

The Dissemination of Divination in
Roman Republican Times
– A Cognitive Approach

PhD Dissertation

By Anders Lisdorf

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Certain parts of this dissertation have been published or are under publication in part or full. Chapter 4 builds on Lisdorf 2007a, 2007b, 2007c. Chapter 5 contains parts of Lisdorf 2007d. Part of chapter 10 builds on a translated version of Lisdorf 2004c and contains parts of Lisdorf 2004a which is copyrighted by Brill Academic Publishers. It is reproduced with permission from the publisher.

Introduction

At the climax of the play *Casina* by the Roman playwright Plautus, there is a scene, where the two slaves Olympio and Chalinus have to reach a decision on which of them gets to marry the beautiful Casina. Today one might expect that the female part be heard in such a case, but Roman times were different, so they choose to decide it like real men: by drawing lots! But that is not all; when Olympio eventually wins the draw, he thanks the gods for the decision. This makes, what was already a strange situation, even more puzzling to the modern reader, since we just heard that the decision was made by the use of a random draw of lots. This is not an isolated funny story from an obscure playwright. Quite the contrary; Plautus was very popular in his time and following centuries and his plays were attended by everyone from the lowest to the highest classes. The scene points to something very central about the ancient Romans, namely that divination pervaded their culture from top to bottom.

The basic question of this thesis follows from this example “why did divination pervade Roman culture through centuries?” I will argue that in order to answer this question a general theoretical model of divination must first be constructed. This will be done by investigating the cognitive basis of divination. The thesis will therefore fall in two parts of more or less equal size, one theoretical the other empirical.

Consequently the dissertation combines two scholarly fields that are polar opposites: history and cognitive science. It is difficult to think of any two disciplines that differ more. Whereas cognitive science is interested in phenomena that are synchronic, isolated and general, history is interested in diachronic, composite and particular phenomena. So before we can even start, it is necessary with a two front apology for the project. The objections are probably innumerable, but in order to pre-empt the most obvious ones, I have compiled a small list of “Frequently Posed Objections” that I have encountered. First we will consider typical objections by historians then by cognitive scientists.

“We cannot access the minds of historical persons”. That is obviously true, but that does not mean that the minds of historical people were not important to them. Their actions were formed by their mind just as contemporary people. It does not, therefore, follow that we should not care about minds at all.

“Knowledge of modern minds will not help us in understanding historical minds”. This objection assumes a fundamental difference between the mind of modern and historical

people. It is almost unanimously agreed that no significant mutations have occurred in the human brain since around 100.000 years ago (Mithen 1996; Tremlin 2006: 24). If there is any difference between the minds of historical and modern people it cannot be attributed to any biological difference in the brain. This leads to two other options: a) the mind is not constrained by the brain. This is a dualist assumption implying a fundamental difference between spirit and matter. As this is not consistent with the assumptions of modern science, it is not an appropriate solution. b) A weaker version of this admits that the brain to some degree in principle is important. In practice, though, it is the local culture and socialization which determines the mind of a person. This is a version of the nurture view in the nature/nurture debate of the human mind. This view assumes that the mind is a blank slate just waiting to be filled out. Compelling arguments against this assumption has been made by cognitive scientists and anthropologists alike (cf. Brown 1991; Pinker 2002). This is not to say that culture is not important, just that the human mind of modern and historical people are sufficiently similar in general cognitive function to warrant a meaningful comparison. To put it differently, historical minds are not more different than those of other cultures in our contemporary world. We could therefore also ask: if the psychic chasm is so great that the minds of modern people are not in principle as those of historical people, then how is it possible at all to say something about historical people's actions, motivations or thoughts?

“We cannot understand historical particulars by the aid of the universal”. It actually may be the other way around: we cannot understand anything particular without the general. Just as Wittgenstein showed there can be no private language (Wittgenstein & Anscombe 2003), there cannot be any “private history” consisting only of particulars. Just using language is making use of the general (Jensen 2003: 141). In this sense, the general is a precondition for understanding the particular historical. Maybe some would feel that there is a difference between the general and the universal. Let us therefore look at an example of how the universal aids our understanding of the particular. Imagine a geologist who wishes to understand the magnitude and character of a volcanic eruption thousands of years ago. In order to understand this particular historical eruption, he will make use of the universal laws of chemistry and physics. There is therefore no reason to assume *prima facie* that universal characteristics of the human mind will not help us understand historical particulars.

“Theories will not help in history. It merely distorts the sources”. This is a typical objection in ancient history (Morley 2004: 1). It is, however, built on a number of controversial

assumptions, first of all that the sources may speak for themselves. This is not a tenable assumption. Any historical exposition is based on a theory. The only difference is whether it is explicit. In history theories tend to be implicit and the historian bases his analysis on his own assumptions about human motivations, social forces etc. (cf. Morley 2004). These are not shaped by explicit, tested theories, but by folk notions and the historians own subjective experience of the world. That is perhaps also why every generation of historians has to write its own history. What actually distorts the material is a lack of explicit theorizing.

“There is an essential difference between history and science. Science works by reducing phenomena to deterministic laws. This cannot account for history since human behavior cannot be reduced to any such law”. This objection is founded on two misunderstandings of the nature of science. a) It seems that the historian fears that scientific reduction will render the historical discipline obsolete, because a lower level of explanation will replace the higher. There are however no examples of such a usurpation of a higher level science by a lower level one (McCauley 1986: 197). b) The conceptualization of law as a deterministic statement on reality is a dated remnant of a 19th century logical positivist conception of law which thrives in classical history (Morley 2004: 15). This kind of law applies in every case and can be falsified if a situation arises in which it does not accurately predict an occurrence. It is correct that we do not find this kind of law in history, but it is not sufficient to disqualify it as a science. Contemporary views in scientific theory prefer to speak of invariance instead of laws (e.g. Woodward 2000: 205-209). Invariance is a question of degree and may apply locally not necessarily universally. Counterexamples are therefore not falsifications that render the search for regularities futile.

So far so good, but we still have to deal with a number of possible objections to a cognitive approach to history from cognitive scientists: “The results do not live up to scientific standards of verification. The evidence is too sparse to prove anything”. To this, one could point out that not all psychological research lives up to these standards either. Evolutionary psychology, the branch of psychology investigating the evolutionary origins of human cognition, typically does not adduce any evidence of the historical processes stipulated. As for the history it is pure (informed) guesses without any direct evidence. If one would want to dismiss a cognitive approach to history, which actually has some evidence, on the objection that the evidence is not good enough, one would also have to dismiss evolutionary psychology altogether. The objection that there is not enough evidence is not a valid criticism

that precludes the investigation from being scientific. One could point to scientific areas working on even more tenuous evidential basis, such as human paleontology or astrobiology.

“Since there is no possibility for controlled experiment, there is no possibility for falsification, and therefore it does not qualify as science”. While the falsification criterion is an important lever for scientific quality, few today would agree that it is the only necessary and sufficient criterion for science. Once again let us first consider what other sciences we would have to exclude from the academy if such a criterion was stringently applied. We would have to deem unscientific: all of climatology apart from the past few decades, all of geology apart from contemporary research, all of astronomy, all paleontology; basically all sciences with a historical objective would be unscientific. Falsification consequently is not enough as a standard of science. Other meta-theoretic criteria should be given equal priority, such as consilience and parsimony.

“When you cannot do controlled experiments, you cannot isolate variables and therefore it is not scientific”. This is another version of the former. The fact that you cannot make controlled experiments does not mean that you cannot isolate variables. Variables may be measured as well as in controlled experiments. Most of economy, sociology and parts of medicine operate on the same conditions. It is true that historical research is constrained by what evidence there is. It is not possible to produce new evidence and the historian sometimes has to live with the fact that some things he will never know for sure. What is of importance for scientific explanation, however, is when changes in one variable will invariably result in changes in another variable (Woodward 2000). In historical investigations you may not be able to see all possible combinations of manipulations of variables, but it does not follow that the results are therefore unscientific.

I do not presume to have converted or even convinced neither historians nor cognitive scientists that a cognitive historiography is necessary, but I do hope to have succeeded in providing arguments that would at least warrant the attempt feasible to both sides. It should also be pointed out that both camps may actually learn something from the integration of cognitive science and history. Historians may gain a better model of the human mind than the implicit common sense psychology typically employed by the historian. This can help the historian to make better and more accurate hypotheses about the historical reality he tries to understand. The cognitive scientist, on the other hand, may learn that factors that are important in his lab are not very important in the real world, while others may turn out to be.

In order to answer the question of the dissertation a theoretical model of divination will be developed. To do this, first the phenomenon of divination will be characterized. Then the cognitive basis for this will be investigated. The general theoretical model of divination will then try to integrate these cognitive factors with ecological and social factors. This model will be used to analyze the sources for Roman divination.

At this point it seems appropriate to clarify what is meant by cognitive science and why this approach is well suited to solve the problem of this dissertation. Cognitive science is a term used to describe an interdisciplinary field of interrogation. The object is to understand how humans acquire and use knowledge. It emerged in, what has been termed, the “cognitive turn” in the 1960s and 1970s as a critique of the dominant behaviorist paradigm in psychology. Although earlier significant criticisms of this paradigm had been leveled against behaviorism, the most famous is Noam Chomsky’s. Chomsky introduced the idea of a generative grammar. All humans possess a universal grammar. This is a system of simple cognitive rules on the basis of which all the different actual grammars of the world are constructed.

This is far from the only root of the field of cognitive science. Already early categorization was at the center of attention for cognitive psychologists, developmental psychologists and cognitive anthropologists. Another important precipitating factor to the development of cognitive science was the improved capabilities of computers. This stimulated research in artificial intelligence. Already Turing had discovered that a symbol processor could perform functions equal to the human mind. Therefore manipulation of symbols became a central concern. Neuroscientists also contributed to the development, because it became clear that specific neurological impairments had specific effect on cognitive performance. All these sub-fields continue to contribute to cognitive science and it is not rare that a problem within one is treated in another.

Since the approach taken here is informed by a field called the cognitive science of religion, I will just briefly sketch what this field is and what characterizes work in this field. The cognitive science of religion was inaugurated in 1990 with the publication of two books: *Rethinking Religion* (Lawson & McCauley 1990) and *Tradition as Truth and Communication* (Boyer 1990). The historian of religion E. Thomas Lawson and philosopher of science Robert N. McCauley developed a theory of religious ritual. The basic approach was that of Chomsky, that is, a competence approach. They stipulated a small number of

basic cognitive functions could account for certain characteristics of rituals found in all societies around the world. Just like the principles of universal grammar formed the basis of all actual grammars of the world, the principles of Lawson and McCauley's ritual theory could account for all the actual ritual systems of the world.

Pascal Boyer took issue with anthropology's lack of a theory of transmission of knowledge. His argument was that much of religion is not really explicitly transmitted and the transmission process itself influences what gets transmitted. It was however more with his book, *The Naturalness of Religious Ideas*, from 1994 that his cognitive theory of religion was presented. Here, aspects of developmental and cognitive psychology and connectionist models were incorporated to provide a detailed account of the cognitive processes underlying religious phenomena. The book is probably most famous for the idea of the counterintuitive as the hallmark of religious ideas.

In the middle and end of the nineties, the anthropologist Harvey Whitehouse developed his theory of modes of religiosity (Whitehouse 1992; Whitehouse 1995; Whitehouse 1996). This theory differed from the previous. It was based on the identification of two overall types of religion, one preoccupied with doctrine and religious teachings, and another with emotionally stimulating ritual displays. Whitehouse explained these two distinct forms of religion by recourse to the properties of the human memory system. But he also integrated social factors in the explanation. This was used to explain many concrete examples from around the world (Whitehouse 2000).

The experimental psychologist Justin L. Barrett started to test the ideas of Boyer in controlled experiments (Barrett & Nyhof 2001). He also developed and tested the idea, already noticed by the anthropologist Stewart Guthrie that humans seem to have a tendency to identify agents in their environment, even when they are not there. This led to the theory of the HADD as the basis of the universal belief in gods (Barrett 1998; Barrett & Keil 1996). The introduction of an experimental methodology to questions in cognitive science has been of central importance to the field and will also be in this dissertation. The strengths of controlled experiments are that hypothetical cognitive functions can be tested more rigidly than a hermeneutic methodology would allow. The down side of course is that sometimes the results are a relic of the experimentation situation, without any real world relevance. The basic problem facing the use of experimental methodologies is to demonstrate the realworld relevance.

Although new angles and perspectives appear, these early works still inform the themes and problems discussed in the cognitive science of religion (cf. Lisdorf 2005a).

It still may be difficult to see what is characteristic of the cognitive science of religion. In a chapter from 2005 Pascal Boyer identifies key elements in the field. He terms this the “standard” model (Boyer 2005: 4). Overall, there are two ways that the explanation of religion can move. First, it may move towards more sophisticated descriptions of the underlying cognitive processes that make religion in general possible and probable in human minds. Following this approach the problems are fractionated and broken down into smaller component parts. Second, it may study how these cognitive processes interact with specific historical circumstances. This dissertation does both. The first, theoretical part follows the former strategy, and the empirical part the latter.

There are other important features of the standard model. First, of all it implies a selectionist view of culture. This means that ideas we find widespread in human cultures are the ones selected for: “Religious concepts and norms that we find widespread in human cultures are those that resist the eroding, distorting influence of individual transmission better than others” (Boyer 2005: 5). Second, religion is viewed as a by-product of evolutionary adaptive cognitive functions (Boyer 2003), not as having a function by itself. Third, “All propositions of the standard model are *general, probabilistic, and experience distant*” (Boyer 2005: 7). Let us take this step by step. That the model is general means that it could apply to any cultural milieu. There are no cognitive theories valid of just one or even several specific tribes. That it is probabilistic means that the model is not deterministic. It operates with biases in the cognitive system. They make some things more probable than others. That also means that idiosyncrasies are not problematic and neither are cultural differences. Experience distant means that processes underlying religious concepts are not always accessible to consciousness, but may depend on unconscious processes. One example of this is Lawson and McCauley’s theory of ritual where the judgments are based on intuitions.

These characteristics also count for this dissertation as it is a work within the cognitive science of religion paradigm. The phenomenon (divination) is identified and fractionated into more primary general cognitive processes. Then these general cognitive processes are studied in their interaction with a specific historical milieu: Roman republic. This attempt is not unique, other studies have also identified a religious phenomenon and then applied cognitive theories and methodologies to understand them better. Examples are magic (Sørensen,

Lienard & Feeney 2006), prayer (Barrett 2001), sacrifice (Høgh-Olsen 2006), prophetism (Levy 2007), holy texts (Pyysiäinen 1999), fundamentalism (Malley 2004) and afterlife-beliefs (Bering, McLeod & Schackleford 2005). The first part of this dissertation is a similar endeavor; the second part is an empirical investigation based on the insights provided.

In a sense this dissertation is an experiment. Probably only few readers will not find something that provokes or offends them. It is truly not intended. I hope the reader will forgive me and not take offense at the dispositions this experiment has necessitated. Let me try to preempt some of the most obvious criticisms.

The form is a consequence of what I have felt was necessary to complete the task. Since many different fields of research are touched upon, and since the addition of every new field exponentially increases the possible objections and need for further contextualization, many may feel dismay at the dispositions made. First of all, the reader will often miss reservations and discussions of alternative ways of accounting for the data. This may make the exposition appear much more confident than is the case. The reason for this is that the flow of the dissertation would be jeopardized and the exposition would be too lengthy if I were to make all relevant reservations and take into account all other possible accounts for the material every time some result or theory is presented. I have tried as far as possible to include references to works where such discussions and elaborations are undertaken.

Second, parts of the dissertation may appear congested. Some things could have been more thoroughly discussed, explained or presented. Again this is a consequence of the spatial constraints of the dissertation. This congestion has also resulted in the move of discussions related to source criticism, central for the historian, from the main text to the footnotes and appendices. This is not a depreciation of source criticism, but a decision made for the dissertation to have a better flow.

Third, many historians will probably react with shock at the extended use of quantitative analysis of historical data. There is a reason for this (I mean for the use of quantitative analysis, but probably also for the shock. That is, however, another story). The sort of analysis I am trying here, with a heavy reliance on quantitative data, is not without precedence in historical research. The *Annales* school of history inaugurated by Marc Bloch and Lucien Febvre and continued by Ferdinand Braudel championed exactly this type of analysis. There are even more parallels to this approach: as a summary of the work of

Braudel, Neville Morley writes “(..) the historian’s task, then, is to identify and analyse the structures that organize and limit human experience”(Morley 2004: 58). Whereas the *Annales* school only considered external ecological factors as such structures “that organize and limit human experience”, this dissertation has included human cognition. This has been made possible by vast increases in the knowledge of how the human cognitive system limits and organizes experience. It is still important to be aware what such quantification of historical material can and cannot do. Any quantification of historical material introduces an extra uncertainty. But that uncertainty is there as well in traditional hermeneutical history. Numbers do, however, often impose a false sense of security. It should therefore be borne in mind that quantification is not necessarily more objective. Quantitative analysis will not tell us much about individual events in history or about the motives of individual persons. Fortunately this dissertation makes no such claims. Quantitative analysis is, however, much better suited for analysis of what the French historian Fernand Braudel calls *longue durée* (Braudel 1980:31ff), the long trends of history, and since the objective of this dissertation is such a question of *longue durée*, why divination persisted through centuries in Roman culture, quantitative analysis has been the most obvious way of analyzing the material.

Fourth, it is not possible to observe cognitive functions directly. Therefore the inference of a cognitive function is based on an interpretation of experimental results. Like historical data even interpretations of experimental results are associated with uncertainties. It should however be noticed that these uncertainties and imprecisions are minor compared to the alternative usually taken in historical research: informed or even blind speculation about how the human psyche is constituted.

The dissertation is, as mentioned, divided in two halves of almost equal size. The first half, comprised by chapters 1-6, is dedicated to the investigation of the theoretical basis of divination and the other, comprised by chapters 7-10, is dedicated to empirical analysis of Roman divination on the basis of the theoretical part.

Summary of dissertation

Chapter 1 investigates how divination has been conceptualized as a universal phenomenon. An etymological investigation of the word divination reveals that the word is derived from the Latin word *divinatio*. This is derived from an Indo-European word and can be rendered

“the making clear of something”. *Divinatio* originally had two different senses in the Latin language: one, designating roughly what we today call divination and another, designating the process of finding the litigator in certain legal proceedings. In the treatise *De divinatione*, Marcus Tullius Cicero fused the first meaning of divination with stoic philosophy and created a general category for interrogation. Cicero showed the universality of divination by examples drawn from the entire known world of his time. This work has been the frame of reference for all subsequent scholarship dealing with divination as a general phenomenon.

In chapter 2 the focus is turned to theories that have been proposed to explain divination. Divination had disappeared as a central factor of European culture with the rise of Christianity. Therefore, when scholars encountered divination among all the different peoples of the world, they were in need of an explanation. Initially evolutionist ideas accounted for the differences between the primitive people of the colonies and the scientific European by reference to cultural evolution: the rest of the world had not yet advanced to the European stage of culture. In Britain the evolutionistic argument rested on empiricist concerns such as a deficiency in inductive ability of the primitives compared to the modern Europeans. In France rationalist concerns such as collective representations and classification took center stage. With the breakdown of evolutionistic anthropology after the First World War other ways of analyzing divination came to the fore. It became apparent that the source material of the arm-chair evolutionist anthropologies was not of sufficient quality. Extended periods of field work became the ideal of anthropology. This ideal entered divination scholarship with Edward E. Evans-Pritchard. By considering the everyday life of the people, the problem of the rationality of divination was resolved. Focus shifted to the social relations and the function of divination. The French tradition of research showed a continued interest in cultural classification schemes. This had a great influence on a line of research focusing on the meaning of divination. The problem of the irrationality of divination had, however, not entirely vanished with Evans-Pritchard’s meticulous work on divination among the Azande. Later, pragmatic linguistic philosophy was integrated to try to account for it in a more principled way. It is argued that, while previous research has provided important insights into divination, the cognitive basis of divination is still poorly understood.

In chapter 3 the foundation for the general theoretical model is laid out. A stipulative definition of divination is given. Two types of divination are distinguished: impetrative and oblativ divination. Impetrative divination is divination employing a technique to produce an

answer to a question explicitly posed, whereas oblativ divination is the identification of a sign that answers a question not yet posed. Divination is divided into three major elements: motivation, sign production and interpretation. The greatest difference between impetrative and oblativ divination lies in the sign production. Whereas oblativ divination depends on the identification of a sign in the daily stream of events, the sign is produced consciously by aid of a technique in impetrative divination. These basic distinctions form the basis of the subsequent treatment.

In chapter 4 the details of the cognitive basis of motivation, sign production and interpretation in impetrative divination are investigated. It is argued that a questioner is always motivated by actual or potential misfortune. The sign production depends on ritualization of the action employed in the divination technique. This produces a displacement of intention of the ritual agent, that is, the operator of the technique. This is followed by a cognitive repair process which replaces the missing intention of the diviner with that of a counterintuitive agent. Most often this is a god, spirit or ancestor. In this process the counterintuitive agent, not the operator, becomes represented as the author of the sign produced in the ritual technique. We know that counterintuitive agents are not represented as having the same restricted access to reality as normal humans. This is why the signs produced can be interpreted as being true descriptions of matters not available to normal human perception. The basis for the interpretation process is that the sign is taken as a communicative sign. The interpretation therefore follows characteristics of ordinary communication. One successful cognitive communication theory is relevance theory. This is used as a basis for understanding the basic interpretative aspects of divination. Compared to normal communication divination is, however, severely restricted. The utility of the information of a given divination practice may be restricted by form or subject. Some divination practices will allow only binary interpretation, others multiple discrete options and yet others rich interpretations. Some divination practices can only answer questions about a specific subject. The most important function of the interpretation is the credibility of the information produced. Since divinatory information is considered a form of communication the same principles apply as for normal communication. In normal communication there is a prestige bias. Prestigious individuals are considered more credible than less prestigious. In divination this is split up, since there is a direct prestige effect of the actual interpreter, and an indirect one of the associated counterintuitive agent.

In chapter 5 it is argued that oblativ divination differs primarily in the sign production. The central problem is accounting for how an event becomes salient and interpreted as a communicative sign. It depends in large part on the existence of a cultural model sensitizing people to the possibility of acquiring signs from counter intuitive agents.

Chapter 6 focuses on how to account for the dissemination of divination and brings together the three previous chapters. By appropriating an epidemiological approach, common in the cognitive sciences, it is argued that a multi factorial account is necessary to account for the dissemination. Insights in the cognitive basis of divination found in the previous chapters are here integrated with ecological and social factors in a theoretical model. The purpose of this is to say something about what factors the dissemination of divination depends on. This is turned into a concrete analytical program that will be used in the empirical investigation in chapters 9 and 10.

In order to see what previous research has found, Chapter 7 reviews the history of research about Roman divination. It is argued that four primary theses have been used to explain Roman divination. The historical thesis explains divination as the product of historical antecedents. The formalist thesis sees divination as mere formalism devoid of any significance. The fear thesis explains the existence of divination as a result of fear in the population. The functional thesis explains divination on the basis of the function it had. All four theses are shown to be inadequate.

Before commencing the analysis it is necessary to look at the extant sources for Roman divination. Chapter 8 reviews the different sources that are available to us. The sources are very diverse in character and span many hundreds of years.

The empirical analysis of divination starts in Chapter 9. Here impetrative divination is analyzed based on the factors stipulated to be of importance in chapter 6. All known forms of impetrative divination in the Roman republic are collected in groups. It is concluded that the factors stipulated, with the exception of one, are central in determining the dissemination and resilience of the individual divination practices analyzed.

Chapter 10 reviews the evidence for oblativ divination in Roman republican times. First a general cultural model is found that specifies the relation between signs and the gods. Then an analysis of the frequency of use of omen words in the Latin corpus of literary works shows that this model was often employed in communication. This indicates that the cultural model was widespread. The Roman prodigies are analyzed in more detail. Here it is found

that prodigies are more attention demanding than regular omens. Furthermore it is shown that the spatial distribution of accepted prodigies conforms to the expectations that can be derived from the theory that divination is represented as the communication with a counterintuitive agent. In a summary it is concluded that the factors isolated in chapter 6 as important for the dissemination and resilience of oblativ divination were present in Roman republican times.

Chapter 11 concludes that the general theoretical model of divination proposed in this dissertation gives a reasonably fine grained explanation of why Roman divination was so widely disseminated for centuries. It also suggests that the model may explain why divination eventually disappeared. Further, it points to some perspectives raised by the dissertation.

The historical part is written according to standards in ancient history and the cognitive parts according to standards in cognitive science. It is therefore inevitable that the reader will have difficulty in reading and understanding certain parts of the dissertation. It is my hope that the reader will bear with me and get through the parts anyhow. For the ancient sources I have supplied a key for the abbreviations used in the text in a section on primary sources in the bibliography. I have in general provided Latin passages along with translations and used English editions of foreign language works for quotations, where they could be found. I have also tried to make the investigation as open as possible by including appendices on the most pertinent points.

Chapter 1 - History of divination as a general phenomenon

In order to gain a better insight into the history of divination as a general concept it is productive to trace the origin of the word and its early uses. The investigation will not reveal the essence of what divination is, indeed, etymological methods have rightly been criticized for submitting to an essentialist fallacy (Patton 2000). Nevertheless, since every instance of thinking about divination presupposes another earlier it seems worthwhile to try to trace the origin of divination as a general phenomenon.

Divination comes from the Latin word *divinatio*. The first time the word *divinatio* is used as a generic term describing a number of different divinatory actions can be dated rather precisely to around 43/44 BCE (Beard 1986; Schofield 1986) in Marcus Tullius Cicero's treatise on divination *De divinatione*. This is also the first known comparative study of divination. Before proceeding with a more thorough analysis, let us investigate the concept's history in Latin prior to Cicero's use.

The history of *divinatio* prior to Cicero

The term is found in nominal and verbal form: *divinatio* and *divinare* respectively.

All previous attempts to construct an etymology for *divinatio* has derived it from *deus* (god), and its adjectival derivation *divinus*, *-a*, *-um* (divine) (Ernout & Meillet 1959; Walde & Hofman 1954). This in turn resulted in two derivations: *divinitas* (god) and the verb *divinare* (to divine) (1st pers.sg. *divino*). The verbal stem and the addition of the suffix *-atio* results in *divinatio* (Ernout & Meillet 1959: 171). This account accords well with Cicero's usage in *De divinatione*, but the earliest attested evidence of the use of *divinatio* does not give the impression that a god or anything godly is involved in *divinatio*.

According to the dictionary of Lewis and Short there are two senses of *divinatio*: it can signify "the faculty of predicting and foreseeing" (Lewis & Short 1975), but it is also a technical term in the criminal process. No one has, to my knowledge, tried to explain why the word ended up in the criminal process where it is not in any way connected to the divine; even the Romans themselves found it wanting an explanation (Gel.2.4.2). It does not seem immediately clear what the connection is. Let us therefore consider two examples of use pre-dating Cicero.

Divinatio is attested as an ability of a diviner to see what is hidden. This can be seen in Plautus' *Miles Gloriosus* 4.6.12. Here it is to describe a woman who knows where her lover is without being able to see him. It is explicitly connected to the term *hariolatur* which means to divine.¹ *Divinatio* refers to the process of coming to know something which is hidden to ordinary human perception, that is, the perception of the knower. No gods are implied in the procedure.

The second example is from the criminal process. In public trials, *Crimina publica*, where there were more than one plaintiff, every plaintiff had to present a speech in order for the judges present to choose which was more suitable for the job as official plaintiff (Ulp.*Dig.* XLVIII 2.16.; Gel.2.4). This part of the process is called a *divinatio*. We actually have such a speech by Cicero called *Divinatio in Q. Caecilium*, where he flaunts all his oratorical skill to obtain the privilege of being the plaintiff in the process against Verres. The goal is to reveal which plaintiff would turn out to be most suitable. Most interestingly no gods of any kind are involved in this process.

Divinatio can thus be seen to be related to acquiring knowledge about things not available to normal human perception, be it hidden in a spatial sense as in the first example or hidden in a temporal sense as in the last example. These earlier meanings of *divinatio/divinare* do not fit nicely with Cicero's and later etymologists attempt to tie it with foreknowledge provided by the gods. It is my contention that only when Cicero chose divination as a general term in his *De divinatione* did the word explicitly become related to the gods. Latin had plenty of other words designating communication with gods, *portentum*, *monstrum*, *augurium* etc. There could therefore be another history behind the word *divinatio/divinare*.

First let us focus on the two basic forms: *divinatio* and *divinare*. *Divinatio* is evidently a derivation of *divinare*. The suffix *-atio* is added to a verbal stem making it a noun designating an action or result of an action. Thus we have *divinare* => *divinatio* which is analogous to the pattern *orare* => *oratio*. This is a common pattern in Latin.

We need to briefly consider the Indo-European root of the word. It seems clear that we should start from the root **dei-* which designates brilliance in Indo-European (Ernout & Meillet 1959: 175). This root developed into two different formations with **-eu-* and **-en-*. Formations with **-en-* came exclusively to designate day. They can be seen in the Slavic languages (cf. Bulgarian *dan*, Serbian and Russian: *den*, which mean day). The other type

¹ It is also described as an ability conferred upon the woman by Venus. This should however not be interpreted literally: The sense is that love has made her capable of this.

with *-eu appears in two forms. One is *deus*, from ind. **dyewo-*. This root also develops into the Latin word for day: *diem* (akk.). Consequently the root is not from the beginning limited to the meaning god or divine. It also designates brilliance, day and sky. I therefore propose that the derivation of *divinare* from *divinus* happened at a time when the adjective *divinus* still denoted something like “clear” and was not fixed on the meaning “divine”. This verbal derivation could then have meant something like “to make clear” since it is a verbal derivation of a stem that designates brilliance, light or day.

Considering the use of this verb before Cicero where we do not find any explicit connection with gods, it would be a meaningful derivation. It could explain the mysterious use in the criminal process. The etymology would still accommodate the use by Cicero since he merely adds the gods in the process of making clear what is hidden to normal human perception. We can thus conclude that the core meaning of the Latin term *divinare* before Cicero probably was “to make clear” (what is hidden to normal human perception).

Cicero's *De divinatione*

The *De divinatione* is part of Cicero's philosophical work². At the time of its completion Cicero was himself an Augur, which was one of the highest public Roman priesthoods (Szemler 1972). Augurs' field of expertise was the observation and interpretation of signs from the gods. Cicero was thus in a sense a diviner himself. The *De divinatione* is part of Cicero's philosophical work. He was very inspired by Greek philosophy and in general tried to adapt it to the Roman context. This clash between the philosophical influence from Greece and traditional Roman state religion runs as a basic undercurrent in the work.

The setting is staged as a dialogue between Cicero himself (Marcus) and his brother Quintus. Quintus is expounding the stoic arguments and Marcus the skeptical (Schofield 1986). The dialogue form was a form taken from Greek philosophy. The basic problem of the work is whether or not knowledge of the future is possible (Cic.*Div.*1.1.). Divination is defined as *prasensio et scientia rerum futurarum* (Cic.*Div.*1.1.): prediction and knowledge of future things. Quintus defends this assertion from a stoic angle in the first book, whereas Marcus attacks it from a skeptical angle in the second book. The stoic view ties it to the

² Unfortunately I have not been able to utilize the doctoral thesis by Francois Guillaumon, *Le De divinatione de Cicéron et les theories antiques de la divination*, published in 2006, since it has only come in to my possession after the writing of the thesis. A quick glance through the book does not, however, seem to prompt a significant revision of the views on Cicero and the *De divinatione* expressed in this dissertation.

existence of the gods. Divination is seen as communication with the gods. This implies that the gods must be there and therefore care about humans. The skeptical view on the other hand will have none of this and produces an argument against this. The first book is the constructive part and therefore of primary importance. It also determines the treatment in the second book, since this is a response to the first. Let us take a closer look

In book 1 Cicero divides the different kinds of divination in two basic kinds: *Ars* and *Natura*, which could be termed technical and natural. The technical form of divination is defined by its application of a discipline, which has been built up through centuries of observation, whereas the natural is defined by lack of any discipline and a direct relation.

<u>Natura</u>	<u>Ars</u>
Hepatoscopy	Dreams
Portents	Ecstasy
Lots	Oracles
Augury	
Astrology	

Table. 1.1. Cicero's typology of divination

This typology is based on the assumption that the soul interacts with the gods. According to Cicero a divine soul (*divinus animus*) exists outside of humans. This is where the human soul comes from. The human soul, which is in the body, has two parts: one which is closely connected to the body, which has the property of movement, sensing, and appetite. The other part of the soul, which expresses itself in rationality (*ratio*) and intelligence (*intelligentia*) expresses itself the further it is removed from the body (Cic.*Div.*1.70). Consequently in the natural form of divination the soul moves freely and can therefore communicate with the gods. This is what happens when you sleep or is in a state of ecstasy as, for example the Delphic oracle. In the technical form it is necessary to use rationality and intelligence to see how the gods express themselves through artifacts or nature. In this case it is the rational compilation of observation through time, which is manifested in a discipline, for example augury, extispicy or astrology (Linderski 1986: 2237-2240).

The rest of the work is formed as an application of examples to fill out the typology. These examples are drawn from the entire known world of Cicero. A good example is found in Cic.*Div.*1.88-91. The subject is the validity of augury: first a Greek example of use by Amfiaraos is mentioned, then one with the Anatolian king Priamos, then a Roman, then one

involving the Korinthian Polyidos. He goes on to mention the Gallic druids, then a Persian example, one from Peloponnese, one from Syria one from Etruria, and on and on. The outlook of the work is clearly universal. The examples show that all peoples known to the Romans have known divination. This is adduced as support for the basic theory.

In the second book this theory is refuted. The basic argument against it is that there is a lack of causal connection between e.g. the constitution of the liver and the communication of the gods (Cic.*Div.*2.29). Cicero also points out a number of empirical examples that disconfirm the thesis (Cic.*Div.*2.45).³ This structure is a basic tenet of the skeptical school, which favored the exposition of a case as the production of an argument and then a counterargument. The conclusion, however, should be left to the listener (Schofield 1986).

Cicero's work on divination can be seen to connect a wide variety of phenomena under the heading of a traditional Latin term. In spite of its possible etymological link to *divus* the above indicated that the connection to the gods is a novel. *De divinatione* specifies a clear definition and typology supported by a theory of divination which stipulates the existence of the gods as an active force able to communicate through nature or directly with the human soul. This typology is given support by a rich number of examples from the whole world and all times, which is meant to demonstrate the theory's validity. Actually this is structurally a model example for science: a theory, a clear definition and a derived typology (Geertz 1999). But as Cicero points out in the second book the theory has several problems: It lacks logical consistency and involves entities (souls and gods) and causal processes that are at best mysterious (such as the relation between some future misfortune, the gods and the constitution of the liver).

Modern treatments of divination as a general term

No monograph has been dedicated solely to divination after Cicero's. A lot has been written about divination, but mostly with reference to a single people or tribe, or a single type of divination. In order to trace the trajectory of thought about divination as a general phenomenon, I have chosen to focus on encyclopedia articles on divination, since they are expert statements about divination as a general phenomenon.

³ He derives logical conclusions from the theory, and shows that they are not confirmed by empirical evidence. In the example from Cic.*Div.*45 the hypothesis is that Jupiter can give signs through lightning. Then he would have no reason to let lightning strike in abandoned places, such as deserts, but he nevertheless does.

I have selected 4 articles, 2 from around 1900 and 2 from the last half of the 20th century. Surveying encyclopedia entries naturally raises the problem of selection. These articles are selected based on how well known, comprehensive and general they are. Thus little known, small (e.g. Brandon 1970) and specialized encyclopedias (e.g. Gärtner, Wunsch, & Pauly 1980) were excluded.

The first example comes from the 9th edition of *Encyclopaedia Britannica*. It was published between 1875 and 1889 and crowned by many as a landmark achievement of scholarly work. It has an article on divination written by Edward Burnett Tylor and starts with a definition of divination: “This term is used to mean the obtaining of knowledge of secret or future things by revelation from oracles or omens” (Tylor 1994: IV, 293). This is done on the basis of analogy and symbolism. Tylor explicitly uses Cicero’s typology and supplies it with modern examples from folklore and contemporary ethnographies of primitive people. The theory differs from Cicero’s in one important aspect since it is evolutionistic: divination belongs to the primitive with its belief in gods, but the modern world has moved beyond this.

The article on “Divination” in *Encyclopaedia of Religion and Ethics* from 1911 is written by the classicist Herbert Jennings Rose (Rose 1974). Rose also operated within an evolutionistic framework along the same lines as Tylor. Rose defines divination thus: “by divination is meant the endeavor to obtain information about things future or otherwise removed from ordinary perception by consulting informants other than human” (Rose 1974: 775). This is followed by a detailed typology illustrated with examples from the whole world under each heading. The different types are: 1) Dreams; 2) Presentiment; 3) Divination from bodily movement; 4) Divination by possession; 5) Necromancy; 6) Divination from animals; 7) Divination by mechanical means; 8) Divination from nature; 9) Miscellaneous.

The ordering principle seems to be the proximity of the divination practice to the human mind. 1) and 2) come from inside – the human mind, 3) and 4) from the human body, where 5) is still human but dead. Type 6) involving animals is closer to humans than 7) because alive, but 7) closer to humans than 8) because they are produced by humans. We thus have a taxonomy that builds on the opposition between humans and nature. Interestingly 1) to 4) (and possibly 5) equals Cicero’s *natura*, and the rest the *ars*. The work of Cicero thus seems to lurk in the background of the typology although it is significantly refined. Likewise the definition also largely falls within that delimited by Cicero.

The 15th edition of the Encyclopaedia Britannica published between 1943 and 1973 has a new article on divination. This time it is written by the anthropologist George K. Park, who was one of the most influential scholars of divination in the last half of the 20th century. He defines divination: “The alleged art or science of foretelling the future by various natural, psychological and other techniques, is a phenomenon found in all civilizations in all times and areas.(..) Divination is the effort to gain information of a mundane sort by means conceived to transcend the mundane” (Park 1974). We see that the emphasis on the future aspect of divination is gone (although he later mentions that the information wanted always bears upon the future (Park 1974: 917)); it is simply information, which is the purpose. The transcendent aspect is still there, though not explicitly as communication with gods. He parts with the intellectualist assessment of divination as being illogical or pre-logical. Instead he focuses on the client’s wish to obtain credible information on which he can act.

Park divides divination into “inductive”, “interpretive” and “intuitive”. The inductive comes from natural phenomena, while the interpretive arises out of a “manipulated accident” which might involve either nature or mechanical artifacts. The intuitive is prototypically a shaman. The typology is like Rose’s based on the degree to which the technique is related to humans. The first two correspond quite precisely to Cicero’s *natura* whereas the last corresponds to *ars*. Park refers to Cicero’s work and complains that the Ciceronian typology is too rigid (Park 1974: 917), but misreads Cicero when he claims that the class interpretive doesn’t fit well in the inductive category. It fits very well indeed: the Roman *auspicium*, one of the key examples of inductive techniques, is exactly a “manipulated accident”.⁴

The last of the articles I have chosen is Evan M. Zuesse’s in Mircea Eliade’s *Encyclopaedia of Religion*. He defines divination as “(..) the art of discovering the personal human significance or more commonly, present or past events” (Zuesse 1987: 375). The focus is on different peoples’ indigenous theory of divination. These, according to Zuesse, involve spiritual beings, producing the following typology. 1) Intuitive divination, where the diviner spontaneously sees the future; 2) Possession divination, where spiritual beings communicate through intermediary agents. These can be a) nonhuman, or b) human; and lastly 3) Wisdom divination, where the diviner decodes impersonal patterns of reality. These are, as in the other cases, exemplified with instances from the whole world.

⁴ There are some further peculiarities in Park’s systematization. He puts scapulimancy in the inductive category, but it is clearly a manipulated accident like pyromancy, which he puts in the interpretive category.

Types 1) and 2) b) correspond to the Ciceronian *natura*, whereas 2) a) and 3) correspond to *ars*. The idea of communication with spiritual beings reflects Cicero's idea of communication with the divine as taking place within divination.

When reading through these, we also notice reflections of contemporary trends: the intellectualism and evolutionism in Tylor and Rose reflects the contemporary evolutionistic anthropology, the focus on social function in Park reflects British social anthropology and a concern with the morphology of the sacred in Zuesse's article reflects the phenomenology of religion. All, however, basically build on the work of Cicero. This can be seen in the typologies presented.

	Year	Natura	Ars
Encycl.Brit. 9 th ed.	1889	Natura	Ars
Encycl. Rel. & Eth.	1911	1-5	6-8
Encycl.Brit. 15 th ed.	1973	Intuitive	Inductive + Interpretive
Encycl.Rel	1987	2) b) + 1)	3) + 2)a)

Table 1.2. The relation of modern typologies of divination to Cicero's.

It is interesting how great an influence a theory and typology of divination more than 2000 years old has had on modern scholarship. The ancient Roman and stoic model of conceptualizing gods and their relation to humans have apparently had a lasting effect. The problem from a scholarly point is that it is based on assumptions that are untenable, such as the existence of gods and souls. Further, ethnographic evidence such as (Evans-Pritchard 1937; Favret-Saada 1980) suggests that not all divination is even seen as coming from gods or souls (cf. Boyer 1990). The distinction between *ars* and *natura* comes from stoic dualist assumptions about the soul as separate from the body and may not turn out to cover any theoretically significant distinction.

What is needed then is to produce an explicit theoretical framework from which we can derive a definition and typology to accommodate empirical analysis (Geertz 1997). In this way our typologies are not just catalogues of exotica based on millennia old ideas of the soul, but active instruments in scientific analysis and classification. In order to aid the construction of such a theoretical framework I will now survey the most important modern theories of divination.

Chapter 2 - A History of Modern Divination Research

The focus of the following presentation is theories of divination. In many modern treatments divination plays the role of a convenient angle to describing a culture (e.g. Bruun 2003) or it serves as an opportunity for the scholar just to publish some of his field observations (e.g. Beattie 1967; Beattie 1966). Most treatments of divination are related to a specific area or scholarly field. Among the most productive areas of research are sinology (Loewe 1994; Smith 1991), the ancient Near East (Cryer 1994; Koch-Westenholz 1995), African studies (Devisch & Vervaeck 1985; Peek 1991a) and classical Antiquity (Bouché-Leclercq 1879; Rasmussen 2003). Sinologists have been most interested in the systems and the different dynasties' attitude to divination (Smith 1991). Whereas ancient Near East scholars often work from a philological agenda of understanding what the texts mean, the classical scholars have focused either on collecting and describing the historical material (Bouché-Leclercq 1879) or on understanding the relationship between divination and the state (Rasmussen 2003). These research traditions have all been formed by the nature of their task and the character of the divination system. Few have very elaborate theoretical considerations and few are interested at all in the general phenomenon of divination. This approach can be highly interesting and a worthwhile endeavor in its own right, but it does not aid us significantly in understanding divination as a general phenomenon.

Furthermore there has not either been any great integration across scholarly fields.⁵ When there has been an influence across scholarly fields the direction of influence goes exclusively from African studies to the others (e.g. Cryer 1998; Smith 1991). The field of African anthropological studies is by far the field in which most theoretical progress has been made. This is why the following will have a very strong bias towards African material and anthropological theorizing.

⁵ It should be mentioned that 3 anthologies dedicated to divination as a universal phenomenon have been published (Caquot & Leibovici 1968; Loewe & Blacker 1981; Vernant 1974). They could have been important forums for an integration of different scholarly fields, but they are more like collages of descriptions patched together from different parts of the world and different times.

Foundations - End of the 19th century start of the 20th

The colonial encounter of primitive people who used divination extensively created a problem of interpretation for the European spectators. Why did the entire world except the Europeans, at least educated Europeans, use divination? Two distinctive threads run through the early research, one is anchored in Britain the other in France.

The British thread

Probably the first thorough modern treatment of divination is the work of the English missionary Henry Callaway (1817-1890) (Peek 1991a: 3). He was originally educated as a physician, but became interested in doing missionary work. During his mission among the Amazulu of South Africa he made observations and inquiries into their use of divination. He recorded interviews with diviners which were subsequently published (Callaway 1870; Callaway 1970). Characteristic of Callaway's treatment is a focus on how to become a diviner (Callaway 1970: 270ff) and the myths surrounding divination (Callaway 1970: passim)

Callaway notices that people use diviners primarily in cases of illness to point out a doctor for treatment (Callaway 1970: 285ff) and in retrieval of lost property (Callaway 1970: 314). The treatment does not try to interpret or explain, but collects facts about the Amazulu. These facts are collected according to what coincides with a Christian worldview: that the Amazulu believe that the spirits talk to the diviner (Callaway 1970: 265), which resembles the holy spirit in Christian cosmology; the process of how to become a diviner (Callaway 1870; Callaway 1970: 259), which resembles a conversion process; and the mythology pertaining to the religious practice (passim), which resembles biblical narrative. What is left out, are things such as the details of the divinatory techniques and the actual consultations. Callaway's intention is not theoretical explanation, but missionary zeal. He emphasizes points of correspondences between the Amazulu and Christianity.⁶

This cannot be said of Edward Burnett Tylor's (1832-1917) approach. In *Primitive Culture* from 1891 divination is treated in an overall scientific evolutionistic framework. Tylor views divination and games-of-chance as belonging to the same species.⁷ Divination is the primary,

⁶ This strategy seems to be a general one in Africa (Peel 1990: 347)

⁷ "Arts of divination and games of chance are so similar in principle that the very same instrument passes from one use to the other" (Tylor 1891: 73)

and games of chance a secondary development. Games-of-chance are survivals from earlier stages of evolution. The difference between primitive and modern man appears to be that the primitive takes divination seriously (Tylor 1891: 71). For Tylor divination is lumped together with magic. Magic, as divination, is based on the association of ideas (Tylor 1994: IV, 293; Tylor 1891: 104). The association in thought is erroneously transferred to reality: “he [primitive man] thus attempted to discover, to foretell, and to cause events by means of processes which we can now see to have only ideal significance” (Tylor 1891: 104). Omens are explained along the same lines as having a “direct symbolism” (Tylor 1891).

Thus divination is grouped with magic, distinguished by a faulty transference of ideas onto reality. This is a trait of earlier levels of culture. The distinguishing mark between divination and its modern survivals, games-of-chance, is the attitude taken towards it. In divination it is thought to involve spirits who thereby communicate, whereas games-of-chance are merely thought of as games.⁸ Divination was revealed truth and games-of-chance an entertaining pastime.

The classicist Herbert Jennings Rose (1883-1961) elaborated in 1911 somewhat on the claim that divination is based on faulty analogies of the mind (Rose 1974). Rose thought that divination, like magic, was a pseudo-science. What distinguishes it from proper science is not lack of logical structure, but false induction. The premises were wrong being based on an arbitrary relation between omen and event (Rose 1974): “The reasoning may thus be paraphrased in our definite phraseology: Like causes produce like effects. Therefore this occurrence, which is like that one, will produce a like result. The fallacy lies in the ambiguity of ‘like’ and the reasoner’s inability to differentiate between those things whose likeness to one another is real and essential and those which bear only an accidental or fanciful resemblance to one another” (Rose 1974: 776). Thus bad induction, a lack of ability to distinguish real from apparent likeness results in an arbitrary as opposed to a real causal relation between sign and event. This explains why divination systems can appear logical. Most interestingly Rose has an explanation for why people do not realize that it is an arbitrary relation between sign and event: “Divination rests in very ancient and wide-spread convictions, inherited from lower levels of culture; and its great stronghold is an utter inability to appreciate a negative argument” (Rose 1974: 775), further he writes that the

⁸ Tylor knew that also primitives had games of chance. He explained this as an example of a middle stage (Tylor 1891: 73).

reason for the phenomenon's persistence is that "(...) their consultants have remembered successful predictions and forgotten unsuccessful ones" (Rose 1974: 775).

With Tylor and Rose we see a typical empiricist view on divination. The reality is out there and the way to capture it is through observation. This is achieved through proper induction. This has not been attained in lower levels of culture, why they are caught in the "mind-web" of analogical thinking.

The French thread

Émile Durkheim (1858-1917) and his nephew Marcel Mauss (1872-1950) had their own view on collective representations. In *De quelques formes primitives de classification*, originally from 1903, they express their dissatisfaction with contemporary psychology as being too simple in its focus on the laws of contiguity and similarity. According to Durkheim and Mauss this is not sufficient to explain the organization of concepts. Likewise logicians have only view for the hierarchy of syllogistic expressions (Durkheim & Mauss 1963: 4). Instead Durkheim and Mauss claims: "Every classification implies a hierarchical order for which neither the tangible world nor our mind gives us the model" (Durkheim & Mauss 1963: 8).⁹ Instead the basis for classification is to be found in the concept of kinship.

There is a clear relation between divination and the classification of things: "Every divinatory rite (...) rests on the pre-existing sympathy between certain beings and on a traditionally admitted kinship between a certain sign and a future event.(...)The science of the diviners [forms] a system of classification" (Durkheim & Mauss 1963: 77). Thus kinship, not association of ideas, is the key. Sociality, not nature or individual cognitive ability, is at the basis of human thought reflected in divination. Another important idea expressed here is that divination forms a microcosm. This is elaborated with the example of Chinese astrology. Divination in this perspective helps to maintain the cultural classification system.

Lévy-Bruhl (1857-1939) was a contemporary with Émile Durkheim and was also influenced by his thinking. He considered similar problems. In *Les fonctions mentales dans les sociétés inférieures* from 1910 he was more interested in the characterizing of primitive mentality, than in determining the level and development of culture. Lévy-Bruhl however conceded that primitive peoples did correctly perceive and understand "natural" causes (Lévy-Bruhl 1985: 281), but collective representations made them think in terms of mystical

⁹ I have used English translations for citations where I have been able to find them.

causes. This is also the case concerning divination: “Their collective representations oblige them, as it were, by some form of preconception or pre-connection to refer the death to a mystical cause (...). The only thing that matters is the true cause and among certain peoples, at any rate, this is always mystic in its nature” (Lévy-Bruhl 1985: 281). According to Lévy-Bruhl the method of choice to find this true cause among the primitives was divination, because it was likewise characterized by mystical ideas.

Central to Lévy-Bruhl’s treatment is the distinction between natural and mystical causes. This distinction, which I will call the dual-causation theory, is a fundamental one as we will see later. Another important feature is that Lévy-Bruhl ties primitive mentality to collective representations. This accounts for its persistence. The difference between primitives and moderns is thus not one of adequate perception of the world, as in the English empiricist perspective, but one of thinking about the world. This in turn is conditioned culturally by collective ideas.

Durkheim & Mauss as well as Lévy-Bruhl have their focus on how primitives think and how this is culturally constituted either in collective representations or in systems of classification. In both cases divination plays an integral role. Whereas the English tradition concerned itself with issues of inductive truth the French is concerned with mentality, thus exhibiting the differences between empiricist and rationalist philosophy. In general it is interesting to notice that there seems to be no principled distinction, at this stage, between magic and divination. Both rely on the same thought processes.

After the decline of evolutionist theorizing after World War One research into divination also declined somewhat with some notable exceptions. Instead of the evolutionist armchair theorizing, the extended periods of field work of functionalist anthropologists, such as Bronislaw Malinowski and Alfred Radcliffe Brown, became the ideal. Both were teachers of a scholar, who would arguably become the most central in divination research: Edward Evans Evans-Pritchard.

Edward Evans Evans-Pritchard

Edward Evans Evans-Pritchard’s (1902-1973) classical monograph *Witchcraft, Oracles, and Magic among the Azande* from 1937 is a landmark in divination research. It was based on fieldwork conducted between 1926 and 1930 among the Azande living in Southern Sudan (Evans-Pritchard 1937: vii). No one had dedicated that amount of fieldwork and scholarly

reflection to divination before Evans-Pritchard. Being a student of the functionalists, Bronislaw Malinowski and Alfred Radcliffe-Brown, he had a focus on fieldwork as opposed to the arm-chair theorizing of the evolutionists. But Evans-Pritchard still exhibited the methodical rigor of the evolutionists.

Evans-Pritchard was educated in a post-evolutionistic environment. Although the evolutionistic theory had dwindled in importance the difference between the scientist and the savage was still an important question. For the evolutionists this difference was to be found in cultural stages of evolution, for Lévy-Bruhl it was found in mentality. The core of Evans-Pritchard's project was to demonstrate that this difference was only apparent and consequently that primitives were every bit as rational and intelligent as the Europeans (Douglas 1980: 33-35). Evans-Pritchard was not satisfied with how the "arm-chair" anthropologists treated data from other countries. Theories of primitive thought were constructed on dubious source material, which was treated selectively: "(...)primitive thought as pieced together in this manner by European observers is full of contradictions which do not arise in real life because the bits of belief are evoked in different situations" (Evans-Pritchard 1934: 29). Evans-Pritchard shifts the focus to how these beliefs are products of everyday life, not theoretical science or abstract theology.¹⁰

It is not that he does not think that there is any difference, indeed he does, but he finds it not in any all pervading primitive mentality, pseudo-science or pre-logical thought. Instead he finds it in how everyday life and its institutions establish in individuals local systems of collective representations. This idea of collective representations is an idea he got from the French school of Durkheim & Mauss and Lévy-Bruhl (Evans-Pritchard 1934). An illustration is when he writes about the "web" of Zande thought: "The web is not an external structure in which he (A Zande) is enclosed. It is the texture of his thought, and he cannot think his thought is wrong. Nevertheless, his beliefs are not absolutely set, but are variable and fluctuating to allow for different situations and to permit empirical observation and even doubt" (Evans-Pritchard 1937: 195). That which installs these collective representations and makes them coherent in the Azande is institutions used in real-life situations: "Throughout I have emphasized the coherency of Zande beliefs when they are considered together and are interpreted in terms of situations and social relationships" (Evans-Pritchard 1937: 540).

¹⁰ This interest, of course, parallels a turn in philosophy taking place at Cambridge with Ludwig Wittgenstein and the philosophy of everyday language (Douglas 1980).

Evans-Pritchard also uses a lot of space analyzing the distinction between natural and mystical causes. Evans-Pritchard calls these respectively commonsense/scientific and mystical notions. Mystical notions are roughly notions that cannot be verified by science or plain observation. Common sense notions can be inferred from observation and science is a more methodical way of observation. This distinction is used to show that the Azande are indeed able to observe natural causation, they just supplement it with mystical notions. A classical example of this is when an old granary collapses, killing the person, who was sitting below it. This is something that did happen every now and then. The Azande know well that it is natural for granaries whose support has been eaten away by termites to fall, but still they search for a mystical cause. They want to find out why it collapsed when this particular person was sitting below it. This is done by searching for a witch who could ultimately be responsible. The basic idea is that the collapse of the granary is an intentional act by a witch motivated by envy jealousy or personal enmity based on past interactions. Witches according to the Azande can only be distinguished from ordinary humans by an extra organ, *mangu*, which they possess. It can only be found in a post-mortem autopsy. The witch could therefore be practically anyone living close by with whom the person has engaged in social interactions in the past (Evans-Pritchard 1937: 69-70). This dual causation makes the event socially relevant¹¹, because the witch is to be found among neighbors or other people with a known animosity towards the unfortunate. Divination as an institution serves the function of finding the particular witch responsible, but it also installs in individuals the collective representations that witches exist.

In this rich texture of beliefs, social relations and situations Evans-Pritchard painstakingly demonstrates why it is rational for the Azande to take recourse to divination when misfortune hits. It is interesting to see that Evans-Pritchard attaches great importance to existential phenomena such as misfortune, and to moral behavior and emotional responses. All these were almost completely absent in previous research focusing on mentality and logical processes. English anthropology subsequently focused on the social aspect and especially on witchcraft.

Elaborations

¹¹ "The attribution of misfortune to witchcraft does not exclude what we call its real causes but is superimposed on them and gives to social events a moral value" (Evans-Pritchard 1937: 73)

Witchcraft Oracles and Magic, like no others, opened up for new ways of investigating divination. Especially two aspects have drawn a lot of attention. One is the social aspects involved in divination “on the ground”; another is the rationality of divination. The American tradition of anthropology was originally preoccupied with philological and descriptive matters, but was also inspired by Evans-Pritchard. The American anthropologist William R. Bascom wrote an article on Ifa divination in 1941. Bascom, who had read Evans-Pritchard’s work and concerned himself with much the same problems, had also conducted meticulous fieldwork from 1937 to 1938 among the Yoruba of West Africa. Of interest to Bascom was “(..) why people fail to be disillusioned by his [the diviner’s] mistakes” (Bascom 1941: 43), that is, when a prediction does not come true. He argues that manipulation is not possible (Bascom 1941: 53) and therefore cannot explain the persistence of Ifa divination. Instead several other factors work to protect the system. First of all he argues that it is not so easy to find a clear cut case of refutation of a prediction. Second, the system is legitimized in the mythology of the Yoruba and the system has what he calls “alibis”. These alibis resemble what Evans-Pritchard calls secondary elaborations and consist mostly of a postulate of technical deficiency on the part of the diviner. This article is a big advance on Clarke’s explanation of Ifa’s persistence as a function of the diviner’s telepathical skills or hyperesthesia (Clarke 1939: 251). Echoing Melvin Herskovits (Herskovits 1938: II, 217), Bascom suggested that divination might have the function of eliminating psychological hesitation and give the individual greater confidence in his decision (Bascom 1941: 45). In 1969 Bascom published the influential study of Ifa: *Ifa Divination – Communication between Gods and Men in West Africa* (Bascom 1969). This was a comprehensive study of Ifa divination. In the monograph the system is described in detail. The account is idealized and no concrete cases are mentioned as in Evans-Pritchard's Azande work. There is not much theory, but instead painstaking descriptions of what sort of nuts are used for the divination, variations in terminology across different Yoruba towns etc. He does, however, emphasize that diviners do not and cannot manipulate their clients.

The point made by Bascom about divination’s ability to eliminate hesitation and create confidence was picked up by the American anthropologist George K. Park, who turned the focus exclusively to the social aspect of divination (Park 1963). For Park divination served a social function. Divination legitimizes uncomfortable decisions, which serve to eliminate unwanted elements in society, thus preserving the social structure. Legitimization is achieved

through casting the decision “upon the heavens” (Park 1963: 197). He takes as an example the poison ordeal that also served Lévy-Bruhl in demonstrating a similar point. Through the diviner’s manipulation of the poison in the poison ordeal, unwanted persons are killed with the legitimization of the heavens. Apparently Evans-Pritchard's refutation of manipulation in Zande divination and Bascom’s likewise among the Yoruba had not impressed Park.¹²

Another example of elaborations on Evans-Pritchard's work by an American is that of Eugene Mendonsa. He also finds the persistence of divination to be the result of a closed logical system protected by secondary elaborations (Mendonsa 1978: 45-47). In divination a dual causation is revealed, but because of the secondary elaborations the falsity of the mystical causes are never seen. In his monograph from 1982, *The Politics of Divination*, Mendonsa is trying to overcome the general problem of social functionalism: that there is no room for man as actor. Mendonsa points out that divination far from always has a harmonious effect of maintaining society and group cohesion. Instead it might as well produce friction, which indeed it does among the Sisala in West-Africa where he carried out his fieldwork. Since in society a number of contradictory rules exist, deviance is a system property. In divination the source of this deviance is masked, and a new social construction of reality is created. He finds the persistence of divination in its utility as an instrument for the elders’ manipulation and coping with deviance (Mendonsa 1982: 23, 153). Divination is consequently explained in terms of its function not for society, but for a group in society – the elders.

The fusing of the English tradition of field work plus inspiration from the French in the form of Durkheim had a great impact on divination research. This spawned studies focused on meaning and classification. The prime example of this is Victor Turner, an influential figure in general in anthropology and specifically in divination research. Turner had conducted field work from 1950-54 among the Ndembu in Central Africa. In the course of this he had interrogated a number of diviners on their profession, basket divination, but he had not himself attended any divination séance. In 1961 he published “Ndembu divination – Its symbolism & Techniques” (Turner 1961) where he summarized the technique and dedicated a great part to in-depth symbol studies. In the Ndembu basket divination a number

¹² It is far from exceptional that the refutation of the manipulation aspect was forgotten. Even in a *festschrift* for Evans-Pritchard we find similar misreadings of the *Witchcraft, Oracles, and Magic among the Azande*: McLeod twists the source material so that it apparently shows that the Azande do manipulate with the poison oracle (McLeod 1972: 169)

of symbolic objects are used. The study shows the polyvalence of each symbol, which is shown to imply the entire Ndembu cosmos and society. For Turner the consultation is a central episode in the process which begins with a person's death, disease or misfortune to the finishing remedial action. The misfortune is usually attributed to tensions in the local kin group. As Turner puts it: "Divination therefore becomes a form of social analysis, in the course of which hidden conflicts between persons and factions are brought to light, so that they may be dealt with by traditional and institutionalized procedures. It is in the light of this "cybernetic" function of divination, as a mechanism of social redress that we must consider its symbolism, the social composition of its consultative sessions, and its procedures of interrogation" (Turner 1961: 17). This idea of divination as a process he originally had from Radcliffe-Brown and it was to become important in later divination research.

Long gone is the interest in the rationality and logic of divination. The epistemic dimension is still there, but in the form of an interest in how meaning arises from the symbols. A central contribution is his linking of misfortune, divination and redress together in a unitary process, where each has to be seen in the light of the other.¹³

The British anthropologist Richard P. Werbner followed in the footsteps of Victor Turner and was similarly from the Manchester School. He gave a detailed analysis of Kalanga rhetoric. Here the focus is on the semantic aspect and how the communication takes place within a consultation situation. In divination a "superabundance of understanding is produced". Like Turner investigated the concrete symbols Werbner took it one step further and investigated actual cases with a concrete context (Werbner 1973).

Similarly following this path, the Belgian anthropologist Rene Devisch is also inspired by Turner. He argues for what he terms a praxeological analysis of divination to bring out the emergent properties (Devisch 1985). This approach attempts to shift the focus to humans' purposeful action. Devisch is inspired by Turner and the Manchester School in considering the totality of social life and performance. This parallels the critique against the social functionalist school. In the article from 1985 the outlines of this approach are necessarily vague. In later articles it is more clear what this approach entails (Devisch 1994; Devisch & De Boeck 1994). Divination is a mode of world-making: "in which cognitive structures are

¹³ Turner did publish on divination again, but *Revelation and Divination* is a mere reprint of Ndembu divination, and the introduction merely elaborates and integrates this piece with his new ideas and concepts such as *Communitas* (Turner 1975).

transformed and new *relations* are generated in and between the fields of the human body (senses, emotions), the social body and the cosmos” (Devisch & De Boeck 1994: 100).

Meanwhile in France similar studies of divination were carried out by Jean-Pierre Vernant and Alfred Adler & Andres Zempléni. The classicist Jean-Pierre Vernant was working with divination in historical cultures. A similar endeavor had already been undertaken by André Caquot and Marcel Leibovici, but their two-volume study of divination as a global phenomenon, *La divination*, did not have the same depth of theoretical explanations (Caquot & Leibovici 1968).¹⁴ Vernant edited the volume *Divination et Rationalité* (Vernant 1974) with the purpose to investigate the divinatory systems “as a mental attitude and a social institution” (Vernant & Zeitlin 1991: 303). This volume is a collection of historical studies of divination. The most theoretically fertile paper is Vernant’s own: “Paroles et signes muets”. What interests Vernant is the type of rationality expressed in divinatory procedure and the classificatory frameworks used by the diviners. He points out that divination does not form a separate sector or isolated mentality. The mental function of divination is to suppress uncertain events by investing certain objects with a symbolic value. These form a microcosm. Through the agency of the objects in this microcosm, knowledge of the real macrocosm might be achieved (Vernant & Zeitlin 1991: 310). Divination is founded on a tension between a formal frame of classifications and the multiplicity of concrete situations. This idea is traceable to Durkheim and Mauss’ *Primitive Classification*, and expresses a typically French concern with classification and cosmology.

A similar tendency can also be seen in the elaborate monograph on Moundang divination by Alfred Adler and Andres Zempléni (Adler & Zempléni 1972). In this monograph they elaborately show the symbolisms implied in Moundang divination and how it relates to society and the individual. Here the divinatory system is likened to a linguistic system (*langue*) that brings together cultural symbols (Adler & Zempléni 1972: 210-212). They explicitly use the terms and ideas of structural linguistics to analyze this linguistic system and how it comes to be expressed in actual situations.

These examples reflect a French tradition of connecting classification to the social. Here the problems are engaged with the theory of structural linguistics. “Decision making” is not of central concern as it is in the British and American tradition.

¹⁴ Although Volume 2 has an interesting chapter integrating psychoanalytic theory to understand divination (Devereux 1968) the articles are predominantly descriptions.

In the eighties the French influence was seen in a poststructuralist infiltration of the study of divination. An example of this is the American anthropologist Rosalind Shaw. She was concerned with the interrelation of conceptual structures and social strategy (Shaw 1985: 287). According to Shaw divination involves the selection of particular cognitive constructions of reality, but also individuals who consciously or unconsciously use strategies in pursuit of their interests. Since men are in control of divination among the Temne of Sierra Leone, they have the power to define women, which can be seen in divinatory consultations involving women. To Shaw divination is an instrument to achieve ontological assurance, a means to negotiate reality (Shaw 1985: 300).

Shaw later elaborated this view and found that truth is not a product of biological procedures, but instead of specific legitimizing contexts. An example is courtrooms where truth is sanctioned. This is the same for divination: “Divination is clearly another such truth constructing process in which, through the public reclassification of people and events a particular interpretation emerges as the authorized version of “what really happened”” (Shaw 1991: 140). Thus divination is a truth and knowledge producing mechanism defining authority and power. Similar sentiments are expressed by Susan Reynolds Whyte (Whyte 1991).

In 1991 the volume *African Divination Systems* was published. This seemed to be the apogee of theoretical research on divination. The editor Philip M. Peek, a student of William Bascom, had left the diffusionist and descriptive paradigm present in his earlier work (Peek 1982) and presented a new approach to divination with a focus on cognitive function. According to Peek a “Non-Normal Mode of Cognition” is produced in the divination ritual (Peek 1991b: 205). This is the function of the right hemisphere of the brain, according to Peek, characterized by analogical and liminal thinking. This has to be synthesized with the left hemisphere which produces “Normal Cognition” in order to produce a “plan of action” (Peek 1991b: 203). The diviner thus must establish a non normal mode of cognition and then with the client mediate between the two. Similar ideas are expressed in the same volume by David Parkin: For Parkin a dual process also takes place in divination, but this is one of synchronic deep-semantics converted to sequenced surface semantic through *Bricolage* (Parkin 1991). These two chapters reflect an interest in the meaning of divination, one most present in the French tradition.

Somewhat between the great currents in divination research is Michael Jackson. He is also geographically “between” since he was educated in New Zealand. He worked with the Kuranko, who live in Niger. In 1978 he wrote an influential article in which he analyzed Kuranko divination from the perspective of existential philosophy. Whereas earlier research had ultimately been based in either empiricism or rationalism, Jackson’s existential focus made it possible to interpret the emotional dimension as more than mere irrational folly, or an unimportant excrescence upon the system of collective representations. Jackson argues that in divination emotions brought about by misfortune are objectified in words or objects, which make it possible to manipulate them (Jackson 1978: 130). But divination also functions as a way to socialize the individual as it is subsumed under collective concepts and dogmas. Jackson writes: “The diviner’s analysis transforms uncertainty into conditional certainty and his instructions for an appropriate sacrifice enable the consulter to move from inertia to purposeful activity” (Jackson 1978: 134). According to this, a problem leads to existential anxiety and inactivity because it is not possible to choose the correct alternative for action, through the objectification by the diviner this is overcome and the person’s problem is brought in under a system of collective representations, which makes them possible to manipulate.¹⁵

The debate over rationality had not, however, died although the focus had turned towards social structure and function. A series of studies took up the question of rationality inspired by philosophy, particularly pragmatic philosophy. A good example of this is Peter Winch’s article “Understanding a primitive society” from 1964 (Winch 1964). Here Winch argues that Evans-Pritchard was wrong in trying to evaluate and describe Zande notions in relation to scientific rationality. This forces the Zande mind to go where it would not naturally go. Winch does not think that the collective representations of the Azande form anything resembling a scientific system why understanding is not possible through a comparison with European science. Winch was a student of Wittgenstein’s and he argues instead that it is necessary to find a language that matches Azande’s. Winch finds this in religious language like Christian prayer (Winch 1964: 370). This has in turn been criticized by some, most notably Robin Horton (Horton 1976).

¹⁵ For a similar argument on Roman material see (Gladigow 1979)

Another reinterpretation of Evans-Pritchard's Zande study focusing on the rationality of divination comes from Emily Ahern. By applying speech act theory, specifically John Searle's distinction between constitutive and regulative rules, she seeks to account for why Zande divination appeared illogical to Evans-Pritchard and other western commentators (Ahern 1982). Constitutive rules are rules that constitute an activity, such as the rules of chess. They are rules that define a kind of activity and are expressed as definitions. Regulative rules regulate a pre-existing activity and are logically independent of the rules of that activity. They are framed in the form of imperatives. Consequently you can break regulative rules without interfering with the kind of activity, but not the constitutive rules. According to Ahern the misinterpretation of Zande divination comes from mistaking regulative rules for constitutive ones. This is why contradictions between rules and performance are not perceived to be irrational.

David Zeitlyn is also concerned with the old problem of what happens when contradiction arises in the course of consultation and he also tackles it in the light of pragmatic linguistics (Zeitlyn 1990). He studied Mambila spider divination and found that contradictions frequently arose from consultation. Zeitlyn suggest that the key to understanding why this was not damaging to the practice might lie in conversational analysis. But Zeitlyn makes a new move in that he does not focus on the dialogue between diviner and client, but instead he argues: "We must take seriously the diviners' assumption that the sequence of questions is a dialogue between divination and diviner" (Zeitlyn 1990: 662). In order to throw light on how people deal with contradiction in conversation, he uses a study by Harold Garfinkel. Here a group of college students are told that they can consult a student counselor over an intercom, but that the counselor can only answer with a yes or no. What they did not know was that the answers were given from a predetermined list and hence random (Garfinkel 1967). In this study it was possible in detail to study what happened when two answers flatly contradicted each other. Subjects seemed to treat contradiction, not as logical problems, but as question rejecting moves (Zeitlyn 1990: 657). Meaning is constructed according to a relevance principle – that the communicator gives the most relevant answer. In order to find this the context of the question becomes central. This is exactly the same as what happens in the divinatory dialogue.

Contradiction led Evans-Pritchard, and those after him, to assume secondary elaborations were protecting the closed thought system/collective representations by immunizing them to

refutations. With this article Zeitlyn shows that contradictions are not refutations. This makes the problem behind the rationality debate evaporate. Instead of logic dominating thought and dialogue it is instead the Gricean relevance principle (cf. Grice 2001).

Jon Abbink (Abbink 1993) has also worked with the relevance principle, but in the form of Dan Sperber and Deirdre Wilson's cognitive relevance theory (Sperber & Wilson 1986). Abbink also considers divination a form of dialogue, but one in which a lot of the communication is not explicit. With the help of Sperber and Wilson's relevance theory he shows how, for example, pointing is just as communicative as speaking. Whereas Zeitlyn acknowledged that a dialogue with divination was taking place, Abbink simply treats the dialogue between the ones present.

Pascal Boyer's ideas are related to Zeitlyn's whom he also quotes. He started his attack on anthropology in general and cultural anthropology in particular in 1990 with *Tradition as Truth and Communication* (Boyer 1990). In this book he proposes a new cognitive view on divination. The focus for Boyer is how divination constitutes a truth making procedure (Boyer 1990: 61). Boyer finds that in divination the truth is not a function of people thinking about it as stemming from a god or ancestor, as there is evidence of the contrary, for example among the Azande where no gods or ancestors are thought to be communicating. Instead people implicitly make a causal link between the situation at hand and the divinatory diagnosis. Thus divinatory speech differs from ordinary speech in that people think of it as directly caused by the situations represented in the same way we think a photograph is directly caused by the situation represented (Boyer 1990: 78).

An interesting aspect is that Boyer in his theory separates the mental representations at work in the ritual and the ones in discourse about divination. This makes it possible to explain why some people have elaborate theories of how divination works, but don't follow them in practice. More importantly it renders the question of collective representations and secondary elaborations extrinsic to the truth production of divination, whereas previous research with the possible exception of Zeitlyn tried to explain divination's truth production as a function of secondary elaborations blocking the refutation of the system.

Summary

Divination derived from the Latin term *divinatio* originally came from an Indo-European word designating the making clear of something. This found two different uses in the Latin language: one for designating roughly what we today call divination, another for designating the making clear of the plaintiff in the criminal process. The treatise *De divinatione* by Marcus Tullius Cicero fused the first meaning of divination with stoic philosophy and created a general category. Cicero showed the universality of divination by examples from the entire known world. This work has been the frame of reference for all subsequent scholarship dealing with divination as a general term. Divination more or less disappeared in Europe after the Roman Empire became Christian.

No research on divination as a general phenomenon was carried out until modern times. The colonial encounter with people who used divination extensively everywhere around the world made divination a problem: why did the rest of the world engage in divination, when the Europeans did not? Initially evolutionist ideas served to account for the differences between the savage primitive and the scientific European. The rest of the world had not yet advanced to the European stage of culture.

In Britain the evolutionistic argument rested on empiricist concerns such as a deficiency in inductive ability of the primitives compared to the modern Europeans. In France rationalist concerns such as collective representations and classification took centre stage. The primitives differed in their ideas about the world, not in inductive ability. A central development here was Émile Durkheim and Marcel Mauss' focus on sociality as the basis for classification. This created two separate trajectories of modern divination research. Anthropology in Germany and The United States was more focused on philological and descriptive endeavors, why divination did not pose a problem. This also resulted in very little research in divination as a general phenomenon.

With the breakdown of evolutionistic anthropology after the First World War other ways of analyzing divination came to the fore. It became apparent that the source material of the arm-chair evolutionist anthropologists was not always of very high quality. Extended periods of field work became the ideal of anthropology with the functionalists. This showed a more nuanced view of the "primitives" and their everyday lives. This ideal entered divination scholarship with Edward E. Evans-Pritchard. He gave a richly nuanced analysis of how divination functioned in the everyday lives of people. By considering this everyday life the problem of the rationality of divination was resolved. Focus shifted to the social relations and

the function of divination. Special importance was attached to how divination functioned to legitimize action and aid decision making.

The French tradition of research showed a continued interest in the meaning aspect of divination particularly in relation to cultural classification schemes. This aspect was already with Durkheim and Mauss tied to the social. Victor Turner inherited the tradition for prolonged fieldwork from British anthropology but was also inspired by Durkheim. His studies of divination focused on the meaning aspect and integrated the social with the classificatory and an in depth knowledge of the society, not originally present in French anthropological investigations of divination. This tying of classification and the social came to have great significance for later American anthropology.

The problem of divination had not vanished with Evans-Pritchard's meticulous treatment of how divination was rational to the Azande. It was taken up and discussed under influence of pragmatic linguistic philosophy. This branch of philosophy of language was developed after Evans-Pritchard's work, but had many affinities to it. Like Evans-Pritchard, pragmatics used the context in concrete situations to explain it, not systems of thought. Pragmatics contributed with some new analytic concepts that could nuance the original analyses of Evans-Pritchard.

All treatments considered here have their strong points and weak points and they have all followed trends in their time. I will not here go into the fruitless exercise of dwelling on the weak points of all previous treatments and ultimately advance my own as the solution to all these. I will simply acknowledge that I am standing on the shoulders of giants, indeed I will profit heavily on the insights of Evans-Pritchard, Victor Turner, David Zeitlyn, Pascal Boyer¹⁶ and others.

There are, however, three aspects that have not been sufficiently illuminated in the previous research in order to answer the basic question of this dissertation.

1) Apart from a few treatments the cognitive basis of divination is not very well understood. The previous treatments, like the one mentioned by Philip Peek, all suffer from being too superficial and not founded in experimental research.

2) As already pointed out by Boyer in 1990, anthropology in general does not have an adequate theory of transmission of tradition. The same is the case for divination. We have a

¹⁶ I am heavily indebted to the work of Pascal Boyer whose work in general on the cognitive basis of religion has been a major inspiration. He has treated divination in earlier works (1990, 1994), but has not elaborated his cognitive theory of divination. Some parts of the exposition here is in contradiction with parts of his original theory of divination, but I think it is consistent with his later work, why I will not go in to an extended discussion of his theory in isolation.

plethora of studies and explanations of how it works in a given locality at a given time, but virtually nothing about why or how it is disseminated through larger areas. Likewise no explanation of why some divination practices exist for centuries and others die out has been offered.¹⁷

3) Not since Tylor has any account of the relation between divination and omens been offered, although these two phenomena frequently get mixed.

It is the purpose of the next few chapters to construct a general theoretical model that can account for these deficiencies.

¹⁷ It could be argued that (Van Binsbergen 1996) is a partial exception since it studies the regional dissemination of four-tablet divination. It still does not offer an explanation of why they were disseminated.

Chapter 3 - Definition and typology of divination

In order to build a general conceptualization of divination it is necessary to start with a definition from which we can derive a typology (Geertz 1999; Geertz 1997). Based on the research history of the preceding part of the dissertation a relatively non-controversial definition is: “Divination is the acquisition of credible knowledge about matters not otherwise available to normal human perception or reasoning”. Since this definition makes clear that divination is a way to acquire knowledge, let us look closer at how this definition relates to other ways of acquiring knowledge (See fig.3.1). There are three basic ways humans can acquire knowledge of their surroundings: perception, reasoning and by proxy through testimony from other humans. The two first are not relevant in this connection, but the third is. Testimony entails a kind of communication. The communicator is not always present, as is the case when we for example acquire knowledge through a newspaper or the radio. The communicator may also have the information from another communicator who has it from another and so on. The crucial distinction is whether the source, the ultimate communicator, is conceptualized as normal or non-normal. Normal communicators are parents, teachers, experts and friends. They are endowed with normal epistemic abilities that anyone in principle have or can aspire to. Non-normal communicators are what have been termed counterintuitive agents (CIA¹⁸), such as gods, spirits and ancestors.¹⁹ The proximate communicators could be monks, priests or diviners. Put more succinctly, divination is an intermediary process in producing testimony from counterintuitive agents.

¹⁸ I have decided to use the term counterintuitive agent because it connects with a growing body of research in the cognitive science of religion. This way we will avoid unnecessary neologisms. There are, however, some downsides with this term, since it is not the property of counter intuition, which is of importance here. Let me therefore highlight what is meant by counterintuitive agent here: first, counterintuitive agents are not “normal” in their epistemic access to the real world, i.e. they don’t have restricted access and therefore don’t have false beliefs. Second, it is central that we are talking about *intentional* agents. Third, a counterintuitive agent is an analytical term that covers gods, spirits and ancestors, but it is wider in its application since anything having intentional qualities is considered a counterintuitive agent (Lisdorf 2007a). It is not implied that any well formed rich, coherent representation of the agent, such as where it lives, mythology about it etc, exists. A counterintuitive agent may exist locally only in the divination practice. An example of this is Bengé among the Azande (Evans-Pritchard 1937).

¹⁹ Pascal Boyer argues against the existence of gods, spirits and ancestors as necessary ingredients in divination in *Tradition as Truth and Communication* (Boyer 1990). The term counterintuitive agent is however more primary than gods, spirits and ancestors. I agree that reflective representations of this type of agents are not a necessity, but I hope to show that the account here is consistent with later work by Boyer. For an example of a compromise which stipulates two types of divination, one involving intentionality and another which does not (Cf. Sørensen 2007).

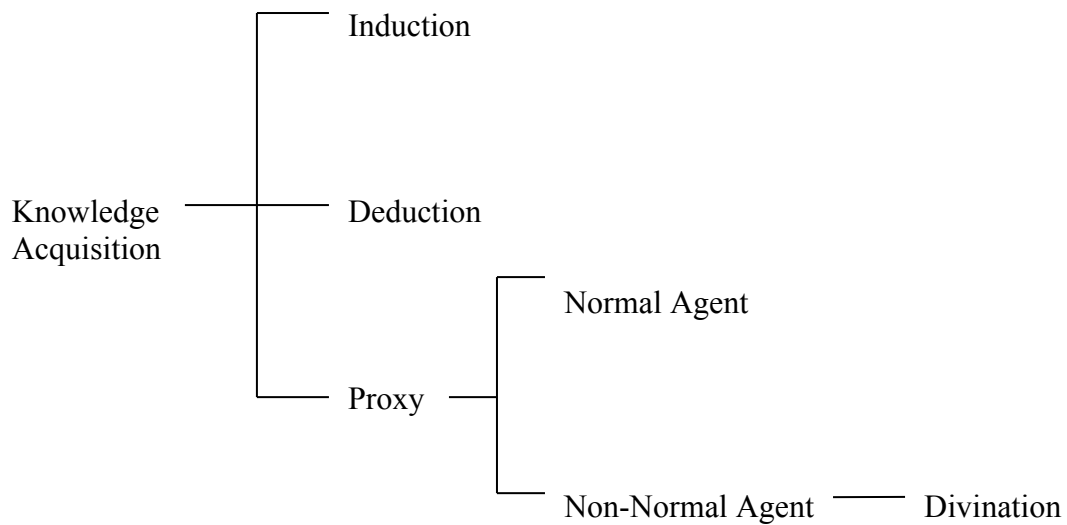


Figure 3.1. Types of knowledge acquisition

Divination is a way of acquiring information that entails communication ultimately with a counterintuitive agent.²⁰ There are four ways such a communication can be conceptualized (See fig.3.2). The first two types are monologic and the last two are dialogic. The first type is the situation found for example in prayer, or dedications. Here the human agent is addressing the counterintuitive agent. The second type corresponds to omens where the counterintuitive agent is addressing the human agent. The third type is what we see in divination where a dialogue initiated by the human agent unfolds. The fourth remains a logical possibility to which I have not been able to find empirical examples. In this case a counterintuitive agent would address a human agent, who would then respond. Of relevance to us are only the second and third types. They coincide with two Latin terms *signa oblativa* and *signa impetrativa*.²¹ *Signa oblativa* in classical Latin meant signs given by the gods, which are omens of all sorts. I will call this type of divination oblativa divination. *Signa impetrativa*

²⁰ Esther Goody has suggested something similar for religion in general (Goody 1995). Unfortunately the anthology which investigates her ideas does not try to integrate insights from the cognitive sciences. In the same anthology David Zeitlyn makes a similar point as here that divination fits a dialogic template perfectly (Zeitlyn 1995).

²¹ This distinction is post classical. The word *impetrativa* comes from *impetro*, more precisely its passive form *impetrare*. This meant looking for signs and may be derived from technical augural language. In classical Latin only the past perfect participle, *impetratus*, is used (Pl.Aul.259). Servius was the first to use *impetrativa* (Walde & Hofmann 1954:684). *Oblativa* is derived from the verb *offero*, which means to bring forward, expose or to bring before. Similarly the past perfect participle, *oblatus*, becomes *oblativa* in Servius. It is not used to designate omens in classical Latin.

means signs obtained from the gods by request. I will call this impetrative divination. This type corresponds to ritual divination. These two types are the basis of the first distinction in the typology of divination.

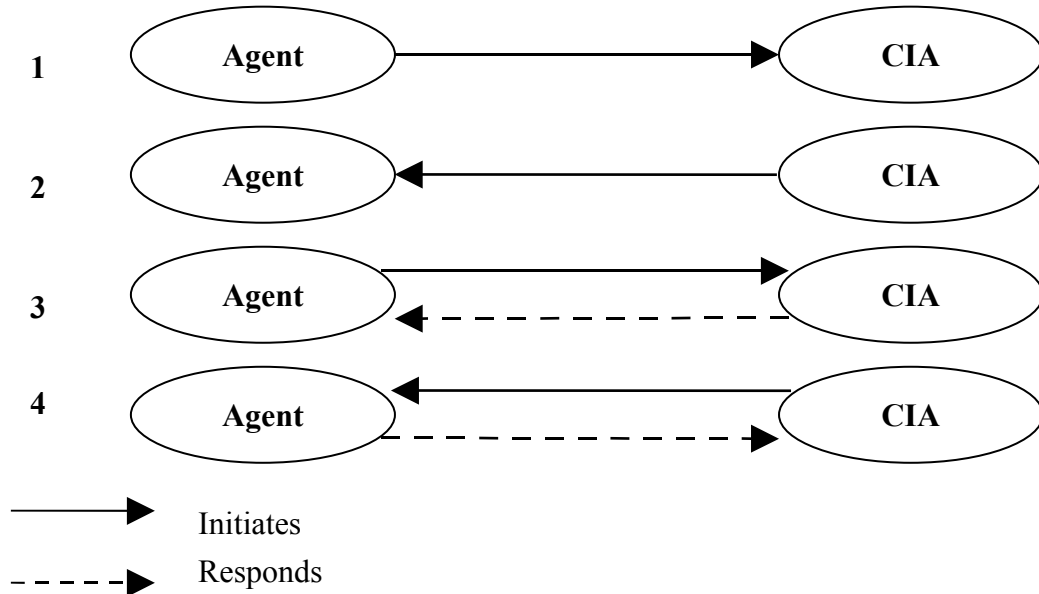


Figure 3.2. Communication with a Counter Intuitive Agent

Now that we have specified what divination does, we need to specify how this is achieved. Based on the ethnographical record, it is possible to distinguish three major interrelated elements in divination: motivation, sign production and sign interpretation. The motivation is what leads to a question posed by a questioner. Without a motivation to know something, sign production and sign interpretation would not be relevant. The sign production is the process that leads to the sign, which is finally interpreted. There are differences between the two kinds of divination, not in the motivation or interpretation, but in the sign production. Impetrative divination always employs an operator and a technique, whereas oblativ divination relies on a salient event. The outcome of both is a sign. This gives us a typology of components in divination (see table 3.1.)

	Motivation	Sign production		Sign interpretation	
Impetrative	Questioner	Operator	Technique	Sign	Interpreter
Oblative	Questioner	Salient event		Sign	Interpreter

Table 3.1. Typology of divination components

The words not in bold face indicate the parts of the model, which are empirically accessible. In impetrative divination the questioner, operator and interpreter can differ or be the same, but they need to be human. They can also be composed of several persons in a group. The technique is a sequence of actions leading to the production of a physical sign. This technique can employ humans, animals or any other physical object capable of producing a sign. The sign can be any distinguishable physical event. For oblativ divination as for impetrative, the questioner and interpreter can differ or be composed of several persons, but they need to be human.²² Let us look at some examples (see table 3.2.)

Practice	Motivation	Sign production		Sign interpretation	
	Questioner	Operator	Technique	Sign	Interpreter
The oracle in Delphi	NN	Pythia	Ecstasy	Verses	Priests in Delphi
Termite oracle among the Azande	NN	NN	Twig inserted into a termite mound	Termites have eaten/not eaten the twig	NN
Ifa divination among the Yoruba in Nigeria	NN	Babalawo	The number of palm nuts remaining in the hand – repeated to generate a pattern	Pattern and recitation of associated myth	NN
Poison oracle among the Azande	NN	Boy/Reciter	Administration of poison to a chick	Death/survival of chick	NN or some of the old men

Table 3.2. Examples of impetrative divination

People came from all of Greece to the Delphic oracle with questions. The prophetess, Pythia, entered into a trance in which she would utter verses as answers to the questions (Diod.Sic. 16.26. 4-5, Strabo 9.3.5). These would then be interpreted by the locally residing priests (Parke & Wormell 1956). The technique used employs a human, Pythia, as sign

²² In a perceptive comparative analysis of divination historian of religion, Jørgen Podemann Sørensen, arrives at a similar scheme as basic for divination. According to Sørensen divination will always imply “1. The experiment 2. The exemplar text 3. The *ad hoc* interpretation” (Sørensen 1999 186). 1. corresponds to what I have called technique, 2. corresponds to sign, and 3. corresponds to the interpreter. I have expanded these distinctions somewhat with the questioner and operator and included oblativ divination. Apart from this Sørensen points to other features as general for divination in a cross-cultural perspective that also apply to the account given here.

producer. In this case we see that the questioner, operator and interpreter are three different persons. The questioner could be a group or even an entire city state.

Among the Azande they used what Evans-Pritchard called a termite oracle (Evans-Pritchard 1937: 352-357). If someone had a question, he would go to a termite mound, utter his question and insert two twigs into the mound. Next morning the questioner would go to the termite mound and see whether the termites had eaten one or both of the twigs. This is the sign. Depending on how the question was phrased it would be interpreted as a yes or no. Here we have a case where the technique employs an animal (insects) and where the questioner, operator and interpreter are the same person.

Another famous divination system is the Ifa system of the Yoruba in West Africa. Consultation begins with a questioner coming with a question to a diviner, a Babalawo. He performs a technique where he grabs 16 palm nuts with his right hand from his left hand. Because of the size of the palm nuts either one or two palm nuts will remain in his left hand. If one is left two marks are made in the powder on his divining tray, if two remain one mark is made. This is done eight times. The marks are made under each other in two rows of four. This yields a figure which is the sign. To this sign is attached a number of verses, which the Babalawo has memorized. He recites these verses to the questioner, who is then left to interpret its meaning (Bascom 1969). Here the questioner and interpreter are the same, while the operator is different. The technique employs ordinary physical objects in the production of the sign.

The last example is also from the Azande. The most famous oracle, the poison oracle, is used by men who have a question usually about some problem involving a possible witch. The questioner tells the question to an older man, who phrases it with great oratorical skill. While he is reciting the question a young boy is administering poison to a chick. The death or survival of the chick is the sign of this divination practice. It is interpreted by the questioner or in cooperation with the others present (Evans-Pritchard 1937: 294-299). Here we see that the operator is composed of two persons, one asking the question and another administering poison. The technique here employs an animal. We can also notice that interpretation can be done by several persons in concert.

If we turn to oblativ divination we can also consider a number of examples (see table 3.3.) Prodigies in the Roman republic are examples of oblativ divination that we shall consider in more detail later. They were especially attention demanding occurrences, such as monstrous

births or statues sweating blood, which were reported by citizens to a magistrate. They were then interpreted by specialized priestly colleges (cf. Rasmussen 2003: 47-52). The questioner was not manifest, but was implicitly understood as the Roman state, since prodigies warned of impending disasters. In this case we can see that the sign is an occurrence of something exceptionally strange in itself. We may also notice that the interpreter is composed of several persons in a priestly college.

	Motivation	Sign production	Sign interpretation	
Practice	Questioner	Salient event	Sign	Interpreter
Prodigies in the Roman Republic	The Roman state	something attention demanding	An occurrence	Different priestly colleges
Buryat	NN	From a catalogue	An occurrence	NN

Table 3.3. Examples of oblativ divination

Omens among the Buryat in Mongolia are different. An example is the omen that “if a dog pricks up its ears like a wolf, it is a bad sign” (Humphrey 1976: 28). This is a relatively normal occurrence, but it achieves its salience because of its being part of a catalogue of omens.

The typology is a sequence of components that are critical to perform the function of divination entailed in the definition: to provide credible knowledge about matters not otherwise available to human perception or reasoning. While there are other interesting and worthwhile aspects of divination, I hope to show that these components are crucial in understanding why divination is a widespread practice. In order to do this we need to find out how each component works and how the components are related. This will be the purpose of the following. We will start by considering impetrative divination and then see how oblativ divination differs.

Chapter 4 - Impetrative Divination

Motivation²³

Why do people engage in divination in the first place? The question is as simple as it is complicated to answer. Divination is acquisition of knowledge, but not just any type of knowledge. People rarely if ever consult diviners to know which star is really the biggest or whether there are an even or uneven number of trees in the nearest forest. You can also wonder why people in modern times, who believe that divination will tell you the absolute truth of any matter, have not yet asked for the Grand Unification Theory, which would unify all the natural sciences (there should be Nobel Prize for that eventually). The point is that the knowledge sought after in divination will inevitably be related to the life of the questioner.²⁴ But why is it so? Why do the concrete subjects apt for consultation seem to vary hugely from culture to culture? Is there at all anything general to the motivation behind divination? To understand this we need to consider human motivation in general.

The psychology textbook by neuropsychologist Michael S. Gazzaniga and experimental psychologist Todd F. Heatherton defines motivation as: “Factors that energize, direct or sustain behavior” (Gazzaniga & Heatherton 2003: 275). In psychological research two main lines of research can be distinguished. The more biological line has focused on the internal states and consequently has given more attention to neurobiology including hormones, neurotransmitters and brain sites (e.g. Rolls 2000). The other line has focused on the life goals of individuals in a more social or individual psychological approach (D'Andrade & Strauss 1992; Sloan 1996). Gazzaniga and Heatherton argue that it is necessary to bridge the gap between these two in order to properly understand human motivation (Gazzaniga & Heatherton 2003: 276).

It seems possible to integrate these aspects of motivation if we work from the assumption that the central component in motivation is emotion. At a superficial level it is not difficult to see that my feeling of pride motivates me to do my best at my exams, that my feeling of hunger motivates me to go to the cantina and that my love for my wife motivates me to kiss her every now and then, but there still seems to be some differences between these kinds of

²³ This chapter builds on (Lisdorf 2007d)

²⁴ It is very often the type of information that Boyer calls strategic information, that is, information related to social interaction (Boyer 2001: 173)

emotion and how they motivate. Recent research on the neurophysiology of emotion makes it possible to be a bit more specific and eventually we can move towards an understanding of what motivates people to engage in divination.

From a general biological perspective there is consensus among researchers in neurophysiology that emotions are part of the human organism's homeostatic system (Buck 1999: 303; Damasio 1994; Damasio 2003; Edelman 1992; Gazzaniga & Heatherton 2003: 276). The purpose of this system is to maintain the organism's health and integrity. A homeostatic system works by regulating equilibrium. An example of equilibrium is the body temperature of 37 degrees Celsius. This is achieved by feedback mechanisms. If a deviation from the set-point, that is the equilibrium, occurs a corrective process is initiated (Gazzaniga & Heatherton 2003: 276). Emotions lie on a continuum of approach and aversion and are a part of such a feedback mechanism. The purpose of this system is to evaluate the environment to allow the organism to react adaptively and maintain its equilibrium (Rolls 2000: 179). For example if a feeling of hunger arises the environment is evaluated with regard to potential food sources. Likewise if a feeling of fear occurs the environment may be evaluated with regard to potential escape routes. Unfortunately all emotions do not have the same simple explanation.

There are several different models of how exactly these different emotions and their neurobiological basis are related. While there may be differences in details, the overall points seem to be agreed. It is possible to distinguish several layers of the body's homeostatic regulation. If we consider table 4.1., we can see an example of these different layers.

Social emotions	Sympathy, embarrassment, shame, guilt, pride
Primary emotions	Fear, anger disgust, surprise, sadness happiness
Background emotions	The condition of feeling good bad or in between
Drives	Hunger, thirst, curiosity, playfulness and sexual attraction
Pain and pleasure	Approach or aversion in relation to an object or situation
Immune system reactions	Fight against a virus
Basic reflexes	Reflexes for example against noise or extreme heat
Metabolic regulation	Maintenance of internal chemical balance

Table 4.1. Layers of homeostatic regulations²⁵

The neurobiological basis of these different groups, show that the different emotions can be related to different neural structures, which in turn correspond to different phylogenetic and

²⁵ Based on (Damasio 2003: 45)

ontogenetic histories. Some feelings, like drives, are properties of the so-called reptilian brain and are shared with reptiles (Buck 1999: 306). This is not so for the social emotions. They in turn seem to be functionally integrated in the orbitofrontal cortex, which is an evolutionarily unique human part of the brain (Rolls 2000: 186f). The higher emotions also depend to a greater degree on an epigenetic process involving social and environmental factors (Buck 1999: 325). This means that the higher emotions are more susceptible to cultural influence (Buck 1999: 327; Damasio 2003: 45).

It is also the case that the higher the emotions are the better they are accessed by consciousness and language. This means that the simple emotions imply more unconscious automatic reactions, whereas the higher emotions allow conscious “explicit (verbalizable) decisions involving multi step syntactic planning to be implemented” (Rolls 2000: 180). Consciousness and language add another dimension since they liberate the organism from the immediate present and allows for evaluation and planning for the future (Carruthers 2002). It is possible through individual and interpersonal communication to create mental models of the world and attach emotional valence to the different elements (Damasio 1998: 86; Damasio 2003: 54; Edelman 1992: 135). Since the higher emotions are dependent on learning from others, they will also be variable from population to population. Thus, cultural differences have an influence on the calibration of emotions in relation to environmental facts. This is what Damasio calls emotionally competent stimuli. The emotion may be universal, but the stimuli that trigger it may vary for the higher emotions. Let us take an example: all people get hungry and all people feel disgust. Hunger is a drive and disgust is a primary emotion. Disgust is therefore a higher emotion. Cultural differences, or technically different epigenetic histories, between a hypothetical Dane, let’s call him Hans-Christian, and an equally hypothetical Turk, Aisha, determine that the former thinks that pork chops are tasty and the latter that they are disgusting. Conversely the latter may find sheep brain delicious and the former that it is disgusting. The feeling of disgust is more malleable than is hunger. It does not matter how often you have learned as a child to be hungry in the morning is good so that you can eat a healthy breakfast, if you simply are not very hungry in the morning.

Overall emotions are assigned an emotional valence on a continuum of approach or aversion. Specific emotions such as disgust, fear, joy, shame, sympathy and pride can be attached to different objects or situations. But although there is a greater flexibility it should

not be forgotten that a large number of things are universally considered disgusting, surprising or fearsome for example. Exactly how cultural diversity is achieved in detail is not clear (cf. Deeley 2004: 253-256), but it seems obvious that language and contextual factors play a role. This probably does not happen directly through propositions (“be happy when you go to boarding school!”), but through more indirect forms such as narratives, idioms and gossip. It would take more research to sort out this question.²⁶ One way that emotions are calibrated, which is of relevance to the present context, is through life models.

Life models

Life models are generic mental models of ingredients of life attached to emotions of approach or aversion. There is some psychological evidence from cognitive and social psychological studies that humans have models or scripts for life in general, which orient the individual towards what is desirable and what is not in a life (Bruner 1987; Rubin & Berntsen 2003; Settersten & Hagestad 1996a; Settersten & Hagestad 1996b; Sloan 1996). These life models appear to be generic structures, widely shared in a culture, normative, and apparently only specifying positive or desirable events. According to cognitive psychologists David Rubin and Dorthe Berntsen they are: “Culturally shared representations of the prototypical lifecycle that locate the majority of transitional events (..) Life scripts deal with transition points that are desirable according to cultural norms” (Rubin & Berntsen 2003: 2f). These life models seem to be similar even across generations. In the study by Rubin and Berntsen, a group of older people told their life story and a group of young people were asked to imagine the life of a hypothetical 70 year old. It turned out that the two were remarkably similar (Rubin & Berntsen 2003). Another study showed that people, at least in the western world, had similar and clear expectations about family transitions such as when to move from home, when to get married, and when to get the first child (Settersten & Hagestad 1996b). Similar structures were also found to underlie expectations regarding education and work such as when to start a career and when to reach the height of the career (Settersten & Hagestad 1996a).

What is meant here by life model is very generic. It does not specify the “good life” of endless luxury, but the ordinary life based on realistic expectations. It may exhibit large differences individually and between different subcultures. Nevertheless, life models seem to

²⁶ The work of the cognitive anthropologists Roy G. D’Andrade and Claudia Strauss is one way to pursue the question (D’Andrade & Strauss 1992).

direct people in their life. It can be likened to a map: If we look at the map and see that the coastline should be 2 kilometers from where we are, we expect to see the coastline after walking for 2 kilometers. Likewise if we have a life model that specifies you should have the first child at the age of 30 it will guide the expectation of that. If life does not accord with the life model it provokes negative emotions. One study supports this assertion. It shows that depressive people are not capable of integrating their own life story in the cultural model, where the opposite is the case for non-depressive people (Luborsky 1993). This is possibly also what happens in post-traumatic stress (Ochs & Capps 1996) or in general as a result of traumatic experiences (Siegel 2001). There may thus be a cultural calibration of emotions regarding what is desirable and what is not in life. This is associated with feelings of aversion when life deviates from the ideal model. But how does this help us understand motivation?

Motivation as a feedback system

Psychologists Charles Carver and Michael Scheier have developed a model for conceptualizing motivation that can fruitfully be integrated with the previous observations. According to Carver and Scheier consciousness of a discrepancy between the ideal and the present state of the self leads to positive or negative emotions that guide subsequent behavior (Carver & Scheier 1998). Motivation can consequently be seen as part of a negative feedback loop (see fig.4.1.).

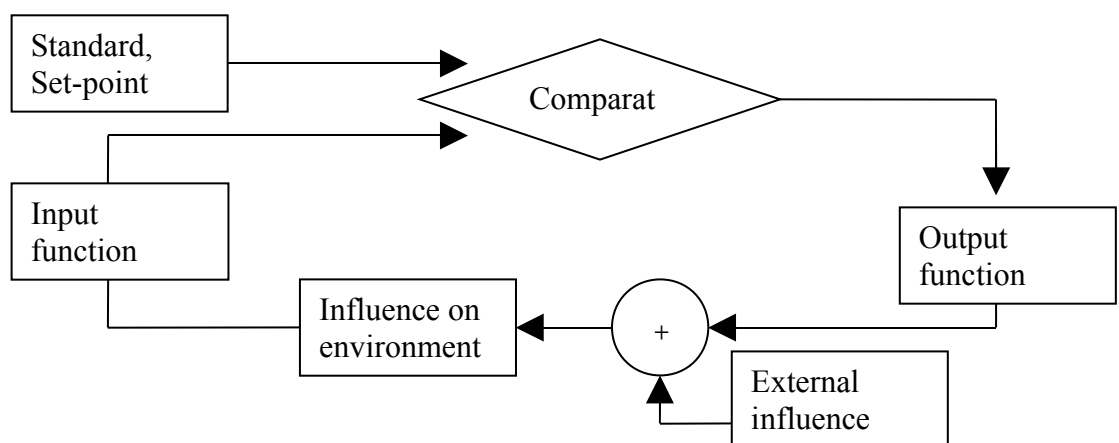


Figure 4.1. Schematic functional diagram of a negative feed-back loop²⁷

²⁷ adapted from (Carver & Scheier 1998: 11)

A negative feedback loop is a functional system. We meet it many places in our everyday life. One example is the thermostat of a furnace. The input function is a thermometer measuring the temperature. This is compared to the set-point or standard of the thermostat by a comparator. In case the temperature is below the set-point, the comparator will initiate the output function, which is turning on the heater. This, along with other external factors such as the draft from the window, influences the environment to produce a new reading of the input function. If the temperature is at or above the set-point, the output function will be turned off. The system can be supplemented with an air conditioner, which would add a maximum value above which the air conditioner will be turned on. We would then have a feedback system that regulates an equilibrium. Notice that it does not matter whether it is the output function or some other external influence which produces the change. As long as the input function does not give values beyond the set-point, the output function is activated.

If we apply this to the previous discussion, the life model functions as a standard signifying the values determining the equilibrium. Like a thermostat can be regulated to give different equilibriums, the life model can differ from culture to culture. While the thermostat is set by a person, the life model is set by interpersonal communication in the group to which the person belongs. There will, though, still be certain limits to the differences. While our thermostat systems may vary from country to country, they will probably mostly have equilibriums making it easy to maintain a body temperature of 37 degrees Celsius.

Let us look at an example of what the life model incorporates and how it could work. Social sociologists Richard A. Settersten and Gunhild O. Hägestad showed that among their respondents a deadline for marriage between 25-30 years was perceived (85 % for men 82% for women (Settersten & Hagestad 1996b: 182f)). This functions like the equilibrium in the thermostat system. If we imagine an idealized case: a single man aged 39, the input function compared with the set-point (married before 25-30 years) would indicate that something should be done. He is motivated to go to social events or use net dating until he finds a wife. When he does get married the input will have changed and he will no longer be motivated to find a wife. Naturally this range for marriage will differ somewhat between cultures, but still within limits. It would be improbable to find any culture with deadlines for marriage at 2 years or 60, just as it would be improbable to find thermostats set at 3 or 40 degrees Celsius. A discrepancy between the life model and the lived life can be characterized as a misfortune and a consistency with the life model as fortune. Thus we can say that a perception of actual

or potential misfortune or lack of fortune motivates the individual to take action. The action or output function will also differ from culture to culture. In western culture being single at the age of 39 may motivate a person to use net dating or consult a psychologist, whereas among other people it may motivate a person to acquire love magic, consulting a witchdoctor or indeed a diviner.

Motivation for divination

Let us see if these general insights into human motivation also apply to the motivation of divination. In most if not all cultures divination is motivated by life problems. As Victor Turner, who was the first to see divination explicitly as cybernetic function, put it: “Divination is a phase in a social process which begins with a person’s death, illness, reproductive trouble or misfortune at hunting” (Turner 1961: 16). Consequently divination is an output function motivated by an actual or potential discrepancy between the lived life and the life model. In the psychological studies from western countries we found transitions, such as childbearing, marriage and death to be central components of the life model. We would expect that such components would also have a central place in other cultures.

Not much systematic research has been dedicated to the motivation for divination. Nevertheless three studies allow us to investigate it to some extent. They concern the motivations for divination among the Sisala, Kuranko and Azande. Although they are all African people, a glance at ethnographic descriptions from other parts of the world do not seem to differ significantly.

Eugene Mendonsa has carried out thorough fieldwork among the West African Sisala. He has focused a lot on divination and compiled a statistic for the reasons people had to consult the diviner during his stay (see table 4.2.)

Reasons	Number of clients	Percent
To find out about a journey	32	12
A matter of marriage	33	12
A child naming	4	1
An illness	102	38
Insomnia	12	4
Childbirth	18	8
Dreams bothering client	3	1
Wife’s infertility	7	3
A death occurred	3	1
To learn about something in the future	3	1

Conflict occurring in the lineage	4	1
Some animals died	1	0
Wanted to know outcome of harvest	1	0
General trouble	10	4
No response to question	25	9

Table 4.2. Reasons for consultation of diviner among the Sisala²⁸

About 25 % of the consultations have to do with central life transitions, such as marriage, birth and death as we expected. The largest single reason for consultation is disease. Disease is another example of a discrepancy between the ideal life model and the lived life. These seem relatively universal. Consequently, more than 60% of motivations for consulting a diviner among the Sisala are directly related to discrepancies between the ideal life model and the lived life.

Other more curious examples seem at the face of it to diverge from this pattern; for example consulting a diviner to find out about a coming journey. The reason it features prominently on the list is that it is not safe to travel in the area where the Sisala live. It is therefore an example of a potential misfortune. The reason why dreams are a motivation for consultation is that they may be signs of insanity and thus ultimately of disease. Yet other reasons have a more obscure etiology, but they all in one way or another relate to the fortune or misfortune of the consulter.

Evans-Pritchard also provides us with a similar list, although he does not specify how many percent of the consultations are motivated by each individual reason. Evans-Pritchard made detailed inquiries into the consultations of the poison oracle among the Azande. The poison oracle is the central and most important form of divination. Situations that motivate consultation are:

- To discover why a wife has not conceived
- During pregnancy of wife, about place of delivery, safety etc.
- Before circumcision of son
- Before marriage of daughter
- Before sending son to act as page at court
- In sickness on any member of family
- To discover the agent responsible of any misfortune
- At death of kinsman in the old days
- Before exacting vengeance by magic
- In cases of sorcery
- In cases of adultery
- Before gathering oracle poison

²⁸ After (Mendonsa 1982: 114).

Before making blood-brotherhood
 Before long journeys
 A man before marrying a wife
 Before presenting a prince with beer
 Before large scale hunting
 A commoner in choosing homestead site
 Before accepting European employment
 Before becoming a witchdoctor
 Before joining a closed association
 A man before he and his adult sons go to war
 In cases of disloyalty to a prince
 A prince before making war
 All other matters pertaining to warfare
 A prince before moving his court
 A prince to discover whether a communal ceremony will terminate drought
 A prince to determine the actions of the British District Commissioner
 A prince before accepting presents or tribute

Table 4.3. Reasons for consultation of diviner among the Azande²⁹

A similar pattern as among the Sisala emerges. Life transitions such as birth, marriage and death account for many of the items. We also find disease and travel on the list. An addition is several items related to war. War like travel is an event where a potential misfortune may conceivably occur. We also find more specific items that are specific to the Azande, such as making blood-brotherhood, joining a closed association and becoming a witchdoctor. They are according to the culture of the Azande actions that may have great consequences for the life of the individual. The rest of the items may seem obscure, but accounts, of how they relate to the actual or potential misfortune or lack of fortune as understood by the Azande, can be offered.

The last list by Michael Jackson is not as comprehensive as the two previous. It is made on the basis of research among the Kuranko of Niger. According to Jackson typical motivations for consulting a diviner are:

A man's wife is barren
 A woman has a long and difficult labor
 A man is about to marry
 A man is about to brush his farm
 A person is about to embark on a journey
 A person is troubled by a dream
 A kinsman is ill
 A sickness or disease does not respond to treatment suggested by a *besetigi* (medicine-master)
 A kinsman (particularly a child) dies suddenly
 A man is about to have his son or daughter initiated

²⁹ after (Evans-Pritchard 1937: 261f)

A man is about to contest a political position
A man is about to build a house

Table 4.4. Reasons for consultation of diviner among the Kuranko³⁰

The list almost seems like a summary of the previous two. We have the same life transitions such as birth, marriage, death and a somewhat more culture specific item: initiation. We also find disease and travel as a motivation in addition to specific Kuranko items. Overall the same picture emerges.

There seems to be some diversity to the concrete motivations for divination, but mostly the reasons overlap. Life transitions such as birth, marriage and death indicate points in the life model that are important in relation to actual or potential misfortunes. Disease likewise indicates a misfortune. These are recurrent motivations and they account for more than half of the cases, where we can test it. Many items are related to future occurrences such as travel, war, hunting or initiations.

It could be objected that this merely reflects typical African concerns, since all three societies surveyed were of Sub Saharan African origin. Let us therefore compare with a survey done in Japan. The Japanese sociologist Kentaro Suzuki conducted a survey of three hundred people who consulted a diviner in a Japanese divination hall. 91% claimed that divination was “something that can be used to achieve happiness and success” and 89 % that it was “something to consult in planning my life”. 74 % of consultations were about love, 26% about marriage and 26% about work (Suzuki 1995: 262f). The most obvious differences to the African societies are that health and birth related subjects do not play an equally large role. This can be attributed to significant differences in infant mortality and general level of public health. For the average Japanese work and marriage, and by implication love, seem to be the central concerns in maintaining a successful life according to the life model. The survey therefore seems to confirm the general conclusion that divination is motivated by an actual or potential discrepancy between the ideal life model and the actual lived life, where some items of the life model may diverge locally.

Summary

³⁰ after (Jackson 1978: 132f)

It was argued that emotion was central for motivation in general. Emotions are part of the organism's homeostatic regulation. They can be placed on a continuum from metabolic regulation to social emotions like pride and sympathy. An investigation of the neural basis revealed that the higher emotions are increasingly accessible by linguistic parts of the brain. They seem to depend on a higher degree of ontogenetic development. By the use of language, mental models of the world are assigned emotional value. One such concrete example of a mental model is the life model. Prior research could be interpreted to lend credibility to the hypothesis that life models exist that specify what is good in relation to central transitions in life, but also more generally what is positive and negative. This was stipulated to be culturally varying, but within certain limits. Since emotions in general function as part of the organism's homeostatic regulation, a model for motivation was introduced where motivation was a part of the organism's homeostatic regulation. The set-point was the life model and divination was an output function activated by the perception of a discrepancy between the ideal life model and the actual life. The culturally variable life model indicates the equilibrium and attaches it with positive emotions, whereas divergences are attached with negative emotions. This was investigated on the basis of 3 ethnographic examples. They all showed that divination was motivated by discrepancies between the lived life of the individual consulter and the culturally shared life model. In short it is possible to conclude that divination is motivated by the perception of actual or potential misfortune or lack of fortune.³¹

The process doesn't stop with divination however. It is usually just the first step in removing the misfortune. Usually the information acquired in divination will involve what should be done, such as a sacrifice, a magic remedy or consultation of another specialist (Sperber 2006; Turner 1961). A consequence of the model is that divination will continue until the misfortune is removed, and that it will stop when it is, and, most interestingly, whether or not the remedies recommended worked or not. This is because external influences also factor in. A person, who gets well on his way to the diviner, will not any longer be motivated to consult the diviner. An illustration that divination is continued only as long as a misfortune is perceived comes from *Witchcraft, Oracles, and Magic among the Azande*. A

³¹ This also provides a corrective to current ritual theories in the cognitive science of religion. The motivation behind divination rituals cannot be explained in terms of the where the supernatural agent is represented to be as E. Thomas Lawson and Robert N. McCauley thinks (McCauley & Lawson 2002a), or by a wish for revelation of the true nature of the world as Harvey Whitehouse thinks (Whitehouse 2000), nor does it seem to be explained by compulsion as Pascal Boyer and Pierre Liénard stipulate (Boyer & Lienard 2006).

man is ill and has the classical symptoms of being a victim of sorcery. Several times his family tries to find out who was causing the sorcery, but without luck. When he finally gets better they stop consulting the poison oracle. What is noticeable is that no answer about who did it was ever found (Evans-Pritchard 1937: 303-305; 397-399). This seems to be a general situation among the Azande and probably by all people. They only use divination when they see a possibility and necessity for changing their situation (Evans-Pritchard 1937: 85).

Sign production³²

As we saw in the beginning divination is understood as *the acquisition of credible knowledge about matters not otherwise available to human perception or reasoning*. In the typical case this process will be initiated by a questioner with a question motivated by actual or potential misfortune or lack of fortune. He consults an operator who performs a divination technique. This produces a sign, which is interpreted to give credible information about the matter of the questioner's question. The operator is in general seen as competent enough to perform the technique, but not himself in possession of the wanted information. The technique implies ritualized action³³ and produces a sign, for example a configuration of stones on the ground (Jackson 1978), a bird's flight in the air (Linderski 1986), or a spider's manipulation of cards at its mound (Zeitlyn 1990). This sign is subsequently interpreted.

According to most views in anthropology the ritual character of divination is accidental and has no consequence for the credibility of the information produced.³⁴ In contrast to this, I hypothesize that the ritual character of the action is exactly what explains the ability of divination to produce information not available to normal human perception.

Let us consider the differences between normal intentional action and ritualized action. Normal intentional action is usually considered guided by beliefs and desires (Dennett 2001: 412; Malle & Knobe 1997). By accomplishing a goal you believe that this will fulfill your desire (see fig.4.2.)

³² This section is based on (Lisdorf 2007b)

³³ The term ritualized action is understood in a technical sense which will be specified shortly (Cf. Boyer & Liénard 2006: 595f). Some divination techniques like using the Ouija board or tarot cards may not seem like ritual, but are in this technical sense.

³⁴ Performance theories may differ on this point. Here, however, there are no clear criteria by which we can distinguish a performative action from a non-performative action (Brown 2003). Also Pascal Boyer's treatment differs from this view (Boyer 1990).

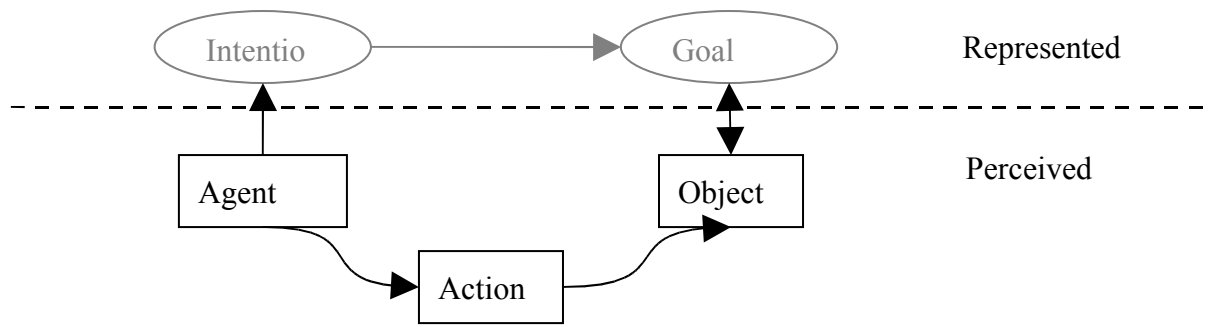


Figure 4.2. Intentional action

It is important to make the distinction between the actual perceived action and the represented action. Let's say we see Peter eating an apple. It is readily inferable that his goal is to eat, because he is hungry (desire), and that he thinks that eating the apple will relieve his hunger (belief) (see fig.4.3.)

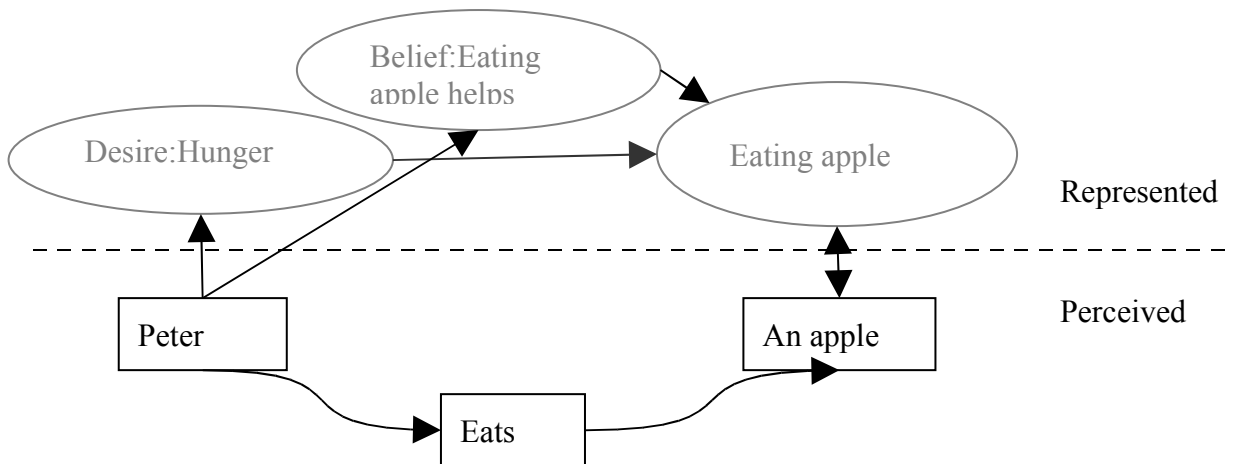


Figure 4.3. Peter eats an apple

According to recent theories in anthropology and the cognitive sciences, ritualized action differs from normal intentional action. In ritualized action the immediate goal cannot readily be referred to the beliefs and desires of the agent. If a catholic is seen cross himself, there is no obvious goal (he is not trying to swat flies or scare away bats), if you see a priest baptize a child, there isn't either any immediate goal (he is not trying to wash the child, indeed it will probably be sparkling clean already).³⁵ What happens in ritualized action has been described

³⁵ Indeed children down to 6-7 years clearly distinguish bathing from baptism (Richert 2006)

as a displacement of intention (Humphrey & Laidlaw 1994; Richert 2006) or a "goal-demotion" (Boyer & Lienard 2006: 605). This does not mean that ritualized action is not thought to be able to accomplish goals, quite the contrary, as we shall see shortly. This is a special mode of action which could be described as counterintuitive³⁶: It is composed mostly of intuitive elements, but involves a breach, in that the action does not accomplish the purported or any other reasonable goal.

The thesis proposed here is that the deficiency in the intentional structure brought about by the displacement of intention in the action produces a search for either another goal, as in magical rituals (the future coming of rain, or the attraction of a beautiful woman), or another hidden agent (such as God giving salvation through priest in baptism, or souls of dead people moving the pointer at the Ouija board).³⁷ The reason for this is that the cognitive system will try to build the best representation of the action at hand and since it initially seems intentional³⁸, a representation based on beliefs and desires will be built. This involves an agent, an action and a goal.³⁹ In divination the action and the goal are fixed from the outset. Consequently only the agent can be repaired. Crucial in obtaining this representational outcome is the severing of the link between the manifest agent and the action leading to the goal. The manifest agent must not be seen to be in control⁴⁰ of the outcome of the action.

³⁶ On the analogy of what is special about religious concepts done by Pascal Boyer and others (Barrett 1998; Barrett & Nyhof 2001; Boyer 1994; Boyer 2003; Boyer 1996; Boyer & Ramble 2001). The first, to my knowledge, to suggest this classification of ritual as counterintuitive action was Pierre Liénard (Liénard 2006).

³⁷ The process resembles the repair process known from conversation analysis (Schegloff, Jefferson, & Sacks 1977). Here a missing word in a sentence will be repaired to make it meaningful. This in turn points to a more primitive and general feature of the human brain, namely pattern completion. Pattern completion underlies among other things the ability to recall events from memory (Guzowski, Knierim, & Moser 2004) and helps resolve ambiguity of perception (Maloney et al. 2005). This is essentially also what takes place here. Further there is evidence that even small infants and infants in general look longer on novel sequences of action (Kirkham, Slemmer, & Johnson 2002: 39). This shows that even at an early stage infants form expectations about the sequences of actions, and that, like counterintuitive concepts, action sequences that violate expectations are attention demanding (cf. Liénard 2006).

³⁸ Because it is carried out by an agent and because it is done in response to a question.

³⁹ While this superficially resembles Lawson and McCauley's theory of ritual action, there is one important distinction here that Lawson and McCauley do not make, that is, between the actual perceived action and the represented action (Lawson & McCauley 1990; McCauley & Lawson 2002b). I believe that the representational part of the thesis proposed here is in accordance with theirs. According to their theory the action representation system will build representations of exactly the type stipulated here: agent, act, and patient (McCauley & Lawson 2002: 14).

⁴⁰ Bertrand Malle and Joshua Knobe investigated the American folk model of intentionality (Malle & Knobe 1997b). They demonstrated that participants in their experiments make distinction in assigning intention to an action based on the agent's skill and awareness (Malle & Knobe 1997: 112). I have collapsed these into the concept of control. This does not mean that there is no real distinction between skill and awareness, but in the present context this distinction is not significant. Malle and Knobe do actually themselves consider the use of

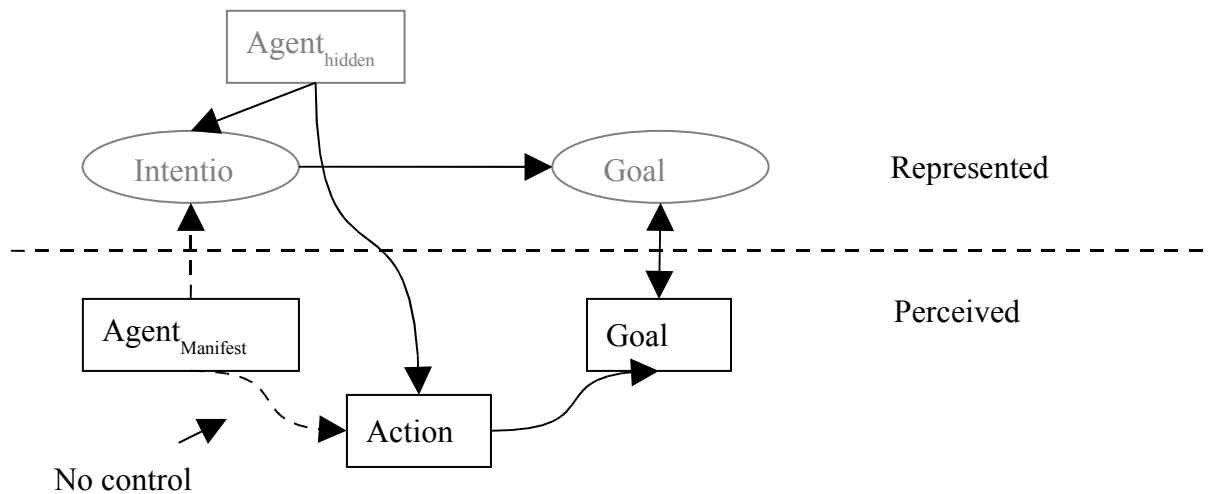


Figure 4.4. Ritualized action in divination

The hidden agent will inevitably be what has been referred to as a “counterintuitive agent” because it is not visible (Boyer & Ramble 2001).⁴¹ Such counterintuitive agents have been found often to be attributed peculiar epistemic abilities, such as not being able to be deceived (Bering & Johnson 2005), having full access to strategically relevant information (that is information regarding social interactions) (Barrett 2001; Boyer 2000; Boyer 2001) or in general not having the same restricted access to reality as humans, that is, an absence of false-beliefs (Barrett, Richert, & Driesenga 2001; Knight et al. 2004).

There is therefore reason to assume that ritualized action, because of its peculiar qualities, is more likely to activate the assumption of a hidden counterintuitive agent in the action description than normal intentional action. There is also reason to assume that such a counterintuitive agent is inferred to have non-standard cognitive abilities, such as unlimited access to reality in particular to information on social interactions and causes of misfortune.

Let us consider a simple example of everyday divination. Consider a person, let us call him Peter. He is single and therefore motivated by his life model and has asked a potential spouse out on a date, but he is in doubt whether they will have the most fun at the movies or at the theatre. Nobody on earth can tell him whether one or the other will be better, because it will happen in the future and human perception of the future is seriously inhibited. He therefore

the word control, but it is not clear what they have against it (cf. Malle and Knobe 1997: 117).

⁴¹ This counterintuitive agent need not be explicitly represented, but when it is it will usually be a god, spirit or ancestor.

asks John to flip a coin in order to know whether he should choose one or the other. If its heads, it will be the movies, if it's tails it will be the theatre. It's heads. This communicates the belief that Peter is better off going to the movies, but it is not John's belief, since he doesn't know. Since the coin flip is an action without control by the manifest agent and with a clear expectation of an intentional outcome, it produces a deficiency of the intentional structure of the perceived action. An agent is so to say missing, and another agent is inferred to be in control. Let us just call it Lady Fortune. She knows everything about the future, and consequently her verdict is credible. Because of the action's character the goal cannot be attributed to the acting agent and another one has to be inferred (see fig. 4.5.)

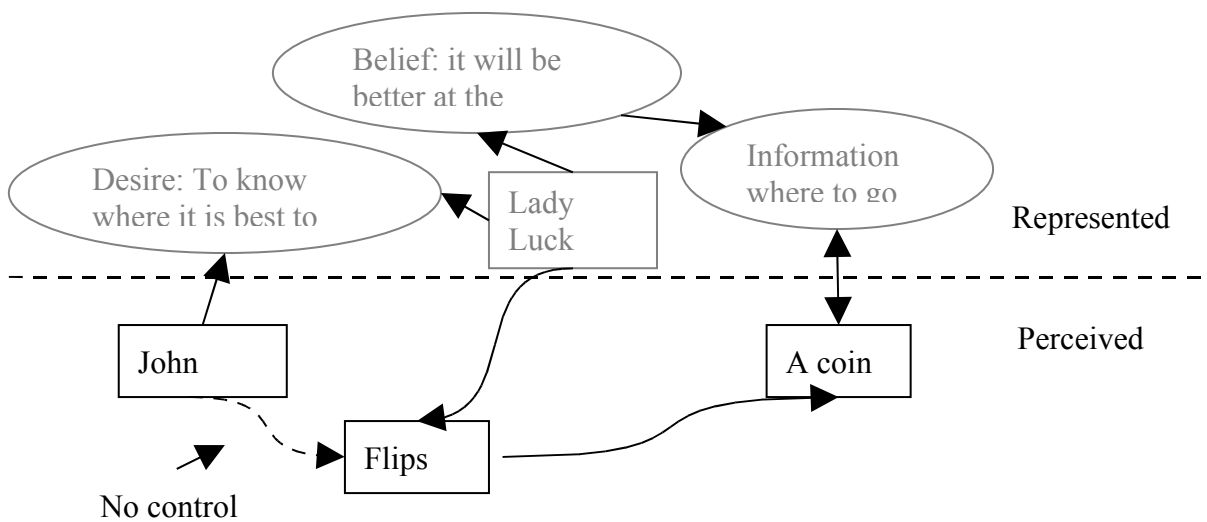


Figure 4.5. Coin flip to decide where to go

In order to summarize, the function of the ritual divination technique is to provide a displacement of the intention of the operator, in order to introduce a replacement with the intention of a hidden agent. This agent is not represented as having any restriction in its access to reality, thus making it possible to produce “information about matters not available to normal human perception”. The physical expression of this is the sign.

From this conceptualization of divination it can be seen that the credibility of the information contained in the divinatory sign is a function of whether it is the counterintuitive agent (who has unlimited access to reality and therefore also to information hidden to normal human perception) or the manifest agent, the operator (who, since he is human, has a limited access to reality), who is represented to be responsible for the sign produced. Low credibility would indicate that the operator was responsible, and high credibility would indicate that it

was the counterintuitive agent who was responsible for the pattern. If the thesis proposed is correct we can formulate the hypothesis that ritualized action will produce higher credibility and intentional action lower credibility of the information produced.

The effect of ritualized action on the evaluation of credibility in divination

No psychological research about how divination is represented has been done. To test the thesis proposed here an experiment was therefore designed. The basic paradigm developed by Justin Barrett and others to test ritual intuitions (Barrett 2002; Sørensen, Liénard, & Feeney 2006) was adapted for the specific task of ritual intuitions regarding divinatory rituals. In this paradigm the participants read a fictive story and were subsequently asked to rate how likely something was to happen.

Three fictive stories were designed, in which there is a main character (questioner) who has an urgent problem that he cannot find the solution to by normal means (an actual or potential misfortune). He visits a diviner (operator), who performs an action by a special technique resulting in a divinatory sign, in this case some sort of pattern. The pattern is subsequently interpreted by the diviner as giving the necessary information to solve the problem. The only difference between the three stories is their endings; each ending varies according to the type of action used in the technique to produce the pattern differed. After reading the story the participants were asked to assess the credibility of the information. The ritualized actions were characterized by the operator not being in the control of the action (e.g. throwing pebbles to the floor to produce a pattern) and the intentional ones were characterized by the operator being in the control of the actions (e.g. putting the pebbles on the floor one by one to produce a pattern). Based on the arguments above concerning the role of intentionality in action, we would expect the ritualized ones to be rated as more credible.

It would, however, potentially skew the measure of credibility if we asked directly. Therefore another way to test the credibility was devised. What we are interested in is not whether people say that they believe the information, but whether they show it by their actions. Self report measures are not always very reliable, because many other factors could distort them. Therefore the participants were asked whether the main character would act on the answers or not. Answers were designed to recommend action and to be potentially very costly (danger of death or economic ruin). Therefore it was reasoned that participants would rate it as more likely the person in the story would act the more credible the information.

After all, people are usually less prone to spending their life's savings when they don't believe it will help them. The independent measure was therefore action type (ritualized or intentional) and the dependent measure was the rating of likelihood the main character would act on the information.

The null hypothesis is that participants will not distinguish between ritualized and intentional action. The alternative hypothesis presented here is that participants will make a clear distinction between ritualized and intentional actions.

Experiment 1

Participants 23 males and 27 females, aged 16 to 21 ($M = 18,18$, $SD 1,4$); 75% from North-Western Copenhagen, Denmark (Bagsværd Kostskole og Gymnasium) and 25% from Esbjerg (Esbjerg Statsskole) in Western Denmark; 60 % Christian Protestant, 30% Non-believers and Others were 10 %.

Materials A booklet was constructed with three fictive stories about a person's consultation of a diviner in a foreign culture. The titles were: the kurabi among the Mwambesi of Africa, the dendrologist among the Canadians in Toronto and the banban among the Katchikvi in Vietnam.⁴² The three different contexts, African Rural, Western Urban, and Asian Rural were chosen to eliminate a bias towards primitivism and racial stereotypes. It would consequently show as a difference between stories 1 and 3 on the one hand and 2 on the other if the results were attributable to participants thinking that primitive people, like the hypothetical Mwambesi, thought differently than modern people like the Canadians. The same goes for racial stereotypes. If participants thought that Africans or Westerners thought essentially differently we would also see a difference between any of the stories.

In these stories the main character was faced with a problem. These problems were designed to match typical reasons for consultation, which can be found in the ethnographic literature (Evans-Pritchard 1937: 261-262; Jackson 1978; e.g. Mendonsa 1982: 114). The problems chosen were danger in relation to a journey, serious disease and choice of future

⁴² Since the research was carried out in Denmark the original material was written in Danish. See appendix 1 for a translation of the stories used.

education.⁴³ These problems required information not available to normal human perception. The main character then consulted a diviner described as a specialist among the particular people. He was considered able to tell the future by the help of some pattern, e.g. a pattern of stones on the ground.

For each story four different versions of the diviner's actions to produce the pattern were given. The information acquired was the same. There were four conditions for action type: Intentional (INT), Ritualized (RIT), Coincident (COI), and Accidental (ACI).⁴⁴ Only the intentional and ritualized were to be selected for statistical analysis. The coincidental and accidental were introduced to minimize the risk of subjects guessing the hypothesis, as they were “weird” in much the same sense as the ritualized. The categorization of action types were matched with an independent rater unfamiliar with the hypothesis, but given an explanation of the difference between the different types of action. To test for inter-rater reliability Cohen's Kappa was calculated yielding 0.75. The sequence of the four different conditions was randomized for each of the three stories into four different sets.

As a dependent variable two measures were made. The first was a question of how likely the participant thought it to be that the main character undertook action on the basis of the information acquired (ACC). The information acquired in divination was constructed so as to recommend an action. The action was potentially costly (traveling through a dangerous area, choosing a future career, and buying costly medicine). This was done under the assumption that the more costly the action the more certain people would want to be. Consequently the more likely the main character was found to undertake action the more credible the information was taken to be by the participants. The likelihood that the participant thought the main character would act on the information is taken to be a measure of the credibility of the action. In order to safeguard, one further measure was introduced. This was a question of how likely the participant found it that the main character felt he or she had received good advice (AD). This was under the assumption that good advice would correlate with the credibility of the information given.

⁴³ The last item is not on the list in the ethnographic literature since it is tied to a western urban context not typically studied in relation to divination. Choice of future education was chosen in order to find an item matching a central concern of many of the participants as most were in their final year in high school. Education and career, but not disease or journeys are some of the central concerns of urban Japanese who consult diviners (Suzuki 1995). It therefore seems plausible that education is of comparable significance in an urban context.

⁴⁴ These were constructed on the two underlying variables: intention and control (see above). Thus: Intentional action is +intention +control, Ritualized action is + intention – control, Coincident is – intention + control and accidental is – intention –control.

The questionnaire was followed by a section of questions aimed to assess how credible the participants themselves found different persons from their own culture (ranging from a 6th grader over an astrologist to a doctor).

Design Action Type (Intentional vs. Ritualized) and Credibility (Action vs. Advice) were within subject variables, while the different Sets were between subjects variables.

Procedure The participants were given this questionnaire as part of their class. The sets were randomly assigned and a written introduction was read by a research assistant. It explained that this questionnaire was part of a study whose purpose it was to investigate intercultural understanding. The participants were asked to put themselves in the situation of the main character and answer the following questions.

Results To test for the effect of Set on the responses a one way ANOVA was conducted, giving a significant difference only for the Kurabi story in the INT/ACC condition, $F(3,43) = 6.839$, $P < 0.001$, but not on any of the other conditions in any of the other stories. This effect can be attributed to one of the sets having this condition as the very first of the alternatives. In this set the rating for the condition was higher than in the others. It may therefore be that participants answered before checking the alternatives. Since the overall results of this story do not significantly differ from the others in any other ways and since the same effect was not present in the safeguard condition INT/AD, the sets were collapsed into one for the remaining analysis. No other effects on Action type were found.

The average rating of the likelihood that the main character would act (ACC) and the average rating of the advice (AD) he received in the Intentional and the Ritual conditions are given for each story in figures 4.6a-c.

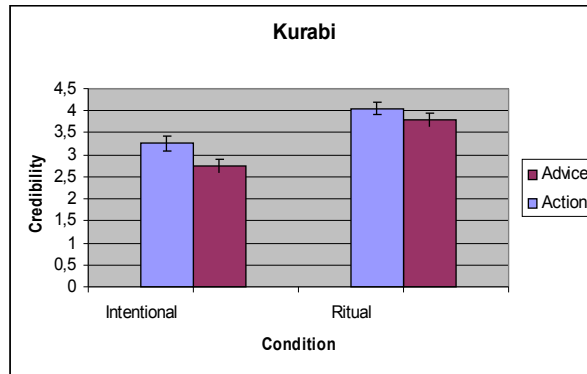


Figure 4.6a Averages for the Kurabi story

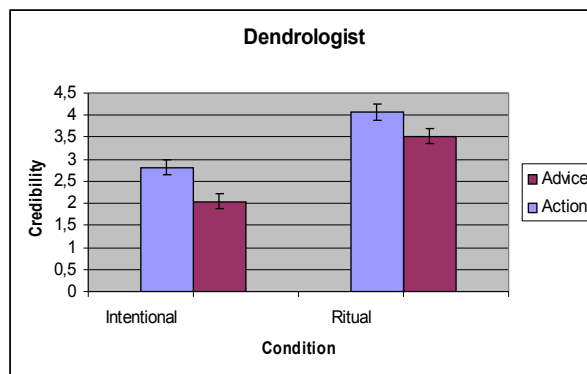


Figure 4.6b Averages for the Dendrologist story

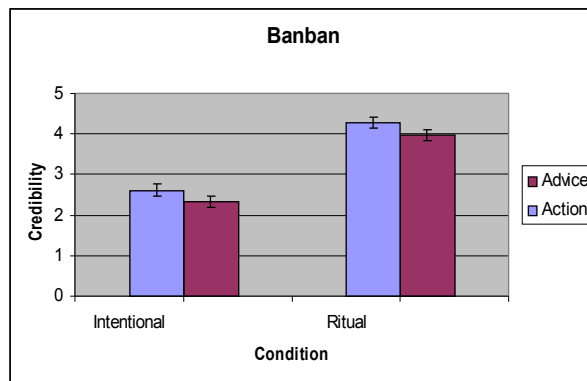


Figure 4.6c Averages for the Banban story.

In order to investigate whether the averages were significantly different, a paired t-test was conducted. The differences turned out to be significant in all cases, as can be seen from table 4.5.

Pairs	t	df	P
Kurabi/INT/AC - Kurabi/RIT/AC	-3,492	46	< 0.001
Kurabi/INT/AD - Kurabi/RIT/AD	-5,492	46	< 0.001
Dendrologist/INT/AC - Dendrologist/RIT/AC	-7,480	47	< 0.001

Dendrologist/INT/AD - Dendrologist/RIT/AD	-6,761	47	< 0.001
Banban/INT/AC - Banban/RIT/AC	-7,189	43	< 0.001
Banban/INT/AD - Banban/RIT/AD	-6,113	42	< 0.001

Table 4.5. Paired t-test for Intentional vs. Ritual conditions

Table 4.5. gives clear evidence that there is a significant difference in the participants rating of the credibility of the information produced by the diviner in the Intentional compared to the Ritual condition. In order to assess the effect size Cohen's d was calculated. The results are shown on table 4.6.

<u>Pairs</u>	<u>Cohen's d</u>
Kurabi/INT/AC - Kurabi/RIT/AC	0,74
Kurabi/INT/AD - Kurabi/RIT/AD	0,98
Dendrologist/INT/AC - Dendrologist/RIT/AC	1,37
Dendrologist/INT/AD - Dendrologist/RIT/AD	1,45
Banban/INT/AC - Banban/RIT/AC	1,61
Banban/INT/AD - Banban/RIT/AD	1,40

Table 4.6. Effect size of difference between intentional and ritual conditions

These are quite sizeable effects, since Cohen's rule of thumb is that effects around .80 are large effects.

If the results were confounded with a primitivist stereotype we would expect differences between the Kurabi and Banban story on one hand and the dendrologist on the other. If the results were confounded with racial stereotypes, we would expect a difference between any of the stories. No such differences in the response pattern between the stories can be observed. This indicates that effects are not attributable to a primitivist or racial stereotype.

The difference in rating could also possibly be attributed to participants who already believed in divination and therefore already had experience of divination ritual. To test for this the second part of the questionnaire was used. It contained a series of questions about how likely different persons in the participants' own culture were to predict the future. The list included normal persons such as doctors, engineers and 6th graders, as well as diviners. Believers in divination were taken to be people who rated the ability to predict the future high for the following persons: Shaman, Numerologist, Tarot Card Reader, Cheiromantic,

Clairvoyant, and Astrologist. There was no significant correlation between scores on these items and ratings of the Ritual condition. Neither was there any effect of religious affiliation on the ratings of credibility of the ritual condition in the stories given. The difference between intentional and ritual conditions can therefore not be attributed to prior belief in divination or religious convictions.

It could also be that participants were able to spot the difference and detect the ritual conditions. That would assume a familiarity with ritualized action. This cannot be rejected, but the participants' experience of rituals in general and divination in particular must be assumed to be very poor in a secular, primarily Protestant, country like Denmark. Further diviners are not common in their culture. The older participants of the group could have been exposed to rituals in teaching since religious studies is on the curriculum for the last year of high-school. If this is the explanation for the preference for ritual, we would expect to see differences in rating depending on age with the younger participants not yet exposed to teaching on religion answering differently than the older. This was not the case. There was no effect of age on ratings of credibility.

Since the most obvious confounds can be ruled out it is possible to attribute the effect to universal cognitive processes. The results are consistent with the hypothesis proposed: ritualized production of the pattern resulted in higher ratings of the credibility of the information than did intentional. This is consistent with the thesis that ritualized action in divination creates the representation of a counterintuitive agent as the intention behind the sign produced by the divinatory technique.

It could be argued against this that the results only allow us to conclude something about how people think divination clients think about divination. It remains a possibility that actual divination clients think differently about divination. This would entail separate cognitive mechanisms for cognizing others' actions from those used in cognizing own actions. There is a large body of literature, however, that supports the opposite conclusion; that the same cognitive and neural resources are used to cognize own and others actions (Barsalou 1999; Blakemore & Decety 2001; Gallese 2001; Gallese & Goldman 1998; Jeannerod 1999). Only further research involving actual practice of divination can settle this question.

The effect of different types of ritual techniques

The wide variety of divination techniques in the world suggests that there are other factors contributing to the judgments of credibility than ritualization, or to put it more plainly: there are many different kinds of ritualized action, but they are not all considered equally credible. What other factors help to predict which divination techniques are more credible than others? Is it merely local cultural differences or are there also significant cognitive biases that make some types of divination techniques more likely to be thought of as credible?

Since the overall thesis is that divination through ritualization of action creates an inference of another hidden intentionality, such as a god⁴⁵, it would be reasonable to assume that the focus of the technique is important. Human categorization is divided into different ontological domains such as intuitive psychology, intuitive biology and intuitive physics (Atran 1990; Bloom 2004; Keil 1979; Keil 1989). Although these domains are domain specific, intuitive biology is closer to intuitive psychology than intuitive physics since the former two share more features. Animals and humans both move by them selves and live and die, whereas that is not the case for stones. It would therefore be possible that techniques, with a focus on categories activating the domain of intuitive psychology, would be more likely to facilitate an inference of a hidden intentionality than those activating intuitive biology. They would in turn be more likely than those implying intuitive physics.

In order to test this possibility an experiment was designed along the same lines as experiment 1. A fictive story was created where a person wants to find out the reason for his disease. He is faced with a choice between three different types of diviners, of whom he can consult only one. The only significant difference between them is that they use different kinds of ritual techniques activating assumptions from intuitive psychology (ecstasy), biology (watching birds) or physics (listening to the wind).

Experiment 2

Participants 40 participants, 17 male 23 female aged 16-20 ($M=18.33$, $SD=1.3$), 77.5 % from the western Copenhagen Region and 22.5% from Esbjerg at the west coast of Denmark. They were primarily Christian protestant (49%) and Non-believers (44%). Other religious affiliations were 7%.

⁴⁵ Technically there is no difference between gods, spirits, souls and ancestors in the cognitive science of religion since what is important is their disembodied intentionality.

Materials A booklet similar to the one in experiment 1 was constructed. The first section with stories used for experiment 1 was substituted with a story about the fictive Guzul people of Central Australia.⁴⁶ They were described as having three different kinds of specialists, whom they often used to determine the hidden causes of peoples' misfortune. The main character is trying to find out why he has been sick for months and wants to know what to do to get better. He has to choose one of three diviners. They are all deemed reliable and have a good reputation. The only difference between them is the technique they employ to communicate with a god. In order to increase the ecological validity, the different techniques are relatively common divination techniques taken from the ethnographic literature. The technique associated with intuitive physics is someone who communicates with a god by listening to the sound of the wind in a cave, the intuitive biology technique is someone who communicates by looking at the flight of the birds, and the intuitive psychology technique is someone who communicates by ecstatic possession.

The sequence in which the three different techniques appeared, were randomized into 3 different sets.

Design and procedure Divination Type was a within subject variable and Set was a between subjects variable. The procedure was the same as in experiment 1 and the same instructions were given. The different sets were randomly assigned to the participants.

Results A one way ANOVA revealed that there were no overall effects of Set on Divination Type. Therefore the different sets were collapsed into one for further statistical analysis. The distribution was as expected (See fig. 4.7.)

⁴⁶ For a translation of the story used see appendix 2.

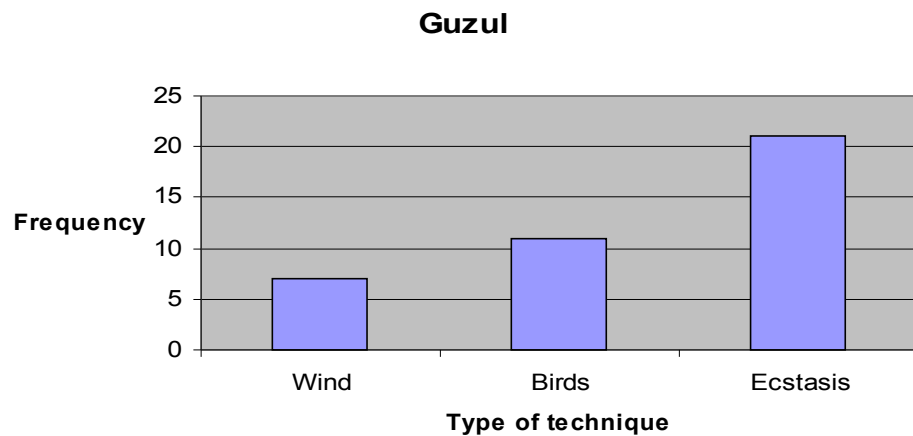


Figure 4.7 Choice of diviner based on the divination technique employed

The difference between the different techniques was significant $\chi^2(2) = 8.00$ $p < .05$. In order to see whether this was attributable to participants personal preference for diviners, further analysis was carried out. We would expect that participants who in general found techniques focused on intuitive physics⁴⁷ more credible would prefer the “wind diviner”, and people who found techniques focused on intuitive psychology⁴⁸ would find the ecstatic diviner more credible.⁴⁹ Those who rated the ability of these diviners to predict the future as high should also prefer the same kind. The statistical analysis did not reveal any significant correlation between personal ratings of credibility on the selected groups and Divination Type. For the group who chose the ecstatic diviner the ratings for the credibility of the intuitive psychology techniques were actually lower than for those who chose the other diviners. In general the astrologist was the most credible diviner, which goes against the results in experiment 2.⁵⁰ It seems that the effect is not attributable to personal or cultural bias. There does therefore seem to be a cognitive bias in the choice of divination techniques which depends on what ontological domains they activate.

⁴⁷ Diviners with intuitive physics techniques that appear in the second section addressing the participants own beliefs are: Astrologists (stars), Numerologists (dates, letters), and Tarot-card reader (cards).

⁴⁸ Diviners with intuitive psychology techniques are: Cheiromantic (hand), Shaman (ecstasy) and Clairvoyant (possession).

⁴⁹ No diviner using techniques focused on intuitive biology are well known enough to have been included in the questionnaire.

⁵⁰ One might legitimately ask why, if people prefer intuitive psychology techniques, the most popular is an intuitive physics technique. It is beyond the limits of this chapter to answer that question, but suffice it to say that astrology probably gains a lot of its credibility in its technique mimicking science, which in Western culture is the ultimate source of credible information.

Summary

The thesis of this chapter was that in divinatory sign-production ritualized action serves to produce a displacement of intention. This leads to a deficiency in the representation of the intentional structure of the action. By a process of repair a secondary hidden or counterintuitive agent is introduced to make sense of the action. This counterintuitive agent is not represented to have the same epistemic limitations as normal human agents. This makes it possible to represent the counterintuitive agent as having accurate credible knowledge of the hidden matter sought after. Experiment one showed that Danish high-school students, who have no great knowledge of or belief in divination still had a strong intuition that ritualized action produced more credible information than normal intentional action. This is consistent with the thesis presented.

There also seemed to be a difference based on the technique employed. Techniques activating assumption associated with intuitive psychology domain were more likely to be chosen than techniques activating intuitive biology or intuitive physics. It therefore seems that there is a cognitive bias towards techniques activating intuitive psychology assumptions.

Interpretation

As we saw in the previous chapter the purpose of divination is to facilitate a connection to a counterintuitive agent. This connection with a counterintuitive agent forms the basis of or precondition for interpretation in divination. It would therefore be relevant to start by considering how and why counterintuitive agents are so easily represented and engaged with universally. The predominant view in the cognitive science of religion is that humans possess what has been called a Hyperactive Agency Detection Device or HADD (Barrett 2000). The hyperactivity of this device accounts for why humans often engage in interaction with counterintuitive agents. That would imply that the HADD is the explanation for why divination works. Therefore this theory needs further consideration.

The basic line of argumentation for most research in cognition and culture is the following: The human cognitive system is evolved through natural selection. Consequently adaptive cognitive functions have provided increased fitness.⁵¹ This approach has frequently been used in the cognitive science of religion to explain why religion is widespread in human cultures (Atran 2002; Atran & Norenzayan 2004; Boyer 2003). A central feature of this endeavor has been to explain the ubiquity in human cultures of belief in superhuman agents (Atran & Norenzayan 2004; Barrett 2004; Boyer & Ramble 2001). This has in most cases been done with recourse to a stipulated hyperactive agency detection function, what Justin Barrett has termed the Hyperactive Agency Detection Device or HADD (Barrett 2000: 31). I will now consider whether the widespread belief in and interaction with superhuman agents (gods, ghosts and ancestors) can be adequately explained by the HADD.

*Explaining cognitive functions by evolutionary psychology*⁵²

The ultimate explanation of hyperactive agency detection is made with recourse to evolutionary psychology (Barrett 2000: 32). Evolutionary psychology's strategy is to explain universal cognitive phenomena by evolved psychological functions. Let us consider this strategy as it is presented by the founders of evolutionary psychology anthropologist John Tooby and psychologist Leda Cosmides. Any given cognitive function is stipulated to have provided a selective advantage in the human ancestral environment thereby accounting for its

⁵¹ The argument has been spelled out in more detail by John Tooby, Leda Cosmides, Dan Sperber and others (Barkow, Cosmides, & Tooby 1995; Bloch & Sperber 2002; Sperber & Hirschfeld 2004; Sperber 1996)

⁵² This section is an adapted version of a forthcoming chapter (Lisdorf 2007a).

present existence, as the slogan goes: “Our modern skulls house a stone age mind”. The function may be triggered in other contexts than that for which it was selected. Then we are talking about by-products of the original function.⁵³

But a couple of quite basic points need to be emphasized before we proceed: first, cognitive functions are not inherited; only genes are, and cognitive functions do not have any selective advantages; only behavior does. Second, cognitive functions cannot be observed, only inferred from behavior. Likewise only the scantiest evidence exists of any connection between a given gene and a cognitive function. Add to this the hypothetical function in a largely unknown environment (the Stone Age), and we end up with quite a mixture of “what ifs”, “maybes” and “probabilities”. That, of course, is the nature of science. But the nature of science is also to use all available evidence in the investigation, and not introduce more hypotheses than are needed.

Let us therefore spell out in detail the premises for the argument. For a cognitive function, F, to have been adaptive, it is necessary that a gene produces a neural structure, S, which reliably produces the cognitive function F. F always leads to behavior B, which has been adaptive in an ancestral environment and conferred an increased fitness on its carrier. Empirically we only have access to B and S.⁵⁴ B is observed in psychological experiments, and S can be observed through a number of techniques, such as various scanning techniques, lesion studies, single cell recordings, brain surgery and autopsies. Evolutionary psychology has almost exclusively focused on B (e.g. the primer). This is not a wise move in an environment with so many hypothetical assumptions.

Before we start to look for an extra hypothesis concerning the environment of evolutionary adaptation for any uniquely human cognitive function, F, we should expect to find:

- 1) A neural structure, S, reliably producing the stipulated cognitive function, F, under certain input conditions causing a range of behaviors B1..Bn.
- 2) S should be unique to humans
- 3) All instances of B1..Bn should be caused by S through F

⁵³ For a short and accessible introduction presenting these thoughts, confer the primer on the web-site for the Center for Evolutionary Psychology (<http://www.psych.ucsb.edu/research/cep/primer.html> (28 February 2007))

⁵⁴ The different levels: behaviour, cognitive function and neural structure are based on the classic distinction between levels of analysis in cognitive science made by David Marr (Marr 1982).

The first point is the causal nexus of the argument explaining the existence of any given evolved cognitive function. Usually evolutionary psychology is manipulating B in psychological experiments to infer properties of F. Thus a difference in cognitive function is inferred from differences in behavior. Tooby & Cosmides for example found that subjects performed differently in the “Wason selection task”, when the problem was framed as a social problem instead of a logical problem (Cosmides & Tooby 2005: 597).

The second point naturally only goes for neural structures causing behaviors specific to humans. Behaviors related to religion are by most accounts such. Behaviors we share with animals would not include this clause.

The third point is trickier. It amounts to distinguishing homology from analogy. It is possible that two apparently identical behaviors have different neural substructures, in which case they are analogous. This is the case for example of ritualized behavior, which is similar to obsessive ompulaory disorder and normal routine behavior. While routine behavior is analogous to ritualized behavior, obsessive ompulaory disorder seems to be homologous (Boyer & Lienard 2006: 606). When they are analogical features, they need two different explanations. The evolutionary psychology account has to make sure that the behaviors are homological or must assume that they are. An example is doing the “Wason selection task” in terms of a social problem, must be homological, or assumed to be homological, with actual social problem solving tasks in real life.

While a number of scholars have used some sort of hyperactive agency detection I will focus on only two examples namely Scott Atran & Ara Norenzayan and Justin L. Barrett. Let me just shortly mention those left out: The anthropologist Stewart Guthrie’s account is the first, but he does not think of agency detection as primarily a cognitive function, but rather as a perceptual function (Guthrie 1980; Guthrie 2004; Guthrie 1993; Guthrie 2001). Pascal Boyer does not explain the function with recourse to agency detection per se, but instead with reference to a tendency of the cognitive system to search for relevance and agentive concepts since they can produce more inferences than non-agentive. The explanation is thus made with recourse to a cost/benefit algorithm working as a system property of the mind, rather than to hyperactivity (Boyer 2001; Boyer 1996). The explanation is clearly compatible with the HADD, but does not depend on it.⁵⁵

⁵⁵ I do believe that these arguments suffer from other set backs, but space does not allow me to treat them thoroughly.

Let us presently consider how hyperactive agency detection works according to experimental psychologist Justin Barrett: According to Justin L. Barrett: “Part of the reason people believe in gods, ghosts and, goblins also comes from the way in which our minds, particularly our agency detection device (ADD) functions. Our ADD suffers from some hyperactivity, making it prone to find agents around us, including supernatural ones, given fairly modest evidence of their presence. This tendency encourages the generation and spread of god concepts” (Barrett 2004: 31). This is what he terms the Hyperactive Agency Detection Device or HADD (32). Examples of when the HADD is active include: Hearing a bump in the night (31), perception of geometric objects moving by themselves (32), perception of a wispy form (33), a computer malfunctioning (33), perception of crop circles (37). To this we might add all representations of “gods, ghosts and goblins”. I do want to add that Barrett does not say that the HADD is the whole story, he actually has several chapters explaining other important factors, but he does say that it is the central function.

According to cognitive anthropologist Scott Atran and social psychologist Ara Norenzayan: “Widespread counterfactual and counterintuitive beliefs in supernatural agents can be explained by the fact that they “(..) trigger our naturally selected agency-detection system, which is trip-wired to respond to fragmentary information, inciting perception of figures lurking in shadows and emotions of dread and awe” (Atran & Norenzayan 2004: 714). While they call it the agency-detection system, it is the same basic explanation as Barrett gives for the HADD. Examples of when this system is active are: Dots moving on a screen, voices in the wind, faces in the clouds, any complex design, the image of Mother Theresa in a cinnamon bun, the virgin of Guadeloupe in a melted ice cream on the pavement, the Virgin in windows, curtains and television afterimages, the face of the Evil-One in the smoke of the World Trade Center (Atran & Norenzayan 2004: 719), sudden movement of an object stirred by the wind, representing ghosts or gods (720).⁵⁶

Since belief in superhuman agents by these accounts qualify as uniquely human, all three points mentioned above must apply to the HADD. Religion is considered a by-product of human cognitive functions. According to Barrett and Atran and Norenzayan the proper function⁵⁷ of the HADD was to detect and evade predators, the by-product is a susceptibility

⁵⁶ Atran and Norenzayan do have some other nuances than Barrett does and their explanation also incorporates emotions, but these are not relevant for the present purposes.

⁵⁷ I am using the notion of proper function in the sense given by the American philosopher Ruth Garrett Millikan (Millikan 1984: 28-33). Millikan has a longer philosophical justification for the term, but to put it

to infer superhuman beings. Let me highlight four representative examples of situations in which the HADD is stipulated to be activated as a sort of benchmark⁵⁸:

B1 the sudden movement of a twig in the forest leads to the inference of ghosts, which can be seen in subsequent caution, sacrifice or stories relating the event.

B2 the perception of crop-circles leads to the inference of aliens, which can be seen in stories about the aliens communicating their far advanced technologies to us.

B3 prayer activating the inference of a god listening, which can be seen from the communicative behavior in a context where there is no one to communicate with.

B4 Reading the book of Genesis in the Bible, which leads to talk about the design of nature.

These four examples are, or lead to, behaviors involving superhuman agents. We have four distinct behaviors B1-B4, which are the explananda. Either the HADD is activated in B1-4 or it is not the most parsimonious explanation. Now let me jump to the first point, the neural structure. We should expect to find a neural structure which reliably produces hyperactive agency detection, and, which is specific to humans.

The classic example of hyperactive agency detection, mentioned by Barrett and Atran and Norenzayan, is the Belgian psychologist Albert Baron Edouard Michotte van den Berck's, more commonly known as Albert Michotte, experiments from the 30s and 40s (cf. Michotte

plainly the proper function is the function of a device when it works, that is, when it is not a false positive.

⁵⁸ I will term them B1-B4 because the empirical measure is some sort of behavior. In some of the examples the behavior is a product of something perceptual (B1, B2 and B4) while B3 does not include anything perceptual. B1 includes movement while this is not the case in the others. These examples have been chosen to indicate the breadth of the claims about the conditions under which the HADD is activated.

1963). Michotte had subjects watch a screen on which dots were moving. When they were moving freely, apparently self-propelled, and reacted to other dots, subjects were inclined to infer mental states to the dots such as chasing, helping etc. This obviously suggests some sort of hyperactive agency detection. A good portion of neurological research has been dedicated to this function (Blakemore et al. 2003; Blakemore & Decety 2001; Decety & Grezes 1999; Frith & Frith 2001; Grezes et al. 2001). It is usually referred to as detection of biological movement, and the neural structure responsible for this is the superior temporal sulcus, or STS. While most studies have focused on its activation by visual stimuli, a recent fMRI study has showed that part of the STS is also activated by auditory stimuli (Bidet-Caulet, Voisin, Bertrand, & Fonlupt 2005a). There are lateral specializations in the STS (Blakemore et al. 2003b), and also some substructures sub-serving specific sub-functions (Bidet-Caulet, Voisin, Bertrand, & Fonlupt 2005b; Goodale & Milner 1992; Grezes et al. 2001). Indeed this neural structure would account for B1, where something is moving, but not B2-4, where nothing is moving. Thus it cannot be the S explaining the existence of the HADD. There is also another problem, namely, that it is not unique to humans.

Another possibility is that the so called mirror neuron circuit is responsible for the hyperactive agency detection. Mirror neurons are a type of neuron found in the ventral pre-motor cortex in macaque monkeys (Gallese et al. 1996). They have the special property that they are activated both by the perception of a movement and the execution of a movement. This has been seen as the basis of mentalizing or empathy (Gallese 2001).⁵⁹ Comparable findings have been reported in homologous areas in humans. These areas were found to be active during perception of a movement, execution of the movement, but also in the imagination of the movement (Jeannerod 1999). Thus mirror neurons could enable us to simulate a non-present agent. This would account for B3- 4, where some sort of simulation of an agent takes place, but it wouldn't explain B1. Mirror neurons are not either very hyperactive, and they seem to function at a very low and boring level of mere movements. Another problem is, as mentioned, they are found also in monkeys, even macaques. Consequently the mirror neuron circuit cannot be the S of the HADD

We could then stipulate that the superior temporal sulcus (STS) and ventral pre-motor cortex (PMv) together formed a distributed neurological instantiation of the HADD. There are two objections to this. First, the mirror neuron circuit is not hyperactive at all; at least not

⁵⁹ For recent criticism of this see (Jacob & Jeannerod 2005)

in the sense stipulated by Barrett.⁶⁰ It is also a pretty pedestrian movement centered system that does not care much about the mental states or long term goals of the perceived agent. Second, this system is not in any obvious way unique to humans.

In conclusion we can say that we have not been able to find an S which reliably produces hyperactive agency detection leading to behaviors B1-4. While there is ample evidence of hyperactive agency detection, the HADD is not the most parsimonious explanation of why the belief in superhuman agents and their associated behaviors is widespread among humans.

A possible way out of the problem would be to focus more clearly on the central function before we eagerly make up some evolutionary scenario. What we really want to know is why humans have a tendency to interact with physical entities as if they were intentional or related to a hidden intentionality. This central function I believe is most precisely put by Daniel Dennett, who calls this “taking the intentional stance”: “first you decide to treat the object whose behaviors is to be predicted as a rational agent; then you figure out what beliefs the agent ought to have, given its place in the world and its purpose. Then you figure out what desires it ought to have on the same considerations and finally you predict this rational agent would act to further its goals in the light of its beliefs” (Dennett 1987: 17).⁶¹ This indeed seems to be a hyperactive function, that is, a function with many false positives, as Dennett already pointed out in the seventies.⁶² We should then instead talk of a hyperactive intentionality detection device or a HIDD. Let us see if this move will fare better than the HADD.

In a series of fMRI studies neuropsychologists Helen L. Gallagher, Christopher D. Frith, Uta Frith and colleagues have tried to find out what happens neurologically, when people take the intentional stance (Gallagher et al. 2000; Gallagher et al. 2002). Previous studies have shown a discrete system involved in theory of mind (ToM) tasks, but all of them were off-line, that is, reflective tasks like narrative comprehension. To isolate the intentional stance in on-line processing, they asked subjects to play a computerized version of the game stone, paper, scissors. One group was told that they were playing against an experimenter,

⁶⁰ Although some sort of hyperactivity has been detected: activity in left PMv was detected in subjects viewing tools, and implied movement (Chao & Martin 2000), but these are more commonly interpreted as being simulations of the affordances of the object at hand. Further, strictly speaking these are not mirror neurons, but so called, "canonical neurons". This would not explain B2 and B3

⁶¹ I think a more contemporary reading of the quote would substitute rational with intentional.

⁶² The article in which Dennett presented the idea of the intentional stance, “True Believers: The intentional Strategy and Why it Works” republished in *The Intentional Stance*, was from 1979 (Dennett 1987: 13)

another that they were playing against a computer using a predetermined rule-based strategy, while a third was told they were playing against a random sequence. The first group was thus prompted to take the intentional stance toward the game, reflecting quite accurately what takes place in most religion. What the participants didn't know was that all three groups were in fact playing against a random sequence. Therefore the only real difference between the groups was the stance taken by participants towards the task. The results showed increased activation in just one area, which had also been activated in all other mentalizing studies: the anterior paracingulate gyrus (PCC) (Gallagher et al. 2002).

Now let us consider whether the stipulated neural structure could cause all instances of the behaviors we wished to explain:

B1 the sudden movement of a twig in the forest leads to the inference of ghosts, which can be seen in subsequent caution, sacrifice or stories relating the event.

This would amount to biological movement, since this is characterized by being movement by and of itself. Castelli and colleagues used animations of two characters, a blue triangle and a red triangle, to investigate the neural activation in ToM tasks (Castelli et al. 2000). In some animations the triangles were interacting intentionally like dancing together, chasing each other or imitating each other, while in others they were bouncing off the walls like billiard balls (Castelli et al. 2000: 316). The study showed strong activation, among other places, in the PCC (Castelli et al. 2000: 319).⁶³

B2 the perception of crop-circles leads to the inference of aliens, which can be seen in stories about the aliens communicating their far advanced technologies to us.

Crop circles are traces of agency, or have evidence of design, as Barrett calls it. That is they seem non-random. One study by Gallagher and colleagues might show something similar (Gallagher et al. 2000). They used cartoons without any text. This is perceptually similar in

⁶³ The study mentions the medial prefrontal cortex, but the PCC is a sub-part of that area.

that you have straight lines in a non-random order. They showed that these cartoons activated the PCC, but other cartoons did not (Gallagher et al. 2000: 19). This indicates that we probably have another variable here, which needs further investigation.

B3 prayer activating the inference of a god listening, which can be seen from the communicative behavior in a context where there is no one to communicate with.

Prayer is the same as interacting with non-present agents. This was shown in the already mentioned study of Gallagher and colleagues, where a game of rock, paper scissors was played with a non-present agent. Something similar was also shown by a study of McCabe and colleagues, where subjects were told they were playing a game against another person (McCabe et al. 2001). This study also showed increased activity in activation of the PCC.⁶⁴

B4 Reading the book of Genesis in the Bible, which leads to talk about the design of nature.

Reading the Bible like any other book is a matter of story comprehension. A couple of studies have shown that the PCC is activated in such tasks (Fletcher et al. 1995; Gallagher et al. 2000). There might of course be differences in neural activation in reading the bible, but what concerns us here is that reading will activate the PCC.

In conclusion we can say that the stipulated neural structure responsible for our cognitive function, the HIDD, is indeed activated in the different behaviors we wished to explain. The key here is that there are different ways of activating this function. Earlier it has been assumed more or less tacitly that agency detection was stimuli driven, but the above mentioned studies indicate that it can just as well be context driven.

But how far is this uniquely human? The anterior cingulate cortex, of which the PCC is considered to be part, is an ancient structure belonging to the limbic lobe. This would immediately indicate that the neural area is not even specific to primates, but an unusual type of projection neuron (spindle cell) is found here. It is found only in higher primates, not in

⁶⁴ Also here the designation is medial prefrontal cortex (cf. previous note)

monkeys. There is evidence that in humans this structure has undergone further evolution from the primates (Gallagher & Frith 2003: 80). This is consistent with a uniquely human structure. Second, this type of neuron is not present at birth in human children. It doesn't appear until around 4 months of age, which would give some clues to the delayed development of mentalizing capabilities in infants (cf. Meltzoff & Prinz 2003).

The proposed HIDD, or just taking the intentional stance, fits all the criteria stipulated in the beginning: it has a well defined neural structure (PCC), which reliably produces the cognitive function (intentionality detection); it is uniquely human, which can be seen neurologically from recent mutation after the phylogenetic departure from the great apes; all instances of the behaviors B1-4 was found to be consistent with activation of the neural structure. The widespread belief in and interaction with counterintuitive agents is thus more parsimoniously explained by a HIDD than a HADD.

This, however, is not the end point of the investigation. It is merely the starting point. The next problem is the conditions of activation of the HIDD in all the different contexts in religion. As we saw there are many different ways of activating the HIDD. What is crucial for the present purposes is that in divination the activation is done with the aid of ritualized action. This turns the perceptual patterns produced by the divination ritual into intentional, or more precisely, communicative signs to which the interpreter takes the intentional stance. Let us now consider the next step: how these intentional signs become communicative and how they are interpreted.

Communicative basis

Previous treatments of divination have not been blind to the communicative basis of divination. There have been two general trends. One trend has followed a basically systemic understanding of the sign interpretation in divination, where great care has been put in understanding the symbolic properties different divination systems (Adler & Zemléni 1972; Turner 1961; Vernant 1974). They have typically been treatments of divination systems with a rich symbolism and multiple meanings. Another trend has focused on the concrete interpretation in a situational context (Mendonsa 1982; Park 1963; Shaw 1985). These studies have been more interested in social processes than the symbolic aspects of divination. These two different approaches parallel two distinct ways of conceptualizing communication

in western thought, which Dan Sperber and Deirdre Wilson have called the “code model” and the “inference model” respectively. I will here follow their exposition of these two as I believe they apply well to the approaches in previous divination research and also because I will use Dan Sperber and Deirdre Wilson’s Relevance Theory as my basis.⁶⁵

Already in his little book *Le symbolisme en general* from 1974⁶⁶ anthropologist Dan Sperber criticized an understanding of communication, which had been prevalent for more than 2000 years: that language was best seen as a code. According to this view a message is encrypted in linguistic symbols by the sender and then subsequently decrypted by the receiver (Sperber 1975: 14). This basic communication model he found among those he termed symbolists, who were those practicing symbolic anthropology, structuralism and Freudian psychology. According to Sperber the relation between sign and meaning is not constant as assumed by the code model of communication (Sperber 1975: 85). He pointed out that it was difficult to account for idiosyncratic interpretations on that model. Another problem is how anybody could ever learn the language since it seems to be necessary to know the code in advance in order to learn it. This criticism is followed up in *Relevance: Communication and Cognition* coauthored by linguist Deirdre Wilson from 1986 (Sperber & Wilson 1986).

The other extreme is identified as the inference model. Whereas the code model relies on an idealized sentence, the inference model is more realistic since it is designed to understand concrete utterances. A sentence can have a common semantic core regardless of where it is uttered. It will nevertheless mean something different according to the context in which it is uttered. This meaning has to be inferred. There is a common core to the sentence “I will come tomorrow” meaning a person coming at a certain day, but the actual meaning is dependent on who utters the sentence and when. The meaning is thus filled by inference from the context (speaker and time) (Sperber & Wilson 1986: 10). While this model is good at accounting for the local situational meanings of communication, it has problems accounting for the semantic stability of sentences. Therefore Sperber and Wilson conclude that it is not sufficient either.

⁶⁵ The reason I have chosen relevance theory is not that it has solved all problems regarding communication. Indeed there are several valid criticisms that can be raised against the original formulation (Levinson 1989), but five aspects are in its favor: first, during the 20 years since its original formulation it has produced a solid body of experimental evidence in its favor. Second, it connects very well with other cognitive theories such as for example work on theory of mind (Tomasello 1999). Third, it is already the basic communication model used in the cognitive science of religion (Boyer 2001). Fourth, it is not tied to only linguistic communication. Fifth, the basic idea of relevance has already been applied in divination research (Abbink 1993; Zeitlyn 1990).

⁶⁶ The English translation *Rethinking Symbolism* (Sperber 1975) is used here.

Sperber and Wilson programmatically claim: “We will try to show that this line of reasoning is invalid. It is true that a language is a code which pairs phonetic and semantic sentences. However, there is a gap between the semantic representations of sentences and the thoughts actually communicated by utterances. The gap is filled, not by more coding, but by inference” (Sperber & Wilson 1986: 16). Relevance theory is therefore an alternative to these two models and appears to be a more psychologically plausible synthesis. Instead of simple coding or simple inference, Sperber and Wilson stipulate that a linguistic coding consistent with a number of different interpretations takes place. The proper interpretation is then found with the aid of inference (Sperber & Wilson 1986: 27; Wilson 1999: 719). The theory is limited to what Sperber and Wilson calls “ostensive communication” (158) or “ostensive inferential communication” (50-54).⁶⁷ The means for this form of communication is most often, but most importantly not always, language. The ostensive communicative act can be done by any perceptual means: pointing, smiling, arranging the flowers or whistling. As a general term for the means for communication they use the psychological term stimulus. This is understood as “(..)any modification of the physical environment designed to be perceived” (Sperber & Wilson 1986: 29). While this description focuses on the part of the sign producer or the communicator, the interpreter can only identify a communicative stimulus by taking the intentional stance toward this modification of the environment.

Ostensive inferential communication arises from two basic assumptions: first, that the communicator has an informative intention: “To make manifest or more manifest to the audience a set of assumptions” (Sperber & Wilson 1986: 58). Second, that the communicator has a communicative intention: “To make it mutually manifest to audience and communicator that the communicator has this informative intention” (61). By assumptions is meant: “(..) thoughts treated by the individual as representations of the actual world”(2) and by manifest: “A fact is manifest at a given time if and only if he is capable of representing it mentally and accepting it as true or probably true”(39). The identification of a communicative intention picks out a sign as specifically communicative. According to cognitive psychologist Michael Tomasello, this function is at the basis of language and it is carried out by the cognitive ability of humans to have joint-attention to something (Tomasello 1999: 96).

⁶⁷ They do see exceptions to ostensive inferential communication. One such is morseing (Sperber & Wilson 1986: 158). This is a bit strange since morseing is just a recoding of other linguistic signs (letters) and it still needs to be interpreted.

Let us consider an example. Peter sees a balloon up in the air. Peter turns towards Michael and utters “there is a balloon up in the air”. The informative intention is to make it manifest to Michael that there is a balloon in the air, and the communicative intention is seen in Peter turning towards Michael and uttering the sentence. Detecting the communicative intention seems equivalent to taking the intentional stance and identifying the intention as communicative. The next step is to interpret the informative intention. It could be said that the communicative intention expresses *that* something is communicated and that the informative intention expresses *what* is communicated.

According to Sperber and Wilson an act of communication always carries with it the presumption of optimal relevance: “(a) The set of assumptions (I) which the communicator intends to make manifest to the addressee is relevant enough to make it worth the addressee’s while to process the ostensive stimulus. (b) The ostensive stimulus is the most relevant one the communicator could have used to communicate (I) (..) Every act of ostensive communication communicates the presumption of its own optimal relevance” (Sperber & Wilson 1986: 158). This means that the recognition of a communicative intention automatically activates the assumption that the communicative stimuli are the most relevant in expressing what it is the communicator wants to express. In the example with Peter and Michael from before, Michael recognizes a communicative intention and interprets the sentence according to the words. These words are the most relevant to express that there actually is balloon up in the air, not that it will rain or that TV is bad for your eyes. These thoughts may have been what Peter actually wanted to express, but because of the relevance principle it did not go through. There are other ways Peter could have communicated the same, for example by tapping Michael on the shoulder and pointing at the balloon. Or he could just have blinked his eye if they had on beforehand agreed that an eye blink should serve as a signal that a balloon was in the sky. One stimulus can thus have several different meanings and several different stimuli can have the same meaning.

Relevance Theory is a cognitive communication theory, which seeks to integrate insights from previous theories and it has held up relatively robustly in the 20 years since its original formulation. Since the basis of Relevance Theory is to read other peoples intentions, this connects very well with the large and expanding field of research in cognitive science on the topic of Theory of Mind.⁶⁸ The most important insight offered by relevance theory is that

⁶⁸ Theory of Mind is also known as mentalizing or empathy and covers the branch of cognitive science that tries to understand how we understand other minds. The concept of Theory of Mind can be traced to an article

humans communicate by producing signs which have the goal of making thoughts known to the interpreter. These signs are recognized as communicative by the interpreter and interpreted according to the relevance principle, thereby extracting the information initially intended by the communicator.

In divination, then, the HIDD is activated by the ritualized action. This indicates an intention behind the signs. Because of the question initially formulated, the interpreter will further identify these signs as having a communicative intention. The informative intention is found by the principle of relevance with the aid of the different possible meanings of the signs produced and the context determined by the motivation of the questioner.

Restricted symbol system

Although the basic principles of communication are used in divination there are also important differences. A divinatory sign system differs from a linguistic sign-system in several different ways. A normal English speaker knows between 30000 and 60000 different words. In comparison the richest divination system, the West African Ifa⁶⁹, operates with 256 different signs (Bascom 1969) and the simplest operate with two different signs such as for example the poison oracle among the Azande (Evans-Pritchard 1937). It is obvious that the system is much more restricted with regard to the number of signs than normal language.

This connects well with another aspect that differs from normal communication. The relation between a sign and its meaning is less firm; it is less “coded” than words typically are. More meanings are attached to the individual symbols. This implies that a lot extra “inference” will have to take place on the part of the interpreter. An example of the multiplicity of meanings can be seen from Victor Turners fieldwork among the Ndembu. In Ndembu basket divination a number of symbolic objects are contained in a basket and from their configuration the information sought can be interpreted. Turner asked his informants about what the individual symbols meant. For the symbol *yipwepu*, which is physically

on Chimpanzees from 1978 by psychologist David Premack and primatologist Guy Woodruff (Premack & Woodruff 1978). This was turned into a problem of human psychology by the philosopher Daniel Dennett in the commentary to the article. Here he suggested, what would later become known as, the false belief test (although he called it mistaken belief) (Dennett 1978: 569). This test illuminated the principle of people having beliefs about other people’s beliefs and has had central significance for the development of the Theory of Mind research in developmental psychology, meta-cognition and autism (Baron-Cohen 1995; Gopnik & Astington 1988; Leslie 1994; Premack 1990; Tomasello et al. 2005). In recent years the field has seen an explosive expansion.

⁶⁹ It should be mentioned that the so called rhapsodomantic practices where a section of text is the sign, seem to be exceptions (Petersen 2007). The same can be said of ecstatic or oracular divination forms. These forms simply use language as their sign system.

pieces of a calabash, his informant Muchona explained that it could mean: Water, marriage, any part of a calabash, cup, matrilineage, the things a woman brings into a marriage, beer, cassava mush with bad medicine, grudge, a journey, collection of goods, a man's possession, a person who has left because of a quarrel, horns with medicines, and an assemblage (Turner 1961: 58f).⁷⁰ This under-specification of the relation between sign and referent also makes the actual interpretation less fixed and more open for later reinterpretation. This is, however, not generally the case for the binary techniques that merely denote a yes or a no. Nevertheless, even these cases require further inferences that alter the meaning of the original sign (Garfinkel 1967; Zeitlyn 1990). Summing up, we can say that divination systems differ from linguistic systems in that they are more “under-coded” and the relations between signs and meaning are looser. This necessitates extra inference and more possible meanings.⁷¹

Utility

Compared to normal communication, the utility of the information produced in divination practices is usually also restricted in different ways. In practice a given divination practice will usually be restricted by the form of the response and by the subjects it can answer. The form of the answers can be either binary, discrete or rich. A binary response is an either/or answer. The discrete form works by selecting one possibility from a finite number of given possibilities and the rich form is a more elaborate form that allows for many details in the interpretation. Some divination practices are very specialized and can answer questions about a very restricted range of subjects. I will call them restrained forms. Others are more open and all purpose. These characteristics determine the utility of the divination practice. We can sketch the different possibilities in a two by three matrix (table 4.7.)

	Form	Binary	Discrete	Rich
Subject				
Restrained		Mapingo	Straws	Astrology
Open		Poison oracle	Ifa	Palmistry

Table 4.7 Utility characteristics of divination practices

⁷⁰ It should be stressed that taken out of context these meanings seem unnecessarily arcane. The explanations offered by Muchona for all these meanings show clear signs of a lot of “inference” which makes them understandable.

⁷¹ Other differences could be added: whereas language has grammar, the “grammar” of divination is much more restricted. The basic conclusion is the same, that extra inference is necessary.

Let us consider some examples of the different combinations. An example of a restrained binary form is the *mapingo* oracle among the Azande. It is a technique involving manipulation of three pieces of wood. Depending on whether they stand or fall they will give a yes or no answer. Adult males only use it in choosing a site for a homestead (Evans-Pritchard 1937: 358). Consequently the subject is restrained and the form of the answer is binary. Among the Azande they have several other binary forms of divination. The most important is the poison oracle. Contrary to the *mapingo* oracle the range of subjects that can be posed to it is open (Evans-Pritchard 1937: 261f). These two types of divination have very different utility because one is open and the other restrained. An intermediary form is the discrete form. An everyday example is drawing straws. It is usually used to determine who should do something. A number of straws equal to the number persons in the draw are arranged in the hand. They are of different lengths, but the lengths are hidden. Whoever draws the shortest straw is selected. This is an example of a restrained discrete practice. An open discrete practice is the Ifa oracle. Here one of five different alternatives are chosen to determine which type of fortune or misfortune will come, but it is a matter of further interpretation to find the specifics (Bascom 1969: 54-57). Another example of an open discrete practice is tarot cards. Modern astrology is restricted in the subject, since it can only give information about the questioner's life, but the form is rich since the amount of detail is potentially infinite (Munk 2007). An example of an open and rich form of divination is Japanese palmistry. In modern day Japan palmistry is the most popular form of divination, since it provides a rich basis for interpretation and the opportunity to pose any question (Suzuki 1995: 264).

The utility characteristics of a divination practice are important in order to understand the success or failure of it in a given society. How often it is useful in a given population will determine the growth potential. If a given practice is hopelessly restrained in the subjects that can be addressed it probably will not be very widespread. On the other hand if exactly this specific subject is very important or arises very frequently it may become very widespread. A given practice may also produce information in a specific form, such as binary, but the need may arise frequently for more detailed information. In this case a divination practice with a rich form will have an advantage. There are many possibilities and it is not possible in

advance to say which utility characteristics are good, since the demand may differ widely across societies.

Credibility

A central question of much divination research has been why people believe in it. Now we are in a position to begin unlocking the riddle. In the beginning of chapter 3 we established that divination was a way of acquiring information by proxy. A large amount of human knowledge is acquired in this way through communication from other persons. We should therefore look at the psychological mechanisms for evaluating the credibility of information received from other persons. How do we assess information such as “the Earth’s climate is endangered by human influences”? Common sense tells us that we would assess the credibility of this sentence differently depending on whether we were told this by a cleaning lady or by a university professor. But why exactly and what is the difference? In a recent review of the evaluation of testimony from others, psychologists Bergstrom, Moehlmann and Boyer conclude that “Surprisingly, there is no tradition of empirical cognitive research into the process whereby the identity of a speaker results in an evaluation of reliability” (Bergstrom, Moehlmann, & Boyer 2006: 536). While that is correct it is still possible to learn something from various sources of previous research.

If we start from the everyday example above; what makes a university professor more credible than a cleaning lady? A working hypothesis could be that it is the prestige of the professor that gives him more credibility. This is the suggestion of evolutionary anthropologists Joseph Henrich and Francisco Gil-White. They suggest that prestige in general is an important bias in cultural transmission. Prestige is understood as standing or estimation in the eyes of people (Henrich & Gil-White 2001: 167). It is important to distinguish prestige from dominance. They explain “(..) *prestige* processes as an emergent product of psychological adaptations that evolved to improve the quality of information acquired via cultural transmission. Natural selection favored social learners who could evaluate potential models and copy the most successful among them” (Henrich & Gil-White 2001: 165). Prestige is seen as a cue to success. It is stipulated that a psychological mechanism exists for copying models from prestigious individuals. Models can be anything from preferences to behavioral patterns. In this case the model is information. Information stemming from a prestigious individual is therefore more credible.

Henrich and Gil-White supply precise empirical criteria to distinguish prestigious individuals: Prestigious individuals can be distinguished by certain cues such as 1) the amount of freely conferred benefits and displays an individual receives, 2) by observing wealth, such as hunting returns, 3) the state of health and lack of disfiguring and 4) the age and sex, that is, old and male (Henrich & Gil-White 2001: 175f). There are different ways of measuring credibility, but in general something that influences behavior may be a solid indicator. I have chosen to focus on credibility value as a measurement of a piece of information's credibility. Credibility value falls on a continuum and is used to designate the value or resources a person would risk on the information being not true. It is of course important that a person *says* he believes something, but he might be lying or affirming an identity as a believer or something else than actually really believing. What seems more precise as a measure of depth of belief is what that person is willing to risk on that belief being true. The more he is willing to risk the higher the credibility value of the information.⁷² If a person says he believes in the horoscope in the paper it is relatively difficult to make anything of that belief and how deep it is held. If for example the horoscope warns him to stay indoor today and he knows that it would get him fired if he didn't show up for work, we would have a situation were we could evaluate the credibility value the person attaches to the horoscope. If it is low he will go to work anyway and if it is high he will stay indoors and risk getting fired. What is important, is what the person risks by acting in accordance with the information.

We can now state the hypothesis that the credibility of information known through another person will depend on that person's prestige. A number of different studies allow us to investigate this.⁷³ The biggest group of studies involves opinion or attitude change. They do not approach credibility directly, but it is here assumed that opinion change depends on the new opinion being based on more credible information. Opinions should change more easily from credible than from non-credible information. In these studies the changes of opinion are measured depending on whether the information given is represented as coming from a prestigious source or from a non-prestigious.

Psychologist Richard M. Ryckman and colleagues made a study of opinions about student activism (Ryckman, Sherman, & Rodda 1972). They wanted to study the amount of influence

⁷² There may be some connection with costly signaling theory, but space unfortunately does not permit us to follow this idea. See however (Bulbulia 2004).

⁷³ All of these studies were carried out in the 60s and 70s and were designed to test other theories such as cognitive dissonance.

on opinion change produced by a high prestige source either with relevant or irrelevant expertise. In the beginning the participants' opinion of student activism was measured. They were then introduced to a faculty member who was introduced either as having irrelevant expertise (about the Chinese Ming Dynasty) or as having relevant expertise⁷⁴ (about Student Activism). A number of questions were read aloud and the faculty member should answer to the question first. This answer was visible to the participant who was subsequently asked to answer as well. The result was that participants exposed to the high prestige source changed their opinion significantly more than a control group not exposed to any high prestige source. More importantly, the participants seemed to be influenced by prestige even when the source did not have relevant expertise (Ryckman, Sherman, & Rodda 1972: 111). It seems that a high prestige person in himself influences credibility regardless of whether the person has any expertise on the subject.

A similar study focused in more detail on the difference expertise had for evaluation of information. It was carried out by psychologists Ramon J. Rhine and Robert M. Kaplan. They investigated participants' opinion about the amount of sleep humans needed. They introduced different levels of discrepancy between the participant's attitude and that communicated to them. The information about the amount of sleep needed was framed as coming from either a high prestige but no expertise source (a professor of law), a high prestige with expertise source (a professor of biology) and a low prestige no expertise source (a private from the US Army). The results showed that the biology professor and the private could better get away with very discrepant utterances (such as only 0 hours of sleep was needed) than could the law professor, without reflecting badly upon ratings of their personality and intelligence. The reason is probably that the biology professor was protected by his expertise, while nothing was expected of the private anyway because of his low prestige. But because of his high prestige it was expected that the law professor would not make such incredulous claims (Rhine & Kaplan 1972: 264). There seems, therefore, to be some distinction in high prestige sources on the basis of relevant expertise. Relevant expertise seems to heighten credibility.

This aspect is more thoroughly investigated in a study by social psychologist Elliot Aronson and colleagues (Aronson, Turner, & Carlsmith 1963). They used opinions about poetry. First the participants read a number of stanzas and were asked to rate them. Then a supposed essay on poetry was read. It was introduced as authored by either a highly credible

⁷⁴ Expertise is here and in the following used to designate knowledge of a specific area.

communicator (T.S. Elliot) or a mildly credible communicator (a student of English literature at a High School teachers' College). These sources are equal to a high prestige/expertise and low prestige/expertise communicator. They found that communications by mildly credible communicators can influence opinion change up to a certain degree of discrepancy between personal views and those expressed by the author essay. If the discrepancy between the participant and the low prestige/expertise source becomes too high it ceases to produce opinion change (Aronson, Turner, & Carlsmith 1963: 34). This was not the case for the high prestige/expertise source. The prestige of the source thus has a limit to its credibility depending on how discrepant from the expectations it is. Further it can be seen that expertise is not as strong a factor in assessing credibility as is prestige since both sources had expertise.

All the previous studies mentioned have been carried out with American students, but cross-cultural evidence also exists. Psychologist Elliot McGinnies & Charles D. Ward gave participants in 5 different countries (USA, Sweden, Australia, New Zealand and Japan) an essay arguing for the expansion of borders into the sea. One group was told the author was an expert on international law with a doctoral degree. A second group was told that he was a journalist at a neo-Nazi newspaper with no specific knowledge of maritime law. A third group was not given any description of the author. They were then asked to rate their attitude toward expanding the borders into the sea. The results were a significantly higher rating for the doctor group compared with the journalist group for all countries (McGinnies & Ward 1974: 366). There was however no significant difference between the control and the doctor group (369). This could indicate that the subjects either assumed that the essay was written by a knowledgeable source as in the first group, or that information without any representation of its source is seen as true by default. The last point has also been suggested by others (cf. Bergstrom, Moehlmann, & Boyer 2006: 532). That would indicate that credibility is automatically assumed. This cannot, however, be the case in all instances since the study by Rhine and Kaplan above used a control group who were not told about the author. Here there was a distinction between no source and a high prestige source.

Since all the previous studies do not address the effect of prestige on credibility directly, I did a study to ascertain whether differences in prestige resulted in differences in credibility. As part of a questionnaire 90 Danish high school students, 40 Male, 50 female, 16-21 ($M = 18.24$, $SD 1.34$)⁷⁵ were asked to rate how likely the predictions of 20 different categories of

⁷⁵ This was part of the second part of the booklet handed out in Experiment 1 and 2 in above. The method and procedure is described there. It thus followed a task on the credibility of divination, so it could be said that the

persons⁷⁶ were to come true.⁷⁷ The most credible was the doctor followed by the professor. The least credible was the 6th grader followed by the cleaning lady. We may recall that one of the empirical characteristics of prestige was age and sex, where low age and female gender were associated with low prestige. This fits with the two lowest scoring categories in this study. High age and male gender belonged to high prestige. While this is not guaranteed for doctors and professors, most doctors and professors are male and comparatively old. They are also comparatively wealthy (I don't know about hunting returns though). Further, the professor was frequently used as the high prestige source in the other studies. It is therefore possible to say that the professor and doctor are typical high prestige persons and that the 6th grader and Cleaning Lady are typical low prestige persons.

	6 th Grader t	Cleaning Lady t**	Professor t**	Cohen's d	Doctor t**	Cohen's d
6 th Grader		2,594	7,925*	1,06	8,805 *	1,95
Cleaning Lady			7,483*	0,58	7,903*	1,27
Professor					2,194	
Doctor						

Table 4.8 Difference in average rating of credibility between high prestige and low prestige persons⁷⁸

It can be seen from table 4.8. that high prestige persons are rated as significantly more credible than low prestige persons. The differences between low and high prestige are in all cases significant at the 1% level and effect size is large in general. It could be argued that for the doctor the participants implicitly rated the doctor's ability to predict the outcome of a disease, which they often successfully do. This would indicate that prestige was confounded. It is not impossible to rule out, but other items in the questionnaire seemed to indicate that doctors were also more credible in other contexts. Second, this would merely amount to a doctor being a high-prestige/expertise person known from the previous studies. Third, the

participants were primed to think in terms of credibility.

⁷⁶ The question was: "Følgende personer siger, at de kan forudse fremtiden. Hvor sandsynligt finder du det, at deres forudsigelser vil ske?" (The following persons claim to be able to predict the future. How likely do you find it that their predictions will come true?). The categories were: Numerologist, 6th grader, Chiropractor, Politician, Tarot Card Reader, High School Teacher, Priest, News Reader, Palmist, Doctor, Astrologist, Ophthalmologist, Cleaning Lady, Professor, Shaman, CEO, Clairvoyant, Parents, Spiritist, and Engineer.

⁷⁷ 15 responses were excluded from the study since the respondents had either circled the same answer for every person, or had failed to supply answers to one or more persons.

⁷⁸ *significant at the 1% level in a paired samples t-test, **df=74. Effect size is only calculated for significant results.

professors are not routinely attributed skills at predicting anything and they still had a significantly larger credibility. The study thus confirms the previous studies in the assumption that information obtained through high prestige sources is assessed as more credible than information obtained through low prestige persons.

It seems possible to conclude from these five studies that prestige is an important indicator in assessing credibility of information known by proxy: the credibility of high prestige > low prestige and the credibility of expertise > no expertise. It also suggests that prestige is more important than expertise in assessing credibility. Table 4.9. provides an overview of the studies reviewed here. This is naturally a preliminary result which awaits further research to clarify many issues.

	Low prestige		High prestige	
	No expertise	Expertise	No expertise	Expertise
Ryckman et al.			X	X
Rhine et al.	X		X	X
Aronson et al.		X		X
McGinnies et al.	X			X
Lisdorf	X		X	(X)

Table 4.9. Overview of studies on prestige and credibility

A few other studies add further to the picture of how prestige influences credibility. A study of Danny L. Moore and colleagues show that increasing the cognitive burden increases the effect of source credibility (Moore, Hausknecht, & Thamodaran 1986: 98). They tested a number of different factors and found that source credibility was the most important factor in determining credibility of a commercial; even more than argument strength. A last factor that deserves mention is past experiences with the person. Even children from 4 years track relatively accurately persons past performance and base judgments of their credibility on whether they have been credible in the past (Koenig, Clement, & Harris 2004).

Now that we have established that prestige is an important indicator in assessing the truth of information based on the communicator, we need to make one further distinction. Since all the above examples were about information from the person himself, we need to ask what if the information is presented as stemming ultimately from someone else. If Louise says: “I

heard from my professor that...” would it then make a difference to her credibility? We need to distinguish between the direct prestige from the proximate communicator (Louise) and the indirect prestige of the ultimate communicator (her professor). I have not been able to find research addressing this question. I therefore designed a study to determine whether such an indirect prestige effect would matter in divination, where the ultimate communicator is a counterintuitive agent. If the counterintuitive agent, associated with a divination practice, is of high prestige, it should be rated as more credible than if a low prestige one was associated. In order to test this, a story of the same form as in experiment 2 above was given.

Experiment 3

Participants 40 participants, 17 male 23 female aged 16-20 ($M=18,33$, $SD=1,3$), 77,5 % from the Western Copenhagen Region (Himmelev Gymnasium) and 22,5% from Esbjerg at the west coast of Denmark (Esbjerg Gymnasium). They were primarily Christian protestant (49%) and Non-believers (44%). Other religious affiliations were 7%.

Materials Above we saw that freely conferred gifts were one of the empirical indicators of prestige. This was used in this hypothetical story as an independent variable. One way of doing this was to manipulate the size of sacrifices, which can be considered gifts to the gods (Høgh-Olsen 2006): Low prestige god = sporadic offerings of dry bread, Medium prestige god = daily offerings of a meal, and High prestige god = sometimes elaborate festive banquettes of the finest food. As in experiment 2a fictive story was composed.⁷⁹ This story was situated among the fictive tribe Kalungi in West Africa. The main character had to find out the reason for his wife’s barrenness.⁸⁰ A prescript read: “The Kalungi in West Africa have different specialists, whom they often employ to reveal hidden causes of people’s misfortune. They are all considered reliable and have a good reputation.” The specialists were described as communicating with a god. The technique was not further specified. The only thing that differed between the different specialists was the amount of sacrifice offered to the god with whom they communicated. The sequence in which the different diviners were presented was randomized into three different sets. Then participants were asked to circle the diviner they

⁷⁹ See appendix 3 for an English translation of the story.

⁸⁰ This is a typical reason for consultation based on the ethnographic record (Evans-Pritchard 1937: 261-262; Jackson 1978; e.g. Mendonsa 1982: 114).

thought it most likely the main character would consult. The dependent measure was thus the diviner chosen. It is assumed that the most credible diviner is the one selected.

Design and Procedure 3(Set) x 1(Prestige) with prestige as a within subject variable and set as a between subject variable. The procedure was the same as in experiment 1, and the same instructions were given. The different sets were randomly assigned to the participants.

Results There were no overall effects of Set on Prestige, so the different sets were collapsed into one for further statistical analysis. We should expect the prestige-bias to create a preference for the diviners communicating with gods of high prestige. The distribution of responses can be seen on figure 4.8.

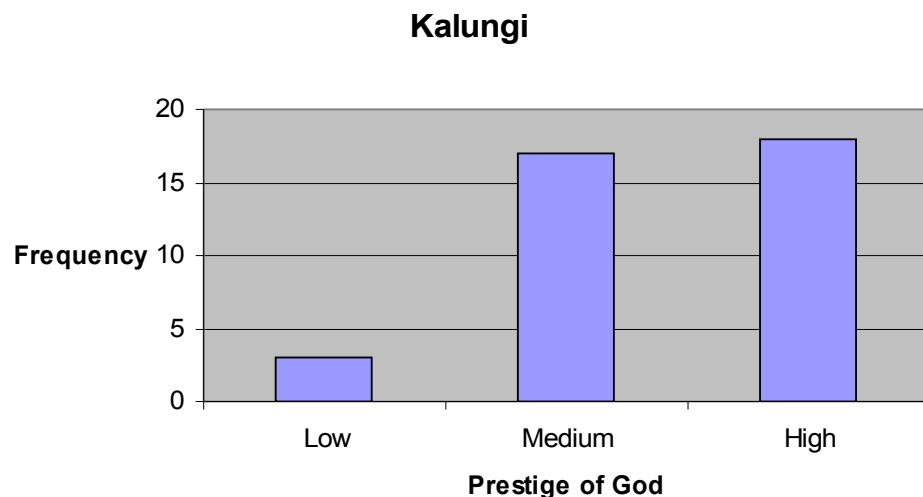


Figure 4.8. Choice of diviner based on the prestige of the god involved.

The overall distribution is significant ($\chi^2(2) = 11.105, p < .05$). There is a significant difference between the Low and the Medium condition ($\chi^2(1) = 9.8, p < .01$), but not between the Medium and the High conditions. This could be attributed to a confusing measure: it is difficult to assess whether elaborate banquettes or daily offerings constitute the greatest amount of resources.

The preference for high prestige gods could be attributed to participants in general believing in high gods. In that case we would expect participants who were non-believers to show an equal preference for the different kinds and Christians and Muslims to show a

preference for the high god category. But there were no significant differences in choices based on religious affiliation of the participants.

It can be seen that there is a significant difference in the preference of the diviner based on the prestige of the associated counterintuitive agent. This preference is here interpreted to reflect a difference in the credibility of the diviners.⁸¹ Thus, prestige of the associated counterintuitive agent has an effect on the perceived credibility of the diviner. Low indirect prestige gives lower credibility than high indirect prestige.

Summary

Interpretation moves from the perception of intention produced by ritualization to the recognition of these intentional signs as communicative. Through the basic principle of relevance used in normal everyday communication, the interpreter interprets the signs in relation to the context given by the question. Divination however differs from normal communication in its sign inventory being much more limited and in the interpretation of these signs as being much more “un-coded”. In general the relation between sign and meaning in divination is much looser than in normal communication. There are also typically constraints on the possible subjects that are fit for a given divination practice and the form in which answers can be given: Divination practices can give binary, discrete or rich answers. This has consequences for the utility of the divination practice. We also found that the credibility of the interpretation depended on prestige. Two types of prestige were identified: a direct prestige from the proximate source. This may either be the operator, for example when the questioner himself interprets, or the interpreter. High prestige indicates a higher credibility value. We also found an indirect prestige effect from the prestige of the ultimate source, the counterintuitive agent.

⁸¹ It might of course reflect something else. It has been suggested to me by evolutionary psychologist Joseph Bulbulia (personal communication) that the size of the offerings may reflect costly signaling. But it is not specified that it is the diviner who sacrifices. It may however, still be a possibility. To investigate this, further research is needed.

Chapter 5 - Oblative divination⁸²

Oblative divination is similar to impetrative divination in all aspects except the sign production. In impetrative divination the sign production is a function of human manipulation and it is no problem to identify the sign, whereas in oblativ divination the problem is identifying the sign in the daily stream of events. The basic problem is to account for the principles for determining how certain occurrences become signs. Precious little research has been done on omens since the turn of the previous century (cf. Lisdorf 2007c). What is presented here is therefore naturally tentative.

According to one of the most perceptive analyses of omens by Caroline Humphrey, omens arise from a person's concern for his own situation (Humphrey 1976: 35). These concerns are, as in impetrative divination, to achieve fortune and avoid misfortune. A quick glance at any collection of omens will reveal that they're typically related to the same life matters that we found in impetrative divination: death (Cannell & Snapp 1933: 20-24; Hansen 1957: 48-55, 94-122, 137-167; Lingren 2003: 139-141; Lyngne 1981: 126-141), marriage (Cannell & Snapp 1933: 14-19; Cielo 1918: 7-22; Hansen 1957: 35-47; Lingren 2003: 132-138) and birth (Jastrow 1914; Lingren 2003: 124-131; Lyngne 1981: 19). While the process starts from this motivation in impetrative divination, in oblativ divination another triggering event is needed – a sign. The argument put forward here is that these signs are interpreted as intentional signs just as those produced in impetrative divination. To some it might be a controversial position.⁸³

What makes an event a sign? Recent research in developmental psychology conducted by Jesse Bering and Becky Parker touches on this (Bering & Parker 2006). Children from ages 4 to 7 were given the task to find out in which of two boxes a ball was hidden. They were told to place the hand on the top of the box in which they thought the ball was and keep it there for 15 seconds. During the 15 seconds they could move the hand back and forth as many times as they wanted, but by the end of the 15 seconds the position of the hand would count as the answer. The children were assigned to either an experimental group or a control group. In the experimental group, the children were taken aside and shown a picture of Princess Alice after the explanation of the rules of the game. They were told that Princess Alice was a

⁸² This section is based on (Lisdorf 2007c). There are also excerpts from (Lisdorf 2004c)

⁸³ It would be a digression in this context, but a more elaborate argument for this can be found in (Lisdorf 2007c)

magical princess who could make herself invisible. They were also told that Princess Alice really liked them and that she would tell them when they picked the wrong box. In the control group, no story of Princess Alice was told. During some of the trials one of two unexpected events would happen when the children had put their hand on the box. Either a picture of Princess Alice would fall from the door, or a table lamp would turn on and off twice in rapid succession.

The results showed that the young children in the experimental group did not react to the unexpected events, but the oldest children, who are closer to adults in performance, responded by moving their hand. This indicates that they had seen the unexpected event as an intentional sign related to their current concern, which was to win the game. It also shows how easily something unexpected can be interpreted as an intentional sign. We may here notice that the experimental group was primed with a story about a counterintuitive agent's interest in their concern to win the game and this counterintuitive agent was endowed with communicative abilities. This is very close to the situation we see in omens.

There is one difference to omens though; the children were explicitly told that Princess Alice would communicate in this way, which is not the case for omens. However, in cultures where belief in omens is widespread, similar stories about the communicative abilities of a counterintuitive agent and its interest in their concerns are frequently communicated. This produces a cultural model.⁸⁴ It is possible that a constant sensitivity to omens is present because of frequent stories of omens. These stories function in much the same way as the story of Princess Alice as a cultural prime. We should therefore expect a cultural model for omens to increase the sensitivity to the perception of omens. The wider it is disseminated the more "primed" are the population in the culture and therefore the more likely are they to identify an event as an omen.

The study also suggests that the sign should be something unexpected. Based on cross-cultural evidence it seems possible to make an empirical generalization about three different ways events become salient.

1) The event is unexpected, but makes unique sense in relation to the interpreters' current concerns. Here the context is what determines the salience. Let us take an example: "At a turning point in her life, Cait tried this technique [being attentive to omens]. Her omen was a sound: She heard a creaky screen door opening. She realized that a door was truly opening in

⁸⁴ A cultural model is a cognitive model that is widely disseminated in a population (Shore 1996: 46-50). It resembles what Dan Sperber calls a "cultural cognitive causal chain" (Sperber 2006: 157-160)

her life”.⁸⁵ In the example the technique of being attentive to omens functions like the Princess Alice prime.

Another example where it is perhaps even clearer how the concern of an agent determines the context in which an omen is interpreted is from a 19th century collection of Danish folklore. The story is from 1886 and is about a boy from Fanø, Western Denmark. His father had gone on a trip around the earth as a sailor, but it had been a long time since he had departed. Therefore people started to speculate that he had probably died. A friend of the boy took him into his house and showed him a jar in which there was water. In the water had been put the yoke of an egg and at the bottom something lay. The friend said that it signified that the sailor, the boy’s father, had drowned. So his mother and aunt had told him” (Hansen 1957: 11). The context is here determined by the current concern of the boy and his mother for the life or death of his father.

This form depends in large part on the previous dissemination of a cultural model that functions like a cultural prime. Without being sensitive to the possibility of omens it is less probable that an occurrence will be seen as an omen.

2) The event stems from a catalogue of recognized omens that have a predetermined meaning. It can be something as vague as a good or bad sign. Consequently it is not always immediately clear what concern it relates to and the interpretation can change. An example from the same folklore collection from Denmark shows this: “On the church in Tjørring sat an owl that howled and Peter Christian thought: “What is that – it must mean something – should I return?” But he continued. When the next day came he wanted to take a nap and said to his wife: “Kræsten [his son] can come to me.” The boy, who was two years old and ran in the kitchen, fell one moment later into a bowl of boiling hot brine, which the wife had put on the floor and he became terribly burned and died” (Hansen 1957: 9). Apart from signifying something bad, the precise meaning of the sign was not clear until later. It had been a prediction of death in Peter Christian’s family. Here the owl is a sign from a catalogue of bad signs, but the actual significance is only found later.

Some omen catalogues are much more elaborate, and frequently, they are written. A prototypical example of this is the ancient Babylonian omens. Here the omens are written down in large catalogues for future reference (Labat 1933). This form is dependent on the

⁸⁵ From the website: <http://www.care2.com/channels/solutions/home/1508> (08.02.07)

dissemination of the catalogue in the culture, whether or not it is confined to writing. It can be seen that it is not dependent on the current concerns of the person identifying the omen.

3) The event is attention demanding in itself to a degree where a natural explanation is not sufficient and is supplied with an intentional one. But what makes an occurrence attention demanding? Research in the cognitive sciences seems to indicate that there are different degrees. The most attention demanding are counterintuitive concepts. They are defined according to a theory of human knowledge organization which stipulates that knowledge is organized in distinct domains (Atran 1990; Hirschfeld 1996; Keil 1979; Sperber, Premack, & Premack 1995). Each concept belongs to an ontological category which is connected to the domains of either physics (objects), biology (plants and animals), or psychology (humans). The former domains are embedded in the latter. Consequently, a concept which falls into the biology domain also falls into the physics domain, but not vice versa. According to Pascal Boyer, one or two violations of knowledge associated with a concept at the domain level make a concept counterintuitive and optimally attention demanding (Boyer 2000; Boyer & Ramble 2001). A violation is either a *breach* of expectations from a knowledge domain connected to a given category, or a *transfer* from another domain of knowledge. Boyer proposed a list of five primary ontological categories (Person, Animal, Plant, Natural Object & Artifact) and three domains of knowledge attached to these (psychological, biological and physical). This yields 15 different possibilities for violation at the category level (cf. Boyer & Ramble 2001)

Justin Barrett and Melanie Nyhof demonstrated the existence of an intermediate category between counterintuitive and normal, which was termed “bizarre” (Barrett & Nyhof 2001). Bizarre concepts were defined thus: “bizarre items possessed a highly unusual feature that violates no category-level assumptions but may violate basic-level regularities (e.g., a living thing that weighs 5000 kilograms may be unusual for a dog, but weighing 5000 kilograms does not violate assumptions about living things in general)” (Barrett & Nyhof 2001: 78). Bizarre concepts can therefore be seen as violations of kind-level expectations, where counterintuitive concepts are violations of category level expectations (Lisdorf 2004a). A bizarre feature is consequently a feature which is highly unusual/irregular for any given kind.⁸⁶ Consider an example of bizarreness from the Roman prodigies: A wolf has been seen

⁸⁶ For research along these lines see (Boyer, Bedoin, & Honore 2000), which stipulates the same inferential divide between domain and kind level expectations. What is here called bizarre seems to correspond to what they call strange.

in the city. To most modern people they might be slightly irregular occurrences but not quite bizarre. However, a wolf seen in the city was to the ancient Romans a highly bizarre feature, as this animal was part of a group of animals which were seen as the antithesis of civilization.⁸⁷ The Romans did not have a theory that animals in general couldn't be in the city, lots were indeed, but this specific animal was incompatible with city life; there was a kind-level expectation that this kind lives in and roams the countryside, not the city. This is not an expectation for the entire category of animals.

Recent research has nuanced the picture somewhat (Alles 2006; Atran & Norenzayan 2004; Norenzayan et al. 2006a), but it seems clear that for concepts that are minimally counterintuitive concepts presented with a context, such as a narrative or event, are the most attention demanding (Gonze et al. 2006: 544). It therefore seems safe to say that counterintuitiveness and bizarreness is a good index of how attention demanding some occurrence is.

All forms of omens are interpreted as intentional signs from counterintuitive agents. The identification depends on two primary factors: a wide dissemination of a cultural model which functions like priming in heightening the population's general sensitivity to the communicative potential of salient events. Events become salient in one of three ways: either by the context of the current concern of a person, by the recognition of an event as one from a pre-existing catalogue of omens, or by the event being unexpected or attention demanding in itself. The basic motivation and the interpretation is the same as in impetrative divination.

⁸⁷ Wolves are the most prominent non domesticated animal and predator, featured in the mythology of Rome's origins (e.g. Ovid's *Fasti* (*Ov.Fast.2.* 267-452); (cf. Wiseman 1995) for myths surrounding the origins of Rome). The "anti-civilizedness" can also be seen in the character of the celebration Lupercalia (the wolfish celebration) on February 15. Here half naked young boys ran around wildly and hit bystanders with a thong inside the sacred perimeters of Rome (cf. Scullard 1981: 76).

Chapter 6 - Cultural epidemiology

Before we proceed, it is necessary to sum up what we have found on the cognitive factors underlying divination. The core function of divination is, as stipulated in chapter 3, the activation of a representation of a communicative interaction with a counterintuitive agent. This function is orchestrated in three phases corresponding to the three elements in divination: motivation, sign production and interpretation. The first phase is the pre-activation phase, the next is the activation phase, and the last is the elaboration phase.

The pre-activation phase establishes the potential for activation. In impetrative divination it is the formulation of a question and in oblativ divination it is the current concern that establishes this potentiation. Both depend on a perception of a discrepancy between the lived life and the idealized life model, what we called actual or potential misfortune in chapter 4. This in turn depends on the establishment of a life model and a cognitive feedback system that regulates life.

The activation phase moves from the perception of intentionality to the identification of this as a communicative intentionality (divination differs from normal functioning in that this identification cannot be referred to manifest agents). This phase depends on the sign production to produce a stimulus with certain qualities, which subsequently makes its identification as being the product of an intentional agent possible. In impetrative divination, the activation is facilitated by the displacement and replacement of intention produced by the ritualization of action in the technique employed. As seen in chapter 5, in oblativ divination the cultural “priming” produced by a widely circulated cultural model and the perception of a salient event facilitates such activation. These two routes lead to the activation of the HIDD, which is the basis for the core function of divination. The activation of the HIDD is followed by an identification of a communicative interaction in difference from other types of interaction, such as for example exchange. In impetrative divination this is stimulated by the prior formulation of a question, in oblativ divination it is stimulated by the cultural model specifying the possibility of receiving communicative signs from counterintuitive agents.

The elaboration phase moves from the identification of the content, that is, the answer, to the assessment of the credibility of this content. In impetrative divination the interpretation of the information in the sign will follow the principle of relevance and is based on the identification of a communicative sign and the context of the question. This will produce an

answer. In oblativ divination the information is derived from the current concern of the addressee and the character of the sign. It likewise follows the principle of relevance. Subsequently an assessment of the credibility of the answer follows. This is done in two stages. The first stage follows a perception of indices of prestige of the proximate communicator. In impetrative divination this will usually be the interpreter, but if the questioner himself interprets the sign, the proximate communicator will be represented as the operator. In oblativ divination the proximate communicator will be the interpreter. This is what we identified as direct prestige. The second stage of the identification of credibility is the perception of indices of the prestige of the ultimate communicator, i.e. the counterintuitive agent. This probably depends on memory, for example the size and frequency of sacrifices usually offered to the counterintuitive agent or the established hierarchy of the gods. This last stage naturally only applies when there is a perception of a named counterintuitive agent. The product of these phases is an answer and a representation of the credibility of this answer. Note that the content of the answer and the credibility of the answer depend on different processes. The answer varies with each question, while the credibility varies with the interpreter and counterintuitive agent.

Phase	Pre-Activation	Activation		Elaboration		
Cognitive function	"Life regulation"	HIDD	Joint attention	Principle of relevance	Prestige bias (direct)	Prestige bias (indirect), memory, meta-representation
Stage	Potential	Detection of intention	Detection of communicative intention	Detection of informative intention	Assessment of credibility 1	Assessment of credibility 2
Input		Stimulus	Sign (intentional)	Communicative sign	Indices of prestige of interpreter*	Indices of prestige of CIA ⁺
Description of purpose	Motivates correctional action - Question	Identifies intentional signs from other signs	Identifies communicative signs	Provides interpretation of the sign	Provides assessment of credibility based on prestige of proximate communicator	Provides assessment of credibility based on prestige of ultimate communicator
Output	Question/current concern	Sign (intentional)	Sign (communicative)	Information (answer)	Credibility value	Credibility value
Condition of activation <u>impetrative</u> divination	Perception of actual or potential misfortune	Ritualized production of a sign	Question	The actual sign and information on context of question	A perception of indices of prestige of the interpreter*	A perception of indices of the prestige of CIA
Condition of activation <u>oblative</u> divination	Perception of actual or potential misfortune	Cultural prime and a salient event	Cultural model	The actual sign and the context of the current concern	A perception of indices of prestige of the interpreter	A perception of indices of the prestige of CIA

Figure 6.1. Cognitive basis of divination

- Or the operator in impetrative divination when the questioner interprets the sign himself.
- CIA is an abbreviation for counterintuitive agent.
-

Figure 6.1. brings together the observations on the cognitive basis of divination made in chapters 4 and 5. The top row shows the different overall phases, then comes the central cognitive functions that are involved and their purpose. In the manner of traditional cognitive science the different inputs, function, and output along with their conditions of activation are specified (Cf. Marr 1982). As can be seen these differ in certain cases between impetrative and oblativ. Obviously the figure is not exhaustive, but merely meant as a form of roadmap that ties together central observations about relations between different factors identified in this dissertation.

Now that we have considered the central cognitive factors underlying divination, we need to ask how this may help to solve our primary problem: why divination was so widely disseminated and persistent in Roman culture. The original turn towards cognitive theories in investigating religion was made by anthropologist and cognitive scientist Dan Sperber. His point of departure was a critique of contemporary anthropology. He argued that anthropology's relation to psychology should be like epidemiology's relation to biology (Sperber 1975: 30). Later he more thoroughly worked out the framework of an epidemiology of beliefs (Sperber 1996; Sperber 1985). The basic principle is that cultural ideas are ideas widespread in a population. Just as diseases are transmitted on the basis of the biological system of humans, so are ideas transmitted on the basis of the properties of the cognitive system of humans. Another reason why epidemiology is a particularly relevant analogy is that epidemiology has a population perspective and explicitly works with social as well as biological factors.

The epidemiology of ideas, or "representations" as it is also sometimes called, starts from the cognitive system. The cognitive system has certain biases. These biases will influence the probability that a given idea will become widespread in a population. But ideas are not like viruses.⁸⁸ They get changed slightly every time they get transmitted. Sperber developed the idea of attractor positions. In a given series of transmissions, a given idea will converge on one such attractor position, because of the biases in the cognitive system (Sperber 1996: 106-112). The local cultural context however also has an effect on this attractor position. Take the example of a folktale. Some versions of a tale are easier for storytellers to remember because of cognitive biases and because of local cultural relevance (Sperber 1996: 108). In a later

⁸⁸ Indeed Sperber spent a good deal of effort in arguing against the extreme version of this idea known as memetics (Sperber 2000). This theory stipulates that ideas are like genes that reproduce in humans' minds (Blackmore 1999; Dawkins 1976; Dennett 1995).

formulation Sperber describes the purpose of the epidemiology of representations as “(..) not to describe in any detail the actual causal chains that stabilize (..) a particular cultural representation (..) but to identify factors and processes that help explain the existence and effect of these causal chains. For instance, showing that a particular folktale has an optimal structure for human memory and that there are recurring social situations in a given society in which people are motivated to tell it or to have it told, helps explain why the tale is told again and again with little or no distortion of content in that society” (Bloch & Sperber 2002: 727).⁸⁹ Sperber has later made some more precise suggestions to the mechanisms behind this, but not investigated it in any great empirical detail (Sperber 2006).

Pascal Boyer was the first to apply the insights of Sperber in a concrete research program. He argued that religious ideas are universally widespread in all cultures because they are counterintuitive (Boyer 1994). Counterintuitive ideas are distinguished by having one counterintuitive feature, a breach of expectations, such as a mountain that needs to eat, a person who is invisible, or statues that sweat. The counterintuitive feature makes them more attention demanding and therefore more memorable. When they are more memorable they have a higher probability of being transmitted. The implications of this theory have been investigated in controlled psychological experiments about the transmission of counterintuitive ideas (Barrett & Keil 1996; Barrett & Nyhof 2001) and cross cultural investigations of the enhanced memory of counterintuitive ideas (Boyer & Ramble 2001).

The epidemiological idea of focusing on cognitive biases to understand cultural forms has subsequently become the dominant approach in the cognitive science of religion. It can be seen in Boyer’s theory of religion (Boyer 2001; Lienard & Boyer 2006), in Harvey Whitehouse’s theory of modes of religiosity (Whitehouse 1996), in Thomas Lawson’s and Robert McCauley’s theory of ritual (McCauley & Lawson 2002c) and in Scott Atran’s theory of religion (Atran 2002). Although this has been a very fertile approach, there are still some points of criticism to be leveled against this approach.

First, the idea that epidemiology primarily deals with transmission on the model of infectious disease, is not accurate. Key epidemiological areas such as cancer, diabetes, cardiovascular diseases and obesity have little or no transmission aspect. A text book in epidemiology defines it thus: “Epidemiology can be defined as the study of the distribution of disease and its determinants in human populations. In other words, it provides the answers to

⁸⁹ For recent research on folktales along these lines see (Lisdorf 2004a; Norenzayan, Atran, Faulkner, & Schaller 2006b)

questions on how much disease there is, who gets it and what specific factors put individuals at risk” (Silman & Macfarlane 2002: 3). The central concern is therefore risk factors. In epidemiology transmission is covered in the term exposure. Sometimes exposure is the most important factor, as is the case in very virulent diseases such as some forms of viral gastroenteritis, where the briefest exposure to a microscopic virus can transmit the disease. Here exposure is the most important risk factor. Other times exposure is not very important, such as certain forms of cancer, e.g. lung cancer where it is possible to smoke for decades and still not develop lung cancer.

Let us consider a cultural analogue: suicide terrorism. Most people have been exposed to it on the news, yet not so many practice it anyway. This is clearly a case where transmission is not sufficient to understand the spread of the phenomenon. If we instead focus on risk factors we can identify several: being male, 18-38 years, unmarried, and of average socio-economic status in Palestine are factors that significantly increase the risk of the suicide terrorism (Atran 2003: 1537). Therefore, the central concern of a cultural epidemiology should not be transmission, but risk factors. Transmission is only one such and often very important.

Second, the epidemiological metaphor has functioned as a way to shift the entire focus to cognition. One could be cynical and claim that it has primarily functioned as a way to change career to psychology. It seems that Sperber’s original claim that local factors are important has been entirely forgotten in practice. All research done has the purpose to discover universal characteristics (Atran & Norenzayan 2004; Boyer 2003; Sperber & Hirschfeld 2004b). This is the opposite focus of epidemiology which seeks to understand local characteristics in populations.

Third, no one has ever applied a more sophisticated understanding of epidemiology than the folk version presented by Sperber in the original formulation. Epidemiology as a discipline has an enormous unexplored potential. There are many analytical principles and models that could be applied if the original idea of Sperber was taken seriously, that is, to identify the factors and processes that stabilize cultural phenomena.⁹⁰

Fourth, the focus on the cognitive basis has resulted in too many sleight of hand assumptions about what would be the large scale effect of these small scale properties in a population. It is never enough to focus on the mind to understand culture. It is necessary to model the properties to find out how the interactions influence the large scale phenomena

⁹⁰ There are notable exceptions outside the cognitive science of religion (Aunger 2002; Cavalli-Sforza & Feldman 1981; Guglielmino et al. 1995).

(Henrich & Boyd 2002: 110). Such models already exist and have been applied to the study of culture (Boyd & Richerson 1985; Cavalli-Sforza & Feldman 1981). These works were originally dismissed by Sperber because they assumed a simplified view of the mind (Sperber 1996). It has however turned out that this need not be the case (Henrich & Boyd 2002) and Sperber seems to admit the appropriateness of these models although he disagrees with some of the details (Cladière & Sperber 2007).

I will follow the cultural epidemiology approach because it is already integrated with the cognitive science of religion and because with a few adjustments it is very suitable to solve the problem at hand. These adjustments are, first we need to shift our emphasis to risk factors and multi-factorial explanations if we want to use the cultural epidemiology in actual investigations of the dissemination of cultural entities. Second, we have to reintegrate other factors aside from the cognitive ones in explaining the success of certain cultural entities compared to others. In particular I would emphasize what others have called “contextual” or “environmental” factors in cultural transmission. For example evolutionary anthropologists Joseph Henrich and Richard McElrath argue that there are two overall types of biases in cultural transmission: a content bias and a context bias (Henrich & McElreath 2003: 129). The content bias captures what Sperber, Boyer and others have identified as the cognitive bias. This is a universal bias. For example, as shown in chapter 4, we found a content bias in divination in the bias towards representing intentionality, the HIDD. The context bias covers what Sperber called “local cultural context” and is dependent on local factors. There are two sub categories of cultural biases: model based biases and frequency dependent biases. The most relevant model based bias for our purposes is the prestige bias mentioned above. We also found a frequency dependent bias in oblique divination in the importance of reiteration of cultural models specifying the ability of a counterintuitive agent to communicate with humans.

Third, we cannot hope to find necessary and sufficient conditions for the dissemination of divination. We need to look at factors that promote the cultural entities under consideration, be they beliefs, folk tales, artifacts, house building or, indeed, divination. These factors are probabilistic and therefore not necessary and sufficient.

While many good and detailed models have been developed to analyze cultural transmission (Boyd & Richerson 1985; Cavalli-Sforza & Feldman 1981), the limitation of sources available in historical research imposes some limits on what we can use. I will only use one particular method from epidemiology, which is usually just the starting point in an epidemiological study. It is called a Web of Causation. It is essentially a simplified model of the stipulated causal relationship between different factors promoting a disease in a population. Usually this serves as a point of departure for further empirical analysis. But before we can start to apply this method we have to be more specific as to what it is we are studying.

In epidemiology the object of study is the distribution of disease in a population. Even here it is not an exact science to diagnose what counts as a case. Often it is based on clinical opinion (Silman & Macfarlane 2002: 3). Precise diagnostic criteria need not therefore be specified. In the cultural version the object of study is some sort of cultural entity. This entity need not be the property of one individual, but can depend on several individuals. In our case it is divination.

Divination depends crucially on a person being motivated to pose a question he cannot find answers to in other ways. In the unlikely situation that human misfortune was eradicated, it would undermine the basis of divination. Likewise, if someone could learn anything with certainty through ordinary human perception, divination would also lose its basis. What determines the choice of one divination practice compared to another depends on how credible it is generally taken to be. I have tried to capture this credibility with the term credibility value. It is likely that the credibility value is important for a divination practice. We therefore have to evaluate the factors that increase and decrease the credibility value of a divination practice. Another factor of importance is the utility of the practice; after all, if the divination practice only allows you to receive perfect advice as to whether you should buy a blue or a red car, it may not be of much use anyhow. A third and more loose factor is the knowledge of the divination practice and a general understanding of how it works. This is captured in the cognitive model used to conceptualize the practice. It is therefore possible to sketch the stipulated web of causation for divination impetrative and oblativ divination respectively.

We stipulated that the following factors were important for the success of impetrative divination (see fig.6.1.)

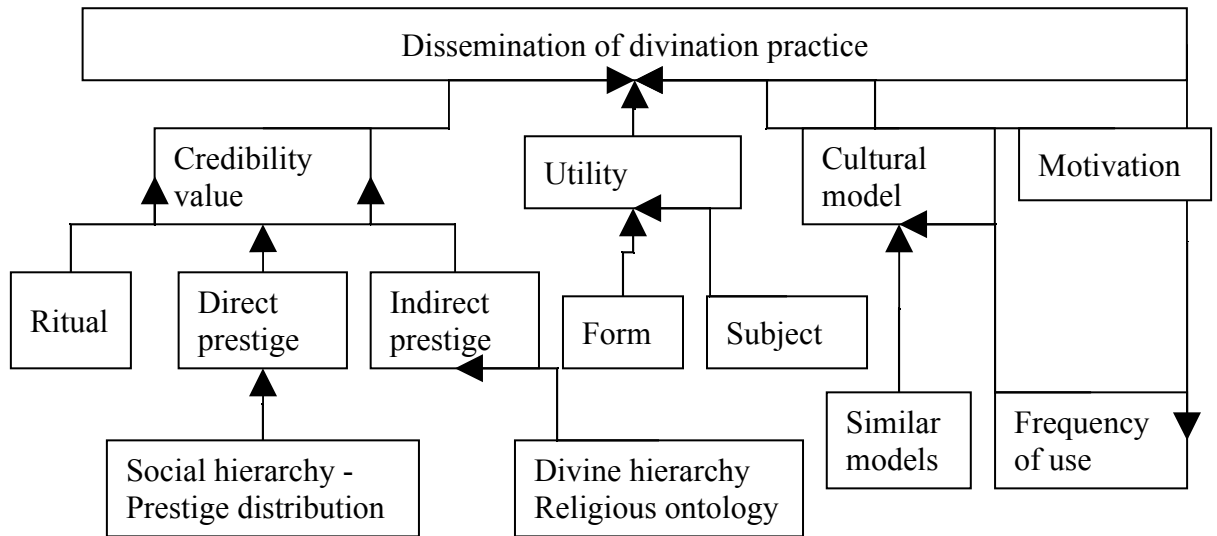


Figure 6.2. Web of Causation for dissemination of a given divination practice

Ritualized sign production is a precondition for the representation of a counterintuitive agent as the ultimate source of the information. The activation of a knowledge domain close to human should make the activation of a counterintuitive agent more probable. The direct prestige of the interpreter or operator and the indirect prestige of the counterintuitive agent also determine the perceived credibility of the information produced by the practice. These are in turn determined by the prestige distribution of the social hierarchy and the divine hierarchy of the religious ontology. The utility characteristics determine the contexts in which the divination practice can become relevant. The cognitive model for how the practice is reflectively conceptualized helps stabilize the memory of the practice, which is important for its probability to be recalled as a possible plan of action when a person is motivated. Since the cognitive model is generic, the use of other similar models, such as oblique divination, may also “spill over” and strengthen the memory of the particular practice.

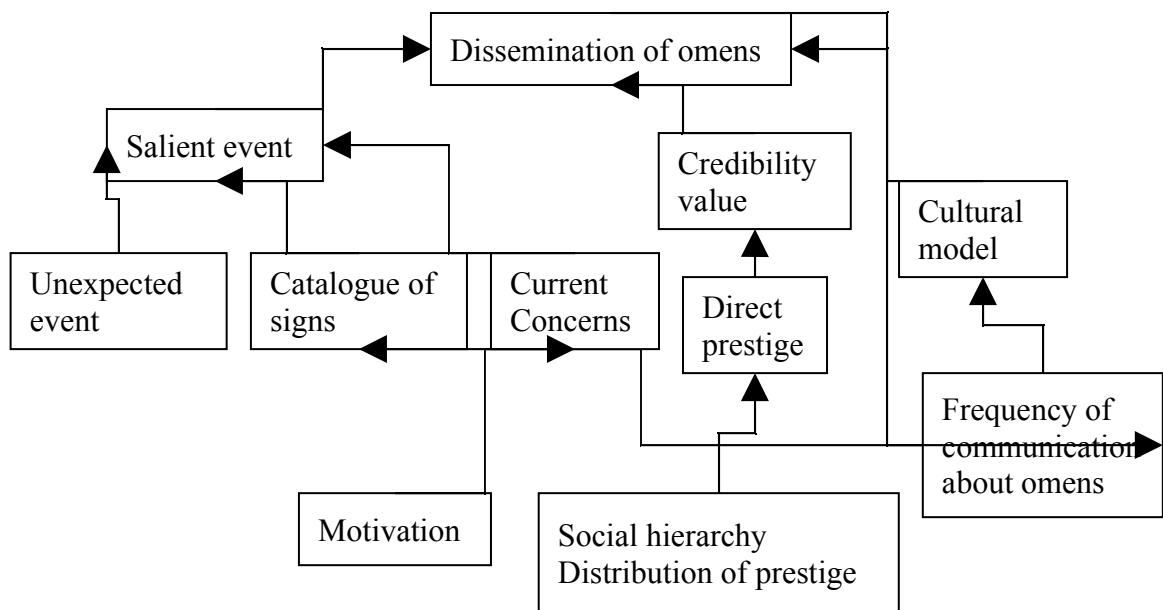


Figure 6.3. Web of Causation for the dissemination and resilience of omens

To account for the dissemination of divination, it is important to have a cultural model which functions like a constant prime in heightening the population's sensitivity to the communicative potential of salient events. The trigger of an omen is a salient event. An event can become salient in one of three ways: either by the context of the current concern of a person, by the recognition of an event as one from a pre-existing catalogue of signs, or by the event being unexpected or attention demanding in itself. The basic motivation and the interpretation is the same as in impetrative divination. As in impetrative divination the direct prestige of the interpreter will have an influence on the credibility of the information interpreted from the omen.

These are the stipulated factors for the two different kinds of divination, but we don't know yet the relative importance of them. Neither do we know if they have any measurable consequences for the dissemination of divination practices. This is why we will now turn to the empirical investigation of divination in the Roman Republic. However, first, it is necessary to dwell on the analytical procedure. In the preceding chapters, we have identified a number of different factors that are stipulated to be important for the dissemination of a divination practice. Now let us look at how they can become empirically tractable to see whether the model for the dissemination and persistence of divination is accurate.

For impetrative divination, all known practices in the Roman republic found in the historical sources will be evaluated with regard to the following factors:

- **Technique.** Here the exact technique is described. It will be mentioned whether it is focused on intuitive physics, biology or psychology.
- **Ritualization.** Here it will be treated whether and how the technique is ritualized. Cases where mistakes or manipulation has taken place will be considered in detail, since they could be related to the presence/absence of ritualization.
- **Direct prestige.** Here it will be assessed whether the status of the operators or interpreters are high or low based on a civic scale. This has consequences for the credibility of the information
- **Indirect prestige.** Here the status in the hierarchy of the associated counterintuitive agent in the Roman pantheon is assessed.
- **Subject/credibility value.** It will be described for what subjects the technique was used. It will also be treated whether the decisions made on the basis of the divination technique entail great actual or potential use of resources. What are the contents – what can it tell?
- **History.** Here the probable historical trajectory of the divination form will be traced
- **Cultural model.** Here the explicit conceptualization is treated, with a special view as to whether it agrees with the cultural model found among omens.

For oblativ divination, it is first of all necessary to evaluate the following factors:

- **Cultural model.** Is there a cultural model specifying a relation between a counterintuitive agent and signs related to the current concerns of people? How widespread was it?
- **Salient event.** How do events achieve salience and become identified as omens?
- **Direct prestige.** It is necessary to find out to what degree oblativ divination was tied to direct prestige.

Chapter 7 - Research history on Roman divination

In this chapter I will review the research history of Roman divination. The focus will be on treatments giving some sort of explanation for the existence of divination in Roman republican times. This means that I will not review treatments which are only descriptive or whose main focus is some detail, unless they have some general applicability to the study of Roman divination. Previous reviews on research into Roman divination have focused largely on English and German traditions (e.g. Rasmussen 2003). The French tradition has not received the same amount of attention (Lisdorf 2004b) and the Italian is virtually never mentioned except in points of detail. I have tried to include these where relevant. Hopefully this will result in a fuller picture of the history of research on Roman divination.

I will begin with a roughly chronological survey of relevant works. Here I will try to sketch how the treatments have oscillated between the largely idiographic tradition of classical philology and the new comparative nomothetic tradition of anthropology which developed around the turn of the 19th century. In a subsequent section I will extract the most prevalent theses put forth in previous research to explain Roman divination, and review them critically.

Chronology of research on Roman Divination

In a sense the history of research about Roman divination starts with the Romans themselves. Primarily Cicero, but also Varro, Valerius Flaccus, Seneca and Plinius researched Roman divination. We have already examined Cicero's *De Divinatione* above. There are no generally recognized treatments of Roman divination from medieval times. It is not until modern times that we find a treatment that can match Cicero's. That is the 4 volume study by Antoine Bouché-Leclercq from the 1870s. This is where we will begin our survey.

Classical philology

Modern research on Ancient divination grows out of classical philology. One landmark is the monumental four volume work *Historie de la divination dans l'antiquité* by Antoine Bouché-Leclercq (Bouché-Leclercq 1879). The book is an impressive collection of all known forms of divination in classical antiquity. Bouché-Leclercq does not have an explicit theory of

divination, but he does have certain theoretical assumptions. For example he writes that sortition satisfied the religious sentiment and curiosity of the Romans (Bouché-Leclercq 1879: II, 41-42). In other places, though, he seems to think that there was nothing religious about divination. Concerning the auspices, he writes that Roman divination has moved away from theology and become formalistic; it has moved from the religious domain to the legal and has thereby lost its original life (Bouché-Leclercq 1879: IV, 178). He also thought prodigies, and especially their expiation, served to reduce fear among the population (Bouché-Leclercq 1879: IV, 80). We can distinguish three key assumptions in his work: that divination satisfied a religious urge, that divination in its ritual form had lost its religious character and become formalistic and legalistic, and that prodigies and their expiation served to reduce fear. These assumptions, as we shall see, surface regularly in the research history of Roman divination.

The two giants in the research of Roman culture and religion Theodor Mommsen and Georg Wissowa, whose works are known to be quarries of information and starting points for almost any investigation, were mainly concerned with describing technicalities. They did, however, notice that divination was used to obstruct, and thereby manipulate, the political process (Mommsen 1952: I, 80; Wissowa 1912: I, 540). Mommsen especially shared the view of Bouché-Leclercq that divination had become mere legal technicalities.

Another central early work on Roman religion was W. Warde-Fowler's *The Religious Experience of the Roman People* from 1911. The basic idea of Warde-Fowler was that Roman religion originally implied some real religious feeling, but this had disappeared in historical times. This disappearance of religious feeling can be seen in the "over-elaboration" of the ritual aspect (Warde-Fowler 1971: 292). Thus the focus on the ritual element in divination was taken to be the result of the decay of true religious feeling. He also had an interesting theory about the historical development of divination: divination originally arose out of an agricultural society's need to predict the weather. Eventually it was adapted to the needs of the city. This was formalized by the state and ended up being used for private ends, that is, as manipulation. This is an historical explanation similar to Bouché-Leclercq's, Wissowa's and Mommsen's.

The early research thus took divination rituals to be a formalistic dilution of true religious belief. In historical times it had become an empty formalism which was used only for manipulation. There is a common assumption of decay in Roman religion. Another

assumption is that divination, especially prodigies and their expiation, had the function of reducing the fear of the Roman people. Interestingly we can see a close parallel between these early classical philologists and their object of study: the idea that things were in a state of decay pervaded Roman culture⁹¹, the idea of divination as manipulation is glossed from Cicero's *De Divinatione* and *De Domo Sua*⁹² and the idea of prodigies calming and being produced by fear is pervasive in Livy.⁹³

Anthropology

Around the turn of the 19th century, anthropology was making progress and even classical philologists such as James George Frazer and Jane Ellen Harrison made significant contributions to anthropology. They did this by integrating knowledge of the “new” cultures discovered by explorers with the old knowledge of classical history. While Warde-Fowler was familiar with the evolutionistic ideas, others more explicitly integrated evolutionistic theories in their explanation of Roman divination. Franklin Brunell Krauss wrote a dissertation in 1933 dealing with prodigies, omens and portents. As did his predecessors, he tied individual and national stress to anxiety, which in turn led to the observation and treatment of prodigies, omens and portents. But he interpreted Roman religion according to evolutionistic schemes and saw omens as a survival from a more primitive stage of culture (Krauss 1933). Similar passing references to primitive religions in the treatment of Roman religion, can be seen in Arthur Stanley Pease's comprehensive commentary Cicero's *De Divinatione* originally from 1920 (Pease 1963).

Another author inspired by evolutionist thought was Jean Bayet. Coming from France, he was inspired by Lucien Lévy-Bruhl, as opposed to James G. Frazer and Edward B. Tylor who figure more prominently in the Anglophone research tradition. In 1957 Bayet wrote *Histoire politique et psychologique de la religion romaine*. This is a general work on Roman religion. According to Bayet, the tendency to see omens was a psychological disposition among the Romans (Bayet 1957: 53). In a later work he more explicitly uses ideas from Lévy-Bruhl in order to understand the omens of the Roman people. According to Bayet it is not possible to

⁹¹ That is, at least at the time when our sources were written. One key example is Emperor Augustus' *Monumentum Ancyranum*, which has a list of all the decaying religious temples he restored *Aug.Anc.*20.17. It can also be seen throughout Cicero's *De Divinatione* e.g. *Div.*2.76f

⁹² The *De Divinatione* book 2 could be read as showing that the Romans did not really believe in divination and only used it to manipulate (cf. Lisdorf 2005b). The *De Domo Sua* could be read as a cynical manipulation of religion by Cicero in order to get his house back (cf. Lisdorf 2005b).

⁹³ On prodigies in Livy see (Levene 1993)

understand primitive thought. What we can do is try to understand the origin. He tries to isolate the more primitive omens, which he calls "presage figurative" from those of a more developed religion, which he calls "signe divin" (Bayet 1971: 55). It can be seen that he, like Krauss, works from a basically evolutionistic assumption, in which divination belongs to the primitive stage. Thus divination is explained as a survival from an earlier stage of culture.

Post evolutionism

After the optimism of comparative anthropological explanations had faded, the historical philological tradition came into power again. A French monograph on the subject of prodigies in general appeared in 1963. In Raymond Bloch's book *Les prodiges dans l'antiquité classique* the overall thesis is that Roman divination is developed under influence of its two great neighboring civilizations: the Greek and the Etruscan (Bloch 1963). Ultimately he wants to trace it to the Babylonians (Bloch 1963: 80). Bloch wanted to explain prodigies as being caused by fear caused in turn by crises (Bloch 1963: 6, 94, 124). The expiations performed in response to the prodigies calmed the fear. With the coming of Greek philosophy in the 2nd century BCE, the Romans became more skeptical and turned the prodigy system into an instrument for the privileged classes (Bloch 1963: 137-138). This way fear could be exploited politically through prodigies (Bloch 1963: 139). On the one hand Bloch explains prodigies as a product of historical influences, something the Romans had from the Greeks and Etruscans, and on the other hand as something caused by fear and crises, amenable as an instrument of manipulation.

In Kurt Latte's influential general account of Roman religion, *Religion der Römer*, an historical approach was taken to the general study of Roman religion. The influence of Greece on Rome was of central importance for Latte. According to Latte a scheme could be made for the development of Roman religion. Before 500 BCE the Romans believed in Dynamism. This is an idea inspired by the concept of mana from evolutionistic anthropology. Around 500 BCE the belief in anthropomorphic gods began. Around 300 BCE the decay of Roman religion set in with the introduction of Greek philosophy. This can be seen in the works of Plautus or Ennius. Eventually, around the time of Cicero and Varro, divination was a mere instrument of manipulation in the political process (Latte 1960).

It can be seen that Latte's as well as Bloch's explanations emphasize historical influences in the explanation of Roman divination. We also see the more traditional explanations, such as divination being an instrument of manipulation and divination being a function of fear.

Fear and trembling...

From the 1970s onwards fear as an explanatory category came back in to focus in the attempt to explain divination in Rome. A number of explanations from this period develop the earlier ideas in light of philosophy, psychology and sociology. One of the exponents of this type of argument, Georges Dumezil, is one of the great historians of religion. Although he was most famous for his Indo-European thesis, he did valuable work on Roman religion as well. In his main contribution, *Archaic Roman Religion*, he writes: "The concern for discovering the feelings of the gods is very close to an obsession. Not only does public credulity dangerously multiply prodigies, during crises and even in periods of calm, but the anxious waiting for *auspicia oblativa*, the dispositions to hear *omina* everywhere, reminds us of familiar mental troubles. Does the religious life of individuals and of the state suggest psychiatry?" (Dumezil 1970: 119). According to Dumezil divination is best seen as a kind of collective psychosis brought about by crises. In line with earlier research he also sees the Romans as insincere in general (Dumezil 1970: 121). Thus, during the last centuries of the Roman republic, divination declined into being mere manipulation which fed on collective psychosis (Dumezil 1970: 121-122, 610).

Johan Hugo Wolfgang Gideon Liebeschuetz's *Continuity and Change in Roman Religion* from 1979 is another influential general treatment of Roman Religion. In this treatment divination plays a central role. According to Liebeschuetz divination had the central function of maintaining public confidence and avoiding panic: "This would calm the emotions, reduce defeatism and obviate the search for scapegoats. An atmosphere was created in which senate and people could decide on future strategy in a rational matter" (Liebeschuetz 1979: 10). He is also the first to suggest an explanation of why it is that the Romans did not find out that the system didn't work. This is due to what he calls a "kink" in human psychology: "divination enables the client to think out his own solution to the problem, but owing to a 'kink' in human psychology, the real working of the system is not scrutinized" (Liebeschuetz 1979: 20). He refers here to William Bascom's work (Bascom 1969; Bascom 1941). The vagueness of divination and the fact that only successes are remembered are contributing factors to the

maintenance of divination (Liebeschuetz 1979: 27). This is the first time a psychological explanation that does not entail pathologies or superstition is offered.

A central contribution giving an explanation involving fear and anxiety is Burkhardt Gladigow's compact and innovative essay from 1979 *Konkrete Angst und offene Furcht*. Gladigow starts from existential philosophy, more precisely Kierkegaard's distinction between fear and anxiety. Anxiety is the unobjectified and fear is the objectified feeling (Gladigow 1979: 16). What provokes anxiety is the lack of natural order evident in the prodigies (e.g. a calf born with two heads). The classification of these transgressions of natural law as prodigies objectifies them and turns the feeling into fear. Periods of crisis also stimulate anxiety (Gladigow 1979: 74). By responding to the prodigies with rituals the fear is turned into "sozialer Zusammengehörigkeit.(..) Die Rituale haben dann die Aufgabe, parallel zur typischen Minimalisierung von Angst Vertrauen aufzubauen" (Gladigow 1979: 75-76). The theory thus stipulates that the psychological basis is anxiety, which is first turned into fear, and then, through common action, into social coherence. We thus see a mix between a fear based and a functional explanation of the handling of prodigies. Divination in this view serves the function of enhancing social cohesion.

Veit Rosenberger's monograph on prodigies from 1998 *Gezähmte Götter – Das Prodigienwesen der römischen Republik* is the lengthiest and most theoretically informed to date. It is also highly eclectic. Therefore it can be difficult to single out just one explanation. Rosenberger uses Mary Douglas' anthropological theories of classification and Victor Turner's theories of ritual. In Rosenberger's view prodigies express anti-structure as they are characterized by a transgression of classificatory categories. Then, through the ritual action of the following expiations, structure is re-established. Rosenberger also makes extensive use of Gladigow's theory, and sees prodigies as the specific coding of anxieties caused by crises, most notably wars (Rosenberger 1998).

Manipulation

We saw earlier that already the first theories invoked manipulation as a central component of divination. Lily Ross Taylor's *Party Politics in the Age of Caesar* from 1949 is the first analysis to unequivocally emphasize the manipulation aspect as *the* explanation of divination. According to Taylor, in the early republic, the patricians manipulated the plebeians into subjection, but eventually, as the plebeians achieved the same power as the patricians, they

both shared the same attitude towards the masses (Taylor 1949: 76).⁹⁴ Like Bloch and Latte, she also sees the influence of Greek skepticism as the cause of the decay of divination into an instrument of manipulation (Taylor 1949: 78).

A more limited use of the manipulation argument is offered by Bruce McBain who made a study of prodigies in the republican period. He attaches special importance to the rituals performed in response to the prodigies, the *expiations*. According to him divination was used as an instrument in foreign policy: when an enemy threatened Rome from the North, that is Etruria, then Etruscan divination experts were called to the senate to interpret the prodigies. MacBain thinks that this served to strengthen the allegiance of Etruria to Rome (MacBain 1982: 60). It is thus a foreign policy⁹⁵ version of the political manipulation thesis expounded by Taylor and others.

Drawing lots- chance and ritual

Another line of research is focused on sortition. Sortition was used as a form of public divination, but has curiously been ignored in earlier research on Roman divination.⁹⁶ Since it is a form of divination, it is necessary also to look at research on sortition.

Jaqueline Champeaux, whose work on Italian sortition oracles in general and the Fortuna oracle in Praeneste in particular is immense, has an interesting observation on the ritual nature of sortition. Contrary to previous treatments of the ritual element in Roman divination, she does not consider it a mere sterile formalism of no consequence. She sees the chance entailed in divination as the language of the gods, and continues: "dans les sorts s'unissent les realisations du hasard et du destin" (Champeaux 1982: I, 434). According to her, the ritual techniques employed are not just empty formalisms, but produce the chance element necessary for sortition to "work" as the language of the gods.

Also working on sortition, but in relation to the public sphere in Rome, Roberta Stewart touches on the problem of whether the Romans believed in their rituals. She thinks that the Romans did take sortition seriously as a ritually circumscribed political procedure. This signaled the patronage of Jupiter and was motivated by the wish to follow Roman political

⁹⁴ She explicitly mentions Marx's dictum about religion as the opiate for the people on page 77. A more explicit Marxist analysis in the same vein can be found in (Günther 1964).

⁹⁵ Technically Etruria is not foreign in the period treated, but they were still to a certain extent perceived as foreign by the Romans.

⁹⁶ As an example I can mention the recent doctor phil. thesis of Susanne William Rasmussen about public portents, where nothing is mentioned about sortition (Rasmussen 2003). Likewise the recent article on divination in Republican Rome in *Thesaurus Cultus et Rituum Antiquorum* has not included sortition (Rüpke & Belayche 2005)

traditions of the Republic (Stewart 1998: 51). She also notices the close similarities in vocabulary in the use of sortition to omens.

Drawing on the work of Champeaux, Sarah Iles Johnston tries to explain why the Romans on the one hand new that in sortition chance and randomness was the cause, but on the other hand saw it as divine intervention. Her answer is that the Romans had two different modes of explanation, and that they simply did not want to choose (Johnston 2003: 156). These thoughts on the relation between ritual, chance and the gods in certain ways resemble the explanation given in this dissertation.

Recent developments

In recent years criticism has been leveled against the traditional positions summarized above. I will focus on two works. In her doctoral thesis on divination in the Roman Republic, Susanne William Rasmussen argues that the main function of divination was to aid the process of constructing and reconstructing Roman identity. Working from a social constructivist viewpoint she sees all societies as fragile.⁹⁷ Identity is what keeps them from collapsing into social anarchy. Through the process of identity construction of public divination, past, present and future were linked together to constitute an orderly and meaningful totality (cf. Lisdorf 2004b; Rasmussen 2003: 141). While the precise form of the thesis is new, it shares with Gladigow, Liebeschuetz and Rosenberger the wish to explain the existence of divination according to its function. Here its function is as identity constructor. In distinction to the other theories, however, her thesis does not entail fear as a causal component. Indeed the fear thesis is undermined.

Recently, in the magisterial two-volume work of Mary Beard, John North and Simon Price (Beard, North, & Price 1998), the manipulation thesis and the assumption that the Romans did not take divination seriously has been criticized. According to Beard and colleagues, it may appear that the Romans manipulated their religion, but there is no known case where a ruling of a priestly college is ignored and no known case where the religious procedures were willfully ignored (Beard, North, & Price 1998: 126). They suggest another explanation of why it is that the will of the gods could be seen as different at all: "if the gods support and promote the Roman state (as they do), then they will make known their opposition to legislation, that is, against the interests of the state. The snag, of course, is that there could be

⁹⁷ Her main influence is Peter Berger and Thomas Luckmann (Berger 1967; Berger & Luckmann 1966)

vastly different views on what legislation is in fact 'good for Rome'" (Beard, North, & Price 1998: 126-127). Thus the Romans believed in divination, but their interpretations of the signs from the gods may vary.

Summary

The early research was carried out in an ideographic historical fashion. The theses offered did not differ significantly from those found in the sources of the Romans themselves. Around the turn of the 19th century the study of divination was inspired by the new discipline of anthropology, which added a general or nomothetic frame for conceptualizing Roman divination. Eventually the enthusiasm of nomothetical explanations faded and a more historical approach came to dominate again. In the seventies nomothetic approaches gained influence again, as old ideas were further developed by the integration of advances in psychology and philosophy. Sociological theory and new developments in anthropology added new explanatory frames that were put to use in explaining divination. As can be seen from the preceding, quite a lot of overlap exists between the different explanations offered, although all of them have their own peculiarities and focus, they all seem to mix a small number of explanations. For purposes of critical evaluation, they can be summarized in the form of four central theses: the historical thesis, the formalist thesis, the fear thesis and the functional thesis. In the following I will present a critical review of these theses.

Four central theses in the history of Roman Divination

The historical thesis

This thesis stipulates that historical contingencies explain the existence of divination. For example Warde-Fowler believed that divination owes its existence to a civic adaptation of an agricultural practice of predicting the weather. Another more prevalent scheme is the evolutionist. Here divination is explained as a survival from an earlier stage of culture. This can be seen in Krauss and Bayet. A third prevalent historical explanation is that Roman divination is somehow influenced by the Greeks or the Etruscans (Bloch and Latte). Often the introduction of Greek philosophy is the central causal factor of manipulation in late republican times (Taylor, Latte).

The problem with these historical explanations is that in so far as they explain anything, they are merely correlational. They take two co-occurring events, e.g. the introduction of Greek philosophy (A) and disbelief in divination (B)⁹⁸, and consider this an explanation. If you want to explain a correlation between A (say introduction of Greek philosophy) and B (disbelief in divination), there are four options to consider: either 1) A causes B, or 2) B causes A, or 3) some other factor, C, causes A and B, or 4) there is no causal relationship between A and B. None have bothered to investigate these possibilities systematically. Let us assume for a moment that there is a causal relationship between A and B. It might then be that a decline in belief in divination made the Romans more susceptible to Greek philosophy (relation 2), or maybe a great admiration of everything Greek (the Greeks did not use divination to the same extent as the Romans) produced both introduction of Greek philosophy and disbelief in divination (relation 3).

Historical explanations of the form reviewed here also lack a theory of why some historical events have an effect on culture change and others do not. The only stipulated mechanism is conservatism. People simply continue doing what their predecessors have done. But sometimes they apparently change. Why did they change this time and not some other? If we take the example of Greek philosophy, we know that there were cultural interaction between the Romans and the Greeks already from the 6th century or earlier BCE (Beard, North, & Price 1998: I, 12). Why did Greek philosophy only make an impact in the 3rd century BCE when the Romans must have known of it for centuries? In order to use history as an explanation of culture change or persistence, it is necessary to give an account of why some historical events have an impact and others don't.

It could be said that contingencies are not proper explanations, but descriptions, because they are merely based on correlation.

The formalist thesis

A large number of scholars have assumed that divination rituals are mere formalisms to which the Romans did not attach any belief in the gods (Bouché-Leclercq, Warde-Fowler, Bloch, Dumezil, Taylor, and Latte). First of all, it is necessary to notice the strongly protestant bias in the focus on belief to the detriment of ritual inherent in this thesis (Durand

⁹⁸ Since recent research has shown that the foremost exponent of Greek philosophy, Cicero, took divination very seriously (Beard 1986; Guillaumont 1984; Linderski 1995: passim), there is no reason to suggest that reading Greek philosophy created a sceptic attitude in general.

& Scheid 1994; Linder & Scheid 1993; Lisdorf 2005b; Scheid 2005; Smith 1990). Second, it is worth noting that nothing in the sources seems to indicate that there was any general disbelief in the efficacy of divination or any other rituals (Beard, North, & Price 1998: I, 126). What seems to be the problem is a misreading of the sources. There are stories about magistrates and others who manipulate or disregard proper ritual action, but these stories do not at all show skepticism towards divination. All "anti-ritualist" protagonists face a grim end, usually death in a military defeat. That would suggest that the Romans saw rituals as quite important.

Other scholars who have done research on sortition have showed a more fruitful way of conceptualizing divination rituals. They have stipulated that chance is a crucial component in how the Romans believed their gods to communicate. Champeaux, for example, calls chance the language of the gods. While I do not believe she has explained the relation between chance and the gods by calling it the language of the gods, I agree that a technique involving chance is a necessary precondition for representing the extraction of credible information from the gods in divination (see chapter 4).

The fear thesis

This is probably the most common thesis, going back to Livy. The central tenet of the fear thesis is that fear is the cause, in one way or another, of divination. Sometimes fear is calmed through divination techniques (Liebeschuetz, Gladigow, Rosenberger), but most often fear is produced by crises (Krauss, Bloch, Dumezil, Gladigow, and Rosenberger). By far the most frequent empirical observation to substantiate this claim is the handling of prodigies.

The basic logic is that crises, such as wars, produce fear in the population⁹⁹, which produces a high number of prodigy reports, since the population is reporting prodigies to the senate. This would qualify as an explanation, because it stipulates some causal mechanism. Fortunately this is a theory which can be checked more rigorously against the historical record, since we have reasonably good evidence of the number of prodigies accepted per year¹⁰⁰ and good evidence of the number of wars or other critical events per year in the period between 218-44 BCE. It is therefore possible to test the thesis empirically.

⁹⁹ It should be mentioned that some versions of the fear thesis stipulate that the cause was individual fear without any apparent outer reason (Kraus, Dumezil, and Gladigow), but there is no way we can test this. It therefore remains a possibility, but should be considered speculation.

¹⁰⁰ For a more thorough treatment of prodigies and the sources for the prodigy records see chapter 10.

Whereas information about the number of prodigies reported per year is relatively straightforward (see appendix 5), we need to operationalize the degree of crisis. Such a measure will never be precise, but we should still be able to see some rough correlation between degree of crisis and number of reported prodigies. A crisis index was devised according to which every year was assigned a value¹⁰¹ (see Table 7.1.):

0 - No perception of risk to Rome and her army

1 - Minor problems; for example rebellion in a remote region, or minor casualties in the Roman army

2 – Larger problems; for example limited military confrontations outside Italy, and some casualties in the Roman army

3 – Major problems; major military confrontations outside Italy; substantial casualties

4 – Serious problems; the enemy is in Italy or at its borders; Consuls killed or entire armies (the size of a legion or more) lost in battle

5 – Acute problems; Rome is facing its demise, the city itself is threatened with capture (or perceived to be so), an unsustainable level of casualties in the Roman army.

Table 7.1. Crisis index

Other things could be seen as the reason for crisis, most notably disease. The problem is that our sources speak of disease in general, and rarely gives us concrete historical information (Sallares 1996). Livy does occasionally inform us of plagues, but it is not clear in all cases how widespread they were.

In order to have a fix-point, the chronological table in the *Cambridge Ancient History* Vol. VIII (page 524-541) and IX (780-798) served as the basis from which values for each year was assigned. Further, in order not to let theoretical preconceptions influence the individual ratings, values were assigned to each year before the count of prodigies per year was done.

Thus we end up with a list of paired values. For each reporting year we have a value designating the degree of crisis and another designating the number of prodigies. To visualize the relation, a bubble plot was made. The size of the bubbles indicates the degree of crisis for

¹⁰¹ The index was devised by me, but was discussed with PhD Ittai Gradel, University of Reading, whom I thank for many fruitful suggestions and improvements. Any infelicities are naturally my responsibility.

the observation. If the fear thesis was right we would expect big bubbles and no small ones at the top and small bubbles and no big ones at the bottom. The results can be seen in fig.7.1.

Relation between Degree of Crisis and Number of Prodigies

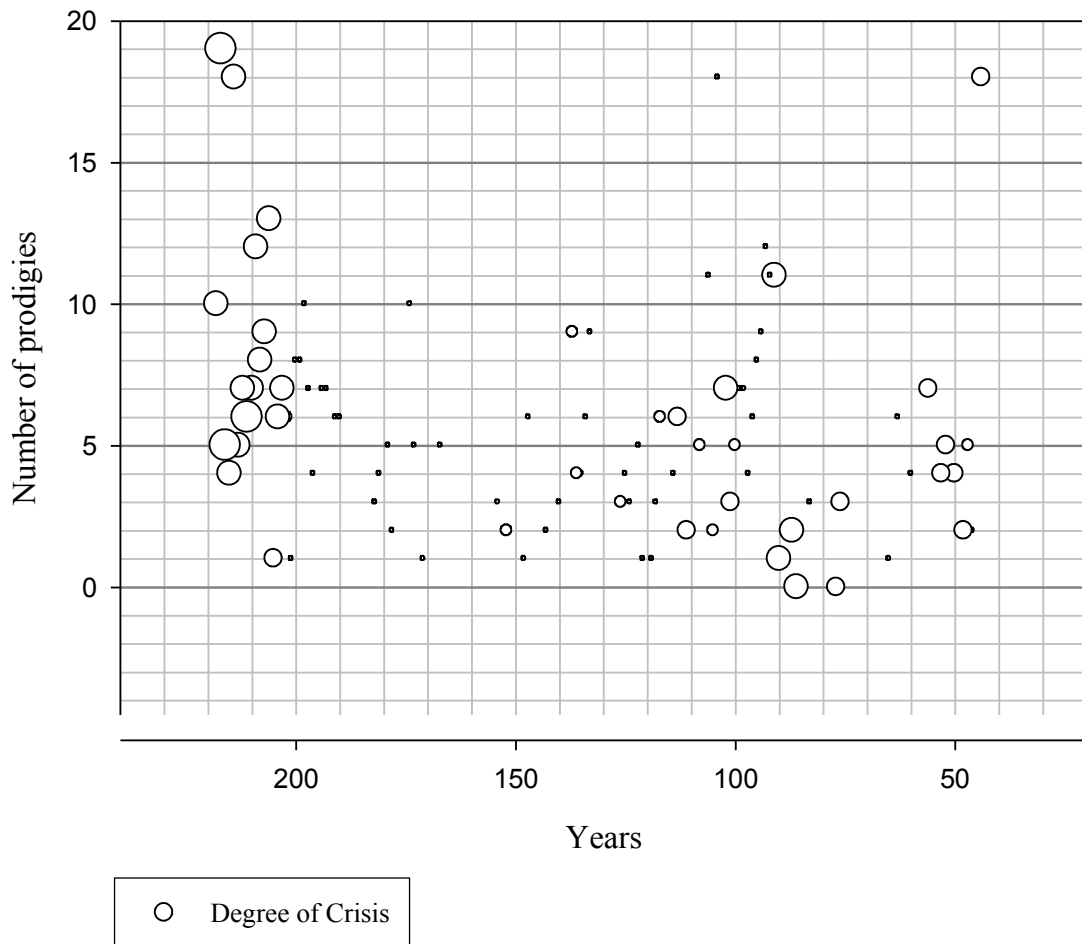


Figure 7.1. Relation between degree of crisis and number of prodigies

Around the Punic war (from 218-202 BCE onwards) there are indeed some big bubbles at the top as expected, but around 80-100 the big bubbles are at the bottom and the small ones at the top. We can see that there does not seem to be any big temporal difference, such as big bubbles at one end only, or high number of prodigies at one point. The fear thesis stipulates that there is a correlation between these two values, whereas the null-hypothesis is that there is none. We can investigate this statistically.

A box-plot was made and revealed the presence of four outliers. The first was from 217, which was at the height of the 2nd Punic war, probably the greatest war in late republican memory. The only source for this is Livy. He sometimes uses prodigies to dramatize events in general (Levene 1993: 84-85). It is possible that he has here collapsed the prodigy lists for two years into one (Levene 1993: 38). The second observation is from 44. The explanation here is analogous. 44 was the year where Caesar was killed. Here we have more sources, but they also seem to dramatize by listing a greater number of prodigies, where some on closer inspection more stringently could be called *omina*. As we shall see in chapter 10, *omina* were directed towards private persons and not the state as *prodigia* were. There is therefore reason to doubt that most of the prodigies for the year 44 are *prodigia* in the technical sense, that is, in the same sense as the other prodigies in this investigation. The third observation stems from the year 104, where a serious attack of the Cimbri on North Italy took place at the same time as the second Sicilian slave war. It could therefore follow the pattern in Livy, where especially important events are dramatized with higher amount of prodigies by collapsing two years and integrating counting *omina* as prodigies. Unfortunately we don't have Livy's history for this period, only the summary of Julius Obsequens.¹⁰² Therefore we cannot investigate this in detail. The last observation is from the year 163, where, as far as we can see, nothing critical happened at all. Nevertheless 17 prodigies were reported. Unfortunately again we only have the prodigy lists from Julius Obsequens, so we cannot determine whether it is attributed to any dramatizing effect, but it can be seen that the prodigy lists from the previous year are missing. Consequently, it is probable, either by purpose or mistake, that the lists from 164 and 163 were collapsed into one. These four outliers were eliminated from the data, since they were likely to skew the trend in the data.

The correlation coefficient for the trimmed data was 0,173 (r squared was 0,020), which is not a very good correlation.¹⁰³ A linear regression analysis was made with degree of crisis as the independent variable and number of prodigies as the dependent variable. This did not reveal any significant relationship between degree of crisis and number of prodigies $F(1,102) = 3,151, P= 0.079$.¹⁰⁴ Other regression models were tried, but the best fit was provided by the linear regression. There is however a slight trend towards correlation.

¹⁰² Julius Obsequens was an historian who extracted the prodigy lists and other portentuous events from Livy and made them into a separate work (Schmidt 1968)

¹⁰³ For the untrimmed data $r= 0.18$ and $r\text{ squared}= 0.025$.

¹⁰⁴ The result for the untrimmed data was $F(1,106)= 3.730, p= 0.056$. This is actually slightly better than the trimmed data, but still not significant.

Based on the evidence available to us, the null-hypothesis cannot be rejected. Still we cannot say that fear can explain the number of prodigies reported in the Roman Republic in the period from 218-44 BCE. This period forms the bulk of our evidence of prodigies in the Roman republic. Previous theories explaining divination with recourse to fear, what I have called the fear thesis, is not consistent with the findings presented here. It should however be borne in mind that there are important uncertainties tied to the quantification of the number of prodigies and the degree of crisis and individual observations may be contended. The trend however, is reasonably clear. It should also be noted that I am not the first to reject this thesis. Also Rasmussen rejects the fear thesis, because it is entirely based on “a very few vague passages from Livy taken from the period around the Second Punic War” (Rasmussen 2003:29). The quantitative analysis presented here thus yields the same result.

The functional thesis

The functional thesis has two different forms. The most common is the manipulation thesis, and the other is the social functionalist thesis. Both explain divination by reference to its function. The problem with these explanations is that, like the historical explanations, they argue from a correlation between a mechanism (divination) and a stipulated effect (political influence, social cohesion, calming of fear). No reason is given why precisely this mechanism should cause that effect. The effect might be spurious. Neither is there any demonstration that the absence of the mechanism entailed the absence of the effect. In most cases it is impossible to measure the effect. How do we measure social cohesion? How do we measure how much fear was calmed? No one has provided anything but vague formulations. The general picture is therefore that we are left without any specification of how the mechanism produces the effect, and also without any way to measure the effect. As long as this is the case, the functional thesis remains speculation (cf. Penner 1989).

There is one instance, though, where it is possible to test the functionalist thesis. That is the assumption that the expiatory rituals performed in response to the prodigies, called *procurationes* in Latin, had the function of calming the fear. It would then be reasonable to assume that, when fear was high, there would be more fear to calm and hence more expiations. By using the same crisis index as above in the section on the fear thesis and counting the numbers of expiations¹⁰⁵ mentioned it is possible to test the assumption.

¹⁰⁵ It should be mentioned that the number of expiations are not given by our sources as conscientiously as the number of prodigies. We have several years where none are mentioned. Further it should be mentioned that

Relation between *Procurationes* and Degree of Crisis

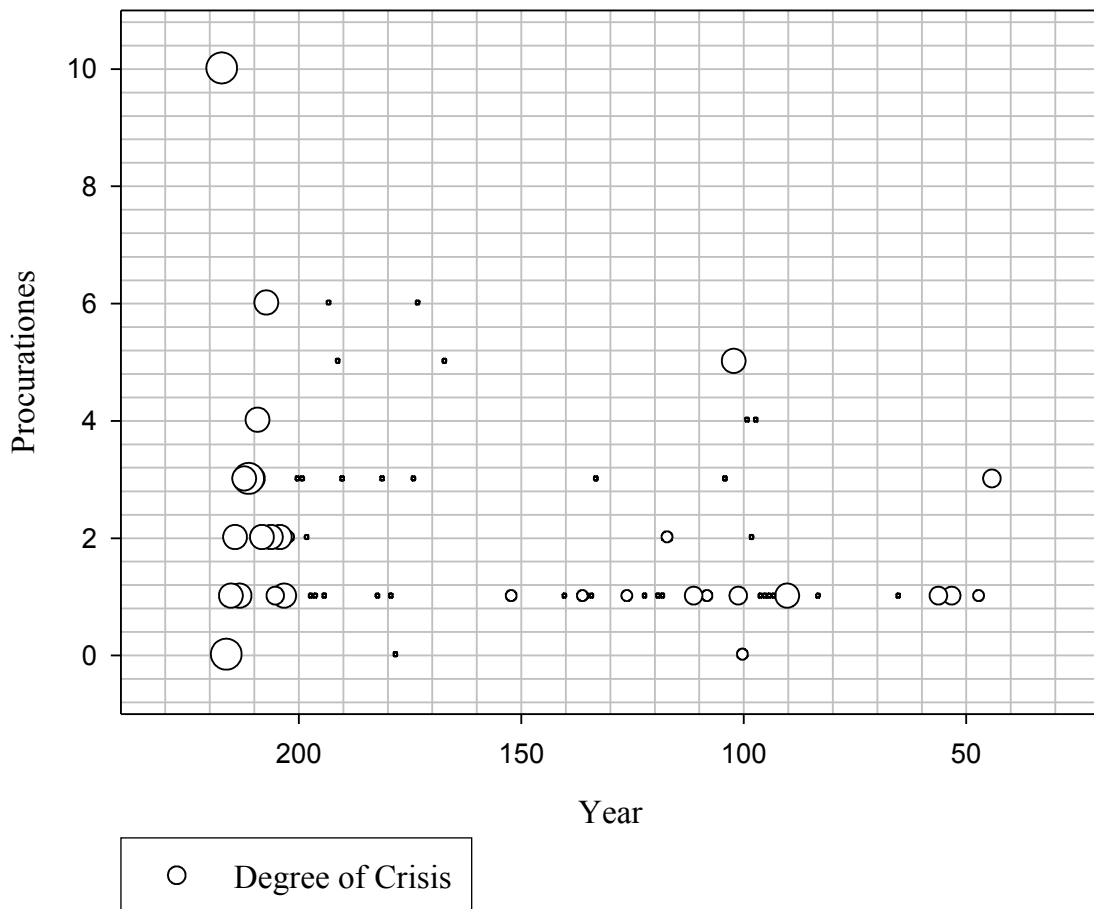


Figure 7.2. Relation between *expiations* and degree of crisis

A bubble plot gives us an overview (see fig. 7.2). We should expect big bubbles to be at the top and small bubbles at the bottom. It can be seen that the period of the Punic war shows all different combinations: many expiations and high degree crisis, and only a few expiations and a high degree of crisis. We also find a high degree of crisis but only few expiations. There does not seem to be any correlation.

To investigate this statistically a box plot was made. It revealed two outliers from 218 (12 expiations) and 217 (10 expiations), but since these were extreme times a high number is to be expected. There is thus no reason to remove them from the data. The correlation coefficient was 0,199 (adjusted R square 0,027). This is close to a random distribution. A

for the years from 166-66 BCE our main source is Julius Obsequens, who did not seem to have taken a special interest in expiations. He rarely mentions more than a few. In light of this, caution should be given to the interpretation of the results.

linear regression analysis was made with degree of crisis as the independent variable and number of expiations as the dependent variable which didn't yield any significant relation ($F(1,77)= 3.163, P=0.079$). To be fair we could say that there is a trend. This trend may, however, just as well be attributed to the dramatic effect. If for example we removed the extreme observations from 218 and 217 in which the expiations play a central role for Livy in evoking the fear caused by Hannibal in Italy, the F value drops dramatically to $F(1,75)=0.000, P=0.985$, which is random. It does not therefore seem reasonable to conclude that there is any causal relation between crisis and number of expiations except in 218 and 217. It seems that, in so far as it can be submitted to empirical tests, the predictions one would expect of the functional thesis do not fit the empirical findings accurately.

Summary

This critical review has revealed review that all previous explanations of the existence of divination in the Roman Republic have serious flaws. We saw that it was possible to distinguish four theses that had been offered in previous research to explain Roman divination. The historical thesis does not on closer inspection qualify as an explanation, because it merely demonstrates a correlation between events without supplying any evidence of a causal relation. The formalist thesis is based on a misreading of the sources. The fear thesis likewise has problems with the empirical level since it does not agree well with the predictions of the theory. The functional thesis has the same sort of problem as the historical thesis because it reverts to a correlational account, where it is not possible to isolate the causes and effects. In the only case where it was possible to test its predictions empirically, it could not account for the results. It is therefore possible to conclude that all previous attempts to explain the existence of divination in Roman republican times have failed.

Chapter 8 - Sources to Roman Divination

Before we proceed with a detailed investigation of divination in republican Rome, we need to briefly review the most important sources. The sources to Roman divination are very diverse. A reasonable picture can only be constructed by piecing together many different kinds of sources, each with their own history and problems. It is beyond the limits of this thesis to go in to the detailed historical criticism of all sources used. Indeed just working out the sources behind for example Valerius Maximus would take a doctoral thesis in itself. In this chapter I will therefore go through the most important observations about the most important sources for divination. Space allows us only briefly to consider the most general characteristics of different writers. The selection is not complete, but based on an assessment of which sources are most important for the subsequent treatment.

Republican writers

Titus Maccius Plautus (c.250-184 BCE)

Plautus was born in Umbria, probably of humble origin. His plays are adaptations of Greek new comedy and most often set in Greece. In practice they were completely reworked to fit Roman culture. Roman comedy differed from Greek comedy in that Roman comedy was mostly performed for the masses and the audience was much more socially diverse. This makes Plautus' plays a unique window into how Romans, especially ordinary people, thought at his time. He gives us a good indication of the implicit assumptions and explicit knowledge of the average Roman.

Marcus Terrentius Varro (116-27 BCE)

Varro was an antiquarian collector of facts. He collected from all the sources he could get hold of, frequently archaic documents. His production was immense, but unfortunately only two works are still extant: *De re rustica*, *De lingua latina*. Already in antiquity he had a great reputation as a scholar and was subsequently known as the wisest of all. Many fragments of his works are therefore scattered in later authors. He knew a great deal about religion and wrote a large work on the subject, *Res divina*, parts of which are known through Augustine's

criticism of it. His antiquarian curiosity and his knowledge of religion make him a good source for details about the history of divination.

Marcus Tullius Cicero (106-43 BCE)

One of the absolute central sources for Roman divination is Cicero. Cicero became an augur in 53 or 52 (Linderski 1995: 13). The augurs were the central authorities on Roman divination in general and they produced authoritative rulings on questions of divination (Linderski 1986: 2154-2189). They therefore had a large body of commentaries and books on divination to which Cicero had access. Cicero was nominated augur late in his life. This is the reason why the technical details of divination can only be found in his late authorship. Other parts of Cicero's authorship are equally important, although in a different way. His speeches are good indications of how people thought at his time because they were public orations meant to convince a living audience of something (Guillaumont 1984: 38f). Only through working from very common assumptions is it possible to convince someone. They can therefore give good clues to implicit assumptions about divination and omens.

A special note should be made concerning the *De divinatione*. This is probably the most central single source for divination. It is staged as a dialogue between Cicero's brother, Quintus, who produces a stoic argument for the efficacy of divination in book one and himself, Marcus, who responds by giving a skeptical refutation of the argument of Quintus in book two¹⁰⁶ (Beard 1986; Guillaumont 1984: 9; Schofield 1986). The first book is a reasonably good exposition of common attitudes among the educated Roman elite. The second book does not prove that Cicero did not believe in divination, as most scholars have maintained. It is an exercise in counter-argument, characteristic of the Academic school of philosophy (Beard 1986: 34), and an argument against a rival augural theory current at the time of Cicero (Linderski 1982: 31). Cicero's own attitude to divination can more clearly be seen in *De legibus*, in which he admits the necessity of public forms of divination (Cic. *Leg.* 2.31). According to Cicero divination assured that the laws of the Roman Republic were in accordance with nature (Linderski 1982)

Cicero is consequently an authoritative source for technical augural details in the late part of his authorship, and also a good source for general attitudes towards divination and omens.

¹⁰⁶ From a letter to his brother from 54 BCE it can be seen that Cicero originally wanted to stage the dialogue in 129 BCE as taking place between Scipio and Laelius (Beard 1986: 39).

Dionysius Hallicarnassus (60 BCE- 7 BCE)

Dionysius of Hallicarnassus was a Greek historian living in Rome at the end of the 1st century BCE. He wrote a history of early Rome, of which only the first books are still extant. He built on the early Roman annalists and frequently gives us references to contemporary life. His work is a useful source for early historical data, but is not a good source for technical details.

Titus Livius (59 BCE-17 CE)

Another central source is Livy's *Ab urbe condita*, which is a history of Rome from its foundation until his own time. Unfortunately, not all books are extant. For those books missing we have a good source for the prodigies in Julius Obsequens' epitome (cf. Schmidt 1968) and we also have some medieval summaries, *periochae*, which, unfortunately, are not very precise or informative. It is generally accepted that Livy did not consult any primary sources, such as monuments, annals or books himself. Rather, he wrote his history on the basis of a small number of previous historians and annalists (Walsh 1961). These previous historians, such as Valerius Antias and Claudius Quadrigarius, were well informed for example about the contents of the *Annales Maximi* (Ogilvie 1965: 12-16; Szemler 1972: 17-19; Walsh 1961: 120-122). The *Annales Maximi* were the official records of the Roman state. They are probably the earliest written Roman history and were probably made public in the end of the 2nd century BCE (Gross 1933). Through Livy and his intermediaries we therefore have access to relatively solid historical information from at least the 5th century and onwards.

There is, however, one caveat: since it is only the typically annalistic information, and maybe a few stories, we can trust from the very early times, we should not take everything Livy writes for historical truth. When for example we encounter a speech of Cincinnatus we should not think that this is in any way based on historical fact. This caveat applies to all speeches in Livy, which tend to say more about his own times than the history they portray. In distinction to reported speeches, the information that someone had been consul and abdicated because of a ritual fault in the auspices can probably be trusted, since it is this type of information that would have been recorded in the official annals. When we come down to where the extant books of Livy start again, in the 3rd century, the historical narratives are fuller and more trustworthy since here Livy had access to historians who were contemporary or close in time to the events related (Cornell 1995: 6).

Post-republican writers

Verrius Flacchus

Verrius Flacchus was a freedman. He was widely considered the most learned scholar of his age and was the tutor of Augustus' grandsons (Dihle 1994: 1637). His approach was antiquarian, which can be seen in his most famous work *De verborum significatu*. This work built on early republican grammarians and antiquarians (Dihle 1994: 1640). It is unfortunately lost, but an abridged version by Sextus Pompeius Festus from the 2nd century CE exists. This is unfortunately only known in one manuscript which was burnt at one point. Consequently some pages are severely fragmented. We also possess an abridgement of Festus' work by Paulus Diaconus plus references to it in Servius (Dihle 1994: 1641-1643). Here I will use the edition by Lindsay which contains the work by Festus as well as the abridgment of Paulus Diaconus. Festus is widely regarded as a quarry of information on technicalities of Republican religion and will therefore play a central role. We also possess fragments from Verrius Flacchus through other authors like Aulus Gellius (e.g. Gel.4.5.6).

Aulus Gellius (130-180 CE)

Aulus Gellius' work *Noctes Atticae* is a rearrangement of material that he gathered on a wide variety of subjects. The value of this work lies in the fact that it has a lot of antiquarian material which is no longer extant, primarily from late Republican and Augustan times (Stevenson 2004). The advantage of this source relative to other sources referring to the Roman antiquarians is that Gellius uses the references, most often to Varro, as the substance of his work, not just as illustrations (Stevenson 2004: 122). This makes it a valuable source of antiquarian information that can give us information about events far back in time.

Valerius Maximus

Valerius Maximus lived in the early first century CE. Apart from this, almost nothing is known about him. He wrote a collection on memorable deeds and sayings, *Facta et dicta memorabilia*, collected from the works that were available to him. We can see that he has used either directly or by way of a common source, Valerius Antias, Coelius and Cicero (Bosch 1929: 110). What makes it a good source for our purposes is that religion and ritual

played a big part in it, and there are many stories about proper and improper religious behavior. This gives us a good indication of how divination was conceptualized in the early principate, but also earlier since some of the sources that Valerius Maximus builds on are republican. When we are able to test his use of these earlier sources he seems to follow them relatively closely, although he is not as detailed and technical in his account (Mueller 2002: 111). Therefore some potentially useful information can be extracted from Valerius Maximus' work.

Gaius Tranquilius Suetonius (c.70 CE -)

While Suetonius is much distrusted in some circles and regarded as primarily drawn towards gossip, he does, however, have one great advantage: he had access to imperial archives, which would have had all relevant historical records. Therefore, in certain cases Suetonius can throw light on some historical events, not known from other sources.

Seneca (4 BCE – 65 CE)

Seneca was educated in Rome and most famous as the tutor of Nero. He is used mainly as a source for knowledge of haruspicy. In his play *Oedipus*, he describes a haruspex inspecting the entrails of a sacrificial victim. In this source we can see what sort of things would be understood by the audience, that is, what a Roman audience in general would know about extispicy. While this is later than republican times, extispicy was one of the divination practices that seem to have remained unchanged from the republic to the principate.

Gaius Plinius Secundus (23BCE - 79CE)

Although Pliny mostly used secondary sources and his work seems to be organized according to inconsistent principles, it can sometimes be useful (Köves-Zulauf 1978: 227). He often includes valuable information on details of Roman religion based on scholars such as, Varro, Valerius Flacchus and annalistic sources that are not otherwise known to us (Köves-Zulauf 1978: 229-243). He is also known to have used *commentarii* on omens by one C. Epidius (Plin.Nat.17.243) and a work on Etruscan divination by Umbricius Melior (Plin.Nat.10.19), who was the chief haruspex of the emperor Galba (Köves-Zulauf 1978: 245f). Pliny therefore is likely to be able to supply important technical details of republican divination.

M. Servius Honoratus

Marius Servius Honoratus was a Latin grammarian active around 400 CE. He was widely recognized as an extremely knowledgeable man at his time (Keune 1990). His most famous work is his commentaries to Virgil. As he was a grammarian, most comments are on grammatical issues, but some are also on the meanings of the words. The world of ideas of the Ancient Romans must have been quite strange to someone living in the 5th century CE. In explicating these strange ideas Servius used works which are now lost. This makes Servius a valuable resource for certain technical details, since these were probably the most incomprehensible at his time. Through Servius we can sometimes get access to the lost sources like Varro or Verrius Flaccus.

Scholia

Scholia are commentaries compiled from ancient to medieval times to the ancient literature. Since they sometimes had access to works now lost, every now and then they can give us useful information.

Material sources: inscriptions, archaeological remains.

Every now and then, though unfortunately much too rarely, we are able to connect our literary sources with material remains, be it material used for divination, sculptures, or pictures of proceedings of divination or inscriptions. They are the best sources we have since they give us a more direct access to the historical reality.

Chapter 9 - Signa impetrativa

In this chapter we will review all known impetrative divination practices in Roman republican times. They can be grouped into five types: auspices, sortition, extispicy, Sibylline books and miscellaneous. They all have subgroups of different practices.

Auspices

Auspices are in principle the observation of birds, but also more generally animals or the sky. There are several different sub-types labeled *augurium*, *auspicium*, *auspicium ex tripudio* and various other types.

Augurium

Augurium, or more often *inauguratio*, is a special case of *auspicium* used by augurs to inaugurate objects, persons or places. The technique is observation of the behavior of birds by an augur.

Technique The only persons able to perform an *inauguratio* were inaugurated members of the augural college, that is, augurs (Catalano 1960: 220-246). The purposes of the *inauguratio* could differ. It is possible to distinguish between the inauguration of ceremonies, persons and places (Linderski 1986: 2222). We do not know much about the inauguration of ceremonies, as only a few are known.¹⁰⁷ We do, however, know that the augur had to be present at the ceremony (Gel.4.6.10). The inauguration of a person to a priesthood required a nomination¹⁰⁸ and the presence of the nominee and the augur.¹⁰⁹ When a place was to be inaugurated, many other rituals had to be performed as well.¹¹⁰

¹⁰⁷ The *augurium* or *sacrificium canarium*, the *augurium salutis* the *feriae pracidanea* and a few others (cf. Catalano 1960: 335-356)

¹⁰⁸ The precise formalities differed for the different priesthoods, some used cooption some voting and others sortition. These procedures also changed during republican times. For a good overview of the different priesthoods, see (Beard 1990). For the Flamens see (Vanggaard 1988)

¹⁰⁹ It is possible that all public priests were inaugurated, but we know for sure that the following were: *Flamen Dialis*, *Flamen Divi Iulii*, *Flamen Martialis*, *Flamen Quirinalis*, *Rex Sacrorum*, the *Pontifices*, the *Augures* and the *Salii* (Catalano 1960: 212)

¹¹⁰ This is referred to as *liberare* and *effare* (e.g. Cic.*Leg.*2.8.21). This entailed sacrifices, invocations, and prayers. For a thorough treatment of the details of these ritual actions, see (Catalano 1960: 281-291; Valetton 1892).

The only full description we have of an *inauguration* is that of persons. A text in Livy purports to describe the ritual inauguration of king Numa (Liv.1.18.6-10).¹¹¹ This text is generally taken to reflect the inauguration of priests in republican times (Linderski 1986: 2256f). It took place at the *arx* on the Capitol mount in a place called the *auguraculum*.¹¹² Other such *auguracula* are known from other Italian cities.¹¹³ They seem to be a parallel to the temporary *tabernaculum* used by the magistrate in the field for taking the auspices. The primary difference is that the *auguraculum* is permanent.

The augur performing the *inauguration* was forbidden to have any sores on his body (Plut.*Quaest. Rom.* 73).¹¹⁴ He officiated, *capite velato*, with his head veiled (Liv.1.18.7; Dion.Hal.*Ant.Rom.*2.5)¹¹⁵, and wore the *toga praetexta*¹¹⁶ or *trabea*¹¹⁷ (cf. Linderski 1986: 2251, n.412). The ceremony probably started with a prayer (*precatio*).¹¹⁸ The *inaugurandus* (the person who is the object of the ceremony) sat on a rock facing south, while the augur was beside him to the left facing east.¹¹⁹ The augur took his staff (*lituus*) with his right hand and demarcated his field of view (*locus designatus in aere*) while uttering a ritual formula.¹²⁰ This field seems to have been demarcated by objects visible in the landscape such as trees (cf. Var.*L.*7.8.) and in the city probably from the *arx* to the *pomerium*.¹²¹ The field probably

¹¹¹ This text is probably a narativization of an original formula which contained the words to be spoken and instructions for the participants (Linderski 1986: 2257).

¹¹² The *arx* was a fort and the *auguraculum* was situated in the open space on the North East corner of the *arx* Capitol. Another one on the Quirinal is also known (Linderski 1986: 2277, n.518; Platner & Ashby 1929: 61).

¹¹³ The most fully described are those in Bantia and Iguvium (Linderski 1986: 2258).

¹¹⁴ This is a general prohibition which applied to all priests (Beard 1990; Wissowa 1912: 491)

¹¹⁵ This signaled that it was a traditional Roman rite (Scheid 2005: 21-57). There is nevertheless a passage in Festus which can be read to claim that augurs officiated *capite aperto*, with open head (Fest. 462 L). That would signify the opposite that it was according to the Greek rite. The passage is very fragmented and this reading builds on partial reconstructions of Lindsay. He follows Mommsen, who reconstructed the entire passage. The entire reconstruction, however, makes it clear that the augur officiating *capite aperto*, did so as an exception due to his *familiaria sacra*. That would make sense. Nevertheless the passage is so damaged and the words *capite aperto* do not appear at all, so it is better not to conclude anything based on this alone.

¹¹⁶ A toga with a purple stripe worn by curule magistrates (Cic.*Red. Sen.*5.12.) and some priests (Liv.27.8.8) (cf. Helm 1953).

¹¹⁷ It was a special kind of toga found in different varieties related to the gods and kingship. The one used by augurs had scarlet stripes and purple hem (Serv.*A.*7.612) (cf. Schuppe 1896).

¹¹⁸ Livy does not mention it in the beginning, but, as Linderski has argued, it is not likely that there would be prayers in the middle of the auspication as Livy's text has it (Linderski 1986: 2279f). Servius, who was not however the most precise concerning augural details, also places the prayers before the actual auspication (Serv.*A.*9.24) Examples of such augural prayers can be seen in Fest. 476 L.

¹¹⁹ There has been great debate over the exact orientations and whether Livy had misunderstood it. It is not possible to say for sure, but I find Linderski's argument the most convincing and coherent (Linderski 1986: 2257-2261, 2280-2289). According to this, Livy has got the orientation right.

¹²⁰ Probably similar to the one mentioned by Varro (Var.*L.*7.8).

¹²¹ Different opinions exist about whether this is a *templum in caelo*, which was also used for the observation of lightning (Catalano 1978; Linderski 1986: 2269-2274; Valeton 1889: 228f). What is important here is not the actual orientation but the fact that a field in which signs are looked for is marked out in advance.

formed a half-circle going from the South to the North. Possibly the field may have been further sub-divided into a lower and higher part by the limit of the city wall, the *pomerium* (Valeton 1890: 246-248). The augur then put the *lituus* in his left hand and his right hand on the head of the *inaugurandus*. He asked if Jupiter approved of the *inaugurandus*, in which case he should send positive signs within the formerly delimited area. Some birds gave positive or negative signs depending on which side of the field of vision they appeared on. For example a *picus* (woodpecker) and *cornix* (crow) in the left field were good or “admitting” birds and likewise a *corvus* (raven) and *parra* (screech-owl) in the right (Pl.As.259-261; Cic.Div.1.12). The cries of birds, like that of the owls called *bubo* and *noctua* were always bad signs. When a positive sign had been observed the *inaugurandus* was declared a specific kind of priest, he was to be, and stepped down.

Ritualization The ritualization is established through the action of asking a question and then marking a field in the air in which birds are observed. Depending on their position and kind, they give an answer to the question. No one is controlling the birds to give the answers and the birds themselves do not speak or qualify as intentional agents. This produces a deficiency in the intentional structure of the action. It is repaired through the context in which the birds are taken as answers from a hidden agent: Jupiter.

Direct prestige Since only the augurs could perform the *inauguratio*, it is relatively easy to assess the prestige of the operator. The augural college was the second most prestigious priesthood. The known members of the college also held the highest political offices (Szemler 1978: 2326; Szemler 1972: 184-186). Another interesting observation is that augurs could not have any physical abnormalities. This was one of the empirical markers of prestigious individuals that we found above. Further they are male and comparatively old, which are other markers of prestige. The same is the case for all public priesthoods (Beard 1990).

Indirect prestige The associated counterintuitive agent is *Iupiter Optimus Maximus* (Cic.Phil.13.12; Leg.2.20).¹²² This can be seen explicitly in the text by Livy treated above, where the augur addresses Jupiter directly (Liv.1.18.9), and from the fact that the augurs are

¹²² For sources and discussion see (Catalano 1960: 155; Linderski 1986: 2226f; Mommsen 1952: I, 77, n.2; Wissowa 1912: 119).

called *interpretes Iovi*, interpreters of Jupiter, and the augural birds are called *internuntiae Iovi*, messengers of Jupiter (Plin.*Nat.* 10.110, Ov.*Fast.* 1.446-448).

Utility and Credibility value The *inauguratio* was used to permanently change the religious/juridical status of a ceremony, person or place (Linderski 1986: 2296). The *inauguratio* of a ceremony made it valid. The inauguration of a person turned him into that specific kind of priest. This changed the properties of the person into a person with the ability to act as a priest of that college. The inauguration of a place turned it into a *templum*, which changed the properties of the place into one in which a magistrate could take the auspices and the senate have meetings.

It is difficult to assess the credibility value since no actions were taken directly on the basis of it. The *inauguratio* only provided an answer as to whether the ceremony, person or place should change status. It could be argued that the credibility value indirectly was high since these changes were at the bottom of the Roman society: if the senate met it was very important that it was in a *templum*. Likewise, when a magistrate took the auspices before carrying through legislation, it was also in a *templum*. If these were not *templa*, it would constitute a severe ritual fault (*vitium*), which, in the Roman culture was thought to lead to disasters and calamities.¹²³

History In the tradition, *augurium* can be traced to Romulus who was the first augur when he founded Rome. While this is legend, we can still assess the history of the practice based on a few other clues.

1) Comparable practices are known among Oscan and Umbrian people in Italy. This can be seen from the archaeological finds in Bantia and Iguvium (Catalano 1978: 471), which were Oscan and Umbrian towns respectively. Since Oscan and Umbrian are the two Italic languages closest to Latin it is possible that the roots are very old and common for Italic peoples. It must be older than the Etruscan influence. This means that it could precede the establishment of Rome.

¹²³ We will return to this relation in the treatment of the cultural model for omens in chapter 10. An interesting example of how important it was whether or not a place was a *templum* is the case of Cicero's house. While he was exiled, his house had allegedly been dedicated to the goddess Libertas. In an hour long speech he argued for ritual faults in the dedication, which would make it not a *templum*. That would mean that he could get it back (cf. Lisdorf 2005b).

2) A text by Varro reproduces an ancient document¹²⁴ that mentions *ager gabinum* as a separate augural category.¹²⁵ Gabii was a city close to Rome. In late republican times it was deserted. Its significance lay in the battle of Gabii, which, according to traditional annalistic dating, took place around 468. The peace treaty, *foedus gabinum*, is supposed to have existed in late republican times (Catalano 1978: 494). Roman annalistic dating is not precise, but a date in the 6th century BCE is quite likely. It seems likely that the document Varro mentions would have been produced in a situation where the relation with Gabii was of primary political interest. This would establish the existence of the Roman augural art at least as early as the 6th century.

It therefore seems highly likely that the Roman *augurium* was solidly established in the 6th century BCE, and possibly even in pre-historical times.

Cultural model The *inauguratio* is conceptualized as a dialogue with *Iuppiter Optimus Maximus*, whose approval was sought when appointing new priests or making new *templa*. The birds were his messengers and the augurs his interpreters.

Auspicium

The *auspicium ex caelo* or *ex avibus* is one of the most central techniques in Roman public divination. It is based on watching the sky, either for lightning or birds respectively. The *auspicium* is confined to official magistrates who intend to perform some important action. Thus, while the augurs use a similar technique, the effect and utility is different for the auspices of the magistrates.

Technique The auspices must be taken by a magistrate before the action he intends to carry out (Linderski 1986: 2296). The *auspicium* had to be taken after midnight during the night (Gel.3.2.10, Liv.10.40.) before the day in which the intended action was to take place. It also had to be taken at the place in which the action was intended. For example, in the case of senate meetings, the *auspicium* had to take place at the senate house (cf. Wissowa 1896: 2585).

¹²⁴ The unfortunately corrupt version which we have in the manuscripts show clear signs of very old Latin language (Linderski 1986: 2267-2279)

¹²⁵ Mommsen takes the city of Gabii as a synonym of any Italian town (Catalano 1978: 494), but that does not seem convincing (Catalano 1978: 494).

All places where auspices should be taken had to be *templa* (Wissowa 1896: 2586). Many places in the city were already *templa* and nothing further had to be done. If the auspices had to be taken outside the city, for example on a military campaign, a *templum* had to be made (Liv.10.40). This is sometimes referred to as *templum minus* and was established by a ritual formula (*certis verbis*) (Fest.146 L). While doing this the magistrate delineated the region of the sky (*templum aereum*), in which he would look for signs. He most likely did it with a staff (*virga*) similar, but not identical, to the augurs' (Valeton 1890: 259f).

On this spot a tent, the *auguraculum*, was erected to serve as the point from which the *auspicium* would take place. It had corners of spades or javelins and walls of linen, skin or plates with an open door (Serv.A.4.200, Fest.146 L). It was most likely oriented towards the East (Dion.Hal.Ant.Rom.2.5.) (cf. Linderski 1986: 2280-2289). In this tent the magistrate or his assistant was sitting on a seat, called *solida sella* (Fest.470 L). Then a formulaic exchange of words occurred between the magistrate and his assistant. The assistant originally could have been any experienced (*peritus*) person and did not need to be an augur (Cic.Div.2.71).¹²⁶ Eventually this function was taken over by an official, a *pullarius*.

The magistrate then asked: "*dicito, [si] silentium esse videbitur*". The assistant was supposed to keep looking straight ahead and answer that he thought there was *silentio*¹²⁷ (Cic.Div.2.71). Then some sort of prayers were offered, and the ausplicant was expected to sit, or stand completely still, until he received a sign (Serv.A.9.4).

It is not always completely clear what sort of sign was meant. It is either lightning or birds. If it was birds (*ex avibus*) then the signs came either from their flight or song. Birds, whose song was used as a sign, were called *oscines*; they were: *corvus* (raven), *cornix* (crow), *noctua* (night owl), *parra* (screech owl) and *picus* (woodpecker) (Fest.214 L). From another group of birds, the flight was used. They were called *alites*. They were: *buteo* (falcon or hawk), *sanqualis* (osprey), *aquila* (eagle), *inmusulus* (vulture or falcon), *vulturius* (vulture) and some also had the *parra* (Fest.214 L, Sen.Q Nat.2.32.5). It is also known that the side in which they were observed was of importance (Cic.Div.1.85; Pl.As. 2.1.12). The actions of these birds were supposed to give an indication of whether the intended action should be carried out or not.

¹²⁶ It is possible that this rule applied to private *auspices*.

¹²⁷ The expression *silentio surgere* is also known through Festus (Fest.474, 476 L). It was a technical expression. At the face of it is odd that the assistant "sees" (*videbitur*) whether there is silence. *Silentio* is described by Cicero (Div.2.72) and Festus (476 L) as the absence of *vitium* (ritual fault) (Cf. Mommsen 1952: I, 86, n.1). An example of breaking this *silentio* could be that something fell inside the *templum*, called *caduca auspicia* (Fest.56 L), or a noise (Fest.266 L).

If the sign was lightning (*ex caelo*) the sign would also be indicative of whether it was positive or negative. Cicero writes that lightning from the left side was the best sign, except when it was concerning an assembly (*comitium*) (Cic.Div.2.74). An instance of the sign of the *auspicium de caelo* being thunder comes from Dionysius Hallicarnassus (Dion.Hal. *Ant.Rom.*2.5.). Here Romulus is asking Jupiter whether he should be king of the city, and a flash of lightning came from the left to the right. Although it is a legendary narrative about Romulus, there is reason to assume that it describes common practice regarding magistrates at the time of Dionysius (Valeton 1890: 219-221).

The technique is thus a technique ritualized by formulaic speech, with a focus on birds or lightning as the producers of the signs. It is furthermore a binary technique giving a yes or no to a question concerning a future action.

Ritualization The technique can be said to be ritualized, because the actions cannot be adequately represented as intentional action. People do not usually erect tents, sit completely still, and look out their opening past midnight in response to a question. There is thus a deficiency in the intentional structure. This deficiency is repaired by the context. The person seeks an answer to a question and the birds flight or song, comes to be signs of the answer to that question. Since no one controls the birds or lightning and the birds or lightning do not usually communicate with humans, some other hidden agent is inferred, that is, Jupiter.

The most famous example of manipulation involving the *auspicium de caelo* is from the consulate of Bibulus and Caesar (59 BCE). In this year the consular colleague of Caesar, Bibulus, was so effectively bullied by Caesar that he could not do anything (Syme 1960: 44). In consequence he was watching for signs in the sky. Normally, if a consul was watching for signs, the day would not be fit for official decisions (*agere cum populo*) in the *comitia*, and thus legislation and decisions made on such a day were not valid (Cic.Dom.39, Dio Cass.38.13.4f). According to the historical sources, Bibulus was looking for signs during the entire consulate, which in principle made all decisions in that period invalid (Cic.Har.48). This could be seen as manipulation, but there is nothing to suggest that Bibulus was not performing the actions correctly, nor either that he did not believe in the efficacy of divination. It is actually quite probable that he would be looking for signs to deal with the difficult situation, not primarily to obstruct political action, which was evidently inefficient

anyhow. There is therefore no reason to suspect that the ritual was not regarded as important or as a mere instrument of manipulation.

Direct prestige In general only magistrates were allowed to use the *auspicium ex caelo* (Valeton 1889: 444 n.5). According to the augur Messalla, fragments of whose book on auspices is known to us through Aulus Gellius, the auspices were divided into greater (*maiores*) and lesser (*minores*). The greater auspices belonged to the consul, praetor and censor (Gel.13.15.4; Fest.148 L), the lesser to lesser magistrates. But the higher auspices were not equal. First of all, there was a division between the auspices of the censor and those of the praetor and the consul. They did not apply to the same cases and therefore could not interfere with each other. The auspices of the consul were greater than those of the praetor (Gel.13.15.4). This can also be seen in that the auspices of a consul were to be preferred over that of a praetor if differing auspices were accepted (V.Max.2.8.2.). The consulship was the highest and the praetorship the second highest office in Rome. The censorship was in many ways different but equally prestigious.

As mentioned above, other persons could assist. According to Cicero they originally had to be experienced (*peritus*), but at his time anyone would do (Cic.Div.2.71). A specialized assistant, the *pullarius*, is known to fulfill this function (Liv.10.40.) (cf. Pease 1963: 466-467). Not much is known about these though. They were not priestly, but assistants (*apparitores*) of the magistrates (Wissowa 1912: 498), and at the same social level of secretary, clerk or crier (Cic.Agr.2.32). It is, however, important to notice that they could not at their own initiative perform an *auspicium*. Only magistrates could do that and they were always thought of as the *auspicium* of the magistrate. The *pullarius* was the operator, and it is clear that he never interpreted the outcome. In cases such as these, as we saw above in chapter 4, the direct prestige comes from the interpreter not the operator. Consequently the direct prestige of the practice is very high.

It may also be worthwhile to notice that this form of auspices was explicitly forbidden to use privately, which wasn't the case with the *auspicium ex tripudio* or *extispicium* (Valeton 1889: 444, n.5). So the utility is more restricted for this type of divination.

We can thus see that only the highest offices can perform this technique. We can also see that the technique performed by the highest (consul) of these are regarded as more credible, or at least takes precedence over that of the lower (praetor). Although it is strictly speaking

sometimes performed by an assistant, nothing indicates that he was thought of as the one responsible for it.

Indirect prestige It is rarely mentioned exactly who is understood as responsible for the signs. Sometimes it is conceptualized as the gods in general (Liv.5.52.2), but when more precisely specified, it is Jupiter. The birds were seen as messengers of Jupiter (Cic.Div.2.72). Jupiter is seen as giving his advice on state matters through the auspices (Cic.Leg.3.43). Jupiter is the highest god in the Roman pantheon, which can be seen by his epithets: *optimus maximus* (highest greatest). We can therefore conclude that the indirect prestige was very high.

Utility and Credibility value The *auspicium* always expressed either approval or rejection of an intended action¹²⁸ (Cic.Div.2.78). It was never something in between or a suggestion to do otherwise or anything at all.

The *auspicium ex caelo* was used:

- 1) when magistrates were to assume their magistracies. Technically this is after they were *creati* (Valeton 1890: 219-221).
- 2) when a magistrate is leaving Rome for a war or a province (Liv.22.1.7, Fest.276 L)

The *auspicium ex avibus* is used:

- 1) when a *dictator* is appointed (Liv.9.38.14) and his *magister equitus* (Cic.Leg.3.39)
- 2) when an assembly (*comitium*) was held in which laws or elections were to take place (Liv.5.52.15, V.Max.1.1.3, Gel.13.15.4) (cf. Valeton 1890: 234f)
- 3) when holding non-plebeian *comitia* (Wissowa 1896: 2585)

What is known about the auspices of the censor is that they were taken to approve of an indictment of a capital offence (Var.L.6.9) and also when a census should be conducted (Var.L.6.86).¹²⁹ They didn't overlap with the auspices of the consul and praetor (Gel.13.15.4). The auspices of the minor magistrates applied only to the holding of a *contio*, which was a gathering like the *comitia*, but without voting on any measures. They were simply addresses to the people (Gel.13.16.3) (cf. Michels 1978: 47).

¹²⁸ A precise formulation by Servius has it that "*auspicium autem est volatus avium, qui indicat agendum vel omittendum esse quod quis coeperit*" (Serv.A.3.375): "*auspicium* is the flight of birds, which indicates whether what someone is starting should be done or not" (my translation)

¹²⁹ See further (Valeton 1890: 220).

The credibility value of the greater auspices was very high since entire armies could be lost based on the decision (Cic.*Div.*2.71, Liv.21.63.6-9, 22.7.1-4). Furthermore, elections to the highest offices could be invalidated and the consuls would have to abdicate (Cic.*Div.*1.33, V.Max.1.1.3). In the case of the censor, auspices were involved in capital punishment. For the lower magistrates the credibility value was not very high since the meetings (*contiones*) were of no great consequence, as no decisions were made.

We thus find a hierarchy in the credibility value of the auspices correlated to the level of the prestige of the magistrate. The information acquired by the highest office is the most certain, which can be seen in the severity of the measures taken on the basis of the information. At the other end of the scale, the lesser magistrates, the credibility value is not very high since the severity of the actions taken based on the information acquired were not great.

History According to legend the auspices of Romulus created Rome (Liv.1.7.1) and it was the first divinatory practice in use in Rome (Dion.Hal.2.5.). It is thus the oldest type known to the Romans. Cicero mentions an old decree (*decretum*) in the possession of the augural college which indicates that the *auspicium ex caelo* was older than the *auspicium ex tripudio*, which is attested in the earliest historical records (Cic.*Div.*2.73). It is therefore probable that this form belongs to the very earliest forms of divination. This assumption is strengthened in the section on the *augurium*, of which the *auspicium* is a derivation of.

Cultural model The model is that the gods communicate with the Roman people through the auspices (Serv.*A.*3.89). They give a warning that the intended action will lead to misfortune in case it is an unfavorable sign and that it will lead to success if it is a favorable sign (Liv.26.41.18). It resembles the model of omens analyzed below in chapter 10. Only here the sign is not an omen, but produced ritually. Indeed it can be seen how intertwined these conceptions are in the story of Flaminius, who neglects taking the auspices (which would surely have told him that he was not on the right track), and consequently the gods give him the signs in the form of omens instead (Liv.21.63-22.4).

Auspicium ex tripudio

The *auspiciu[m] ex tripudio* was a technique used by the commanders of armies in the field. It was used to determine whether the army should attack or not.

Technique Very little is known about the precise procedure of the *auspiciu[m] ex tripudio*, but the general outline of what took place is reasonably clear. It seems that it was performed during the night/early morning (Liv.10.40.2). Other stories indicate that it could be performed at the ocean (Suet.*Tib.*2). It was performed by the magistrate with an assistant (*pullarius*). It had an overall similarity with the *auspiciu[m] ex caelo* and *ex avibus* (Liv.10.40.2-5, Cic.*Div.*2.72). Also here it was necessary to establish *silentio* (Cic.*Div.*2.72).

Probably, since the proceeding mimicked that of the *auspiciu[m] ex caelo*, a question was posed explicitly as part of a prayer. Chickens (*pulli*) were kept in a cage for taking the *auspiciu[m] ex tripudio*. The assistant (*pullarius*) brought them forth (Cic.*Div.*2.72). Maybe they were led into the *tabernaculum*.¹³⁰ They were given a pellet of flour (Cic.*Div.*1.27). Then the magistrate asked the assistant whether they fed (*dicito, si pascuntur*), and the assistant should answer that they did (*pascuntur*) (Cic.*Div.*2.72; Liv.9.14.4). If the birds ate and dropped something on the floor it was a good sign which was called *solistimum* (Fest.386 L, Cic.*Div.*2.72). If not, as in the case that they did not eat at all, it was a bad sign. Another less frequent variant is *sonivium tripudium*, which is when the food could be heard falling to the floor (Fest.370 L). It was also a good sign (cf. Valeton 1890: 212)

Ritualization The ritualization is established by a question being posed either explicitly or implicitly, and food given to the birds. The birds were not thought to be able to communicate in any way with humans, nor the operator able to influence their behavior. This creates a deficiency in the intentional structure of the action.

This technique has often been taken as a key example of how Roman divination was insincere and manipulative (e.g. Latte 1960: 266; Liebeschuetz 1979: 25). The first comes from the second book of *De divinatione*. Cicero here writes that the birds are starved, and consequently will inevitably eat and drop something when offered food (Cic.*Div.*2.73). This observation is told in the context of a critique of contemporary divinatory practices.¹³¹ Thus

¹³⁰ This is the indication of a late Veronese Scholion mentioned by Mommsen (Mommsen 1952: I, 84 n.5). It is consistent with the description given by Livy in 10.40.

¹³¹ The *De divinatione* by Cicero is difficult to interpret because Cicero uses himself as a literary character in the dialogue (Beard 1986). It cannot be taken for granted that the views expressed in book 2 under his name are really his. It does seem that Cicero believed that the state was best run by the aid of divination (Cic.*Leg.*2.31). For a masterful analysis of these intricacies see Jerzy Linderski's article *Cicero and Roman*

according to Cicero, the point is that in the old days it was better. To be sure, this is described as a practice without efficacy, but it does not reflect insincerity. It is interesting to dwell for a moment on what produces the lack of efficacy. It can be seen from Cicero's description that the representation of the action can adequately be described according to normal human intentional action: the birds are starved by the *pullarius* with the intention that they eat and drop something on the ground when fed. It follows that there is no deficiency in the intentional structure. The action does not open for the representation of a counterintuitive agents; i.e. Jupiter. Instead of showing that ritual didn't matter the, source indicates that ritual was crucial for divination to work.

The second example takes place in 249 during the first Punic war. Publius Claudius Pulcher was appointed consul and gained the command of the fleet in Sicily. Here the Carthaginian admiral Atarbas was attacking. Cladius' fleet had just been reinforced with extra ships, which is probably why he got the idea to make a surprise attack on Atarbas (Polyb.1.49). Before the attack he consulted the chickens as was customary. But, alas, poor Claudius did not win support for his idea from the chickens: they refused to eat. He therefore said that they might drink when they wouldn't eat, and threw them into the sea (Suet.*Tib.*2.). He then attacked, and it ended with a great defeat for the Roman navy (Flor.*anth.*1.18, Suet.*Tib.*2, V.Max.8.1 ext.4). This story shows the opposite of the Romans in general not taking the *auspicium ex tripudio* seriously. The divination had produced a clear answer: that an attack would lead to disaster, which was what happened. The problem is that the individual, P. Claudius Pulcher, did not take it seriously. Indeed, the point of the story is that divination is truthful, and one should follow its pronunciations.

A third case, rarely mentioned¹³², also throws some light on the ritual aspect. It takes place during the third Samnite war before the battle of Aquilonia in 293. In Livy (10.40) we are told a story about the consul Papirius and his army just itching to attack. Before attacking they had to take the auspices. The consul does this and leaves it to the *pullarius* to report whether the birds ate. The *pullarius* caves in to public pressure and reports that the birds did eat and drop the food to the ground although they didn't. The consul orders the attack, but hears of the misconduct of the *pullarius* through his nephew and says: "if the man who is watching the omens makes a false report, he brings down the divine wrath on his own head. As far as I am concerned, I have received the formal intimation that the chickens ate eagerly.

Divination (Linderski 1982)

¹³² See however (Linderski 1993: 61f)

There could be no more favorable omen for the Roman people and army".¹³³ He then placed the poor *pullarius* in the front of the army, and even before the battle-shout a chance javelin killed him. The battle ended with a glorious Roman victory. This story has the opposite outcome of the former which at first sight is strange. It is important to notice that the ritual was not performed properly since the *pullarius* did not answer as he should have. It was his own intention that determined the pronouncement. Effectively it was therefore not an *auspicium ex tripudio* because the action was not ritualized. This does not mean that, had he given the correct pronouncement it would have went wrong, it means that no answer was obtained altogether. The death of the *pullarius* is attributed to his *vitium* (ritual fault). The reason that the consul accepted the sign anyway was that the wrongful pronouncement was instead taken as an omen of the impending victory, that is, an oblativ sign (since it was not impetrative). This is strengthened by the mention of a second omen: just before the battle a crow was giving a loud and distinct caw.¹³⁴

In the first case we can see that the lack of efficacy of *auspicium ex tripudio* is attributed a lack of ritualization. In the second case the ritual was performed adequately, but the individual did not respond to its pronouncement. Both cases reinforce the belief that *auspicium ex tripudio* produced true information and that it needed to be produced through ritualized action. In the third case the ritual was not performed correctly, which resulted in the death of the assistant, who made the ritual transgression. And since it was not performed properly it did not answer the question and was merely inconclusive.

Direct prestige As far as can be seen from the sources, the *auspicium ex tripudio* is only used in military contexts. Only military commanders use it. They were assisted by an assistant (*pullarius*), but his role is subordinate. Since military commanders were generally from the elite but not always of consular rank, the direct prestige was very high. It is also worth to notice that in difference to *auspicium de caelo* or *ex avibus*, this form was not restricted to the consuls, but could be used by any commander of an army (Cic.Div.2.74).

Indirect prestige The chickens were explicitly seen as messengers from Jupiter.¹³⁵

¹³³ *ceterum qui auspicio adest, si quid falsi nuntiat, in semet ipsum religionem recipit; mihi quidem tripudium nuntiatum, populo Romano exercituique egregium auspiciu est* (Liv.10.40.11)

¹³⁴ *Ante consulem haec dicentem corvus voce clara occinuit* (Liv.10.40.14)

¹³⁵ *Haec suntigitur aves internuntiae Iovis* (Cic.Div.2.72)

Utility and Credibility value The *auspicium ex tripudio* was able to give a positive or a negative sign regarding some future action. It was used in the military camp primarily to receive answer regarding an intended attack of the army or fleet (e.g. Liv.38.26.1). It also seems to have been used by soldiers, who wanted to make a will before battle. Unfortunately we know almost nothing about this (Mommsen 1952: 84, n.5; Valeton 1890: 213). Since the future success of some of the ancient world's greatest armies and fleets depended on the *auspicium ex tripudio*, the credibility value must be said to be very high.

History It was not regarded by the Romans as being as old as the *auspicium ex avibus* and *ex caelo* (Cic.Div.2.73). It could originally have developed from an *oblative* practice of looking at how animals ate (Valeton 1890: 211-215; Wissowa 1896). It is attested for the years 293 and 249. According to Cicero even the oldest augurs knew of the *auspicium ex tripudio* although it was in a different form where any type of bird could be used. Cicero was at the time of writing this himself an augur and had access to old decrees. It is therefore reasonable to assume that the *auspicium ex tripudio* had a long history and had at some point in time been changed and adapted to use solely in the army. That could have been in the wake of Roman expansion as is evidenced from the use in the Samnite war and Punic war. Another fact seems to support this assumption: the *auspicium ex tripudio* could be taken by people not of consular rank. It is therefore probable that it had great utility in a context where wars began to be conducted by persons not of consular rank.

Cultural model The use is conceptualized as an interrogation of Jupiter about the outcome of an intended attack. The achievement of an *auspicium solistimum* resulted in a prognosis of success; the failure to obtain this sign was a prognosis of failure.

Other kinds of auspicium

We know of a few other kinds of auspices, but unfortunately not to a degree of detail that allows us to make any wide reaching conclusions. In the following I will report what is known about these.

Auspicium peremne

Technique If, after having taken the auspices, a magistrate came to a stream, he had to lean out over the water and take some up with his hands, and then, while reciting prayers, let the water pour out through his hands (Serv.*A.*9.24, Fest.p.245). It is maybe from the number of drops that the sign was taken (Valeton 1890: 211). The technique seems focused on water as the medium conveying the sign.

Ritualization This kind of auspices is known because it is central in a case from 163 BCE where the newly elected consuls had to abdicate, because the *auspicia peremne* were not taken. The consul Tiberius Gracchus, who was presiding over the elections, had taken the auspices in Scipio's gardens, which were located in the Campus Martius outside the *pomerium* of Rome (Platner & Ashby 1929: 273). He then returned to Rome to be at the electoral assembly (Cic.*Div.*1.33). After the crier had announced the result he died. Tiberius suspected that there might be some religious fault in the proceedings and made an investigation. Tiberius was also an augur. He therefore consulted the ancient books of the augurs himself and remembered that after he had taken the auspices, he had crossed the small stream Petronia which flowed across the Campus Martius into the Tiber (Fest.296 L) (cf. Platner & Ashby 1929: 389). He had forgotten to take the *auspicium peremne*, which should be taken when crossing a river.¹³⁶ The matter was referred to the senate and the consuls were asked to abdicate (Cic.*N.D.*2.10-11). This was however because of *vitium*, that is a ritual fault, not because of a pronunciation of the divination technique.

In principle, everybody who crossed a river after having taken the auspices had to take the *auspicium peremne*. Since it was used both in private and public (Valeton 1890: 210), the social status varied. It is not possible to say anything about the associated counterintuitive agent. And the evidence for assessing the credibility value is inconclusive since we don't have anything about the decisions made on the basis of it. Probably it worked like extispicy, where the purpose was to achieve *litatio*. In that case a bad result would merely necessitate an extra try. This could point to the credibility value being very low.

¹³⁶ Cicero writes that it is because he crossed the *pomerium* (Cic.*N.D.*2.10-11). This is not accurate. The *pomerium* was, however, situated at the same place as the Petronia stream at the side of the Campus Martius (cf. Valeton 1890: 209).

History Since it is mentioned in the books of the augurs (Fest.146 L) it is possible that it has a long prehistory.¹³⁷ It can also be seen from the example that already at the time of Tiberius it was almost forgotten. He had to study the books of the augurs in order to find it. At the time of Cicero it is extinct, since he mentions it as one of the auspices that are no longer used (Cic.*N.D.*2.9; *Div.*2.77).

Auspicium nuptiarum

According to Varro, the wedding auspices were taken by the bride and groom (Serv.4.45). It is also possible that they were taken before the girl went to the house of her future husband, that is, before the wedding.¹³⁸ Also the bridesmaid seems to have been selected by auspices (Fest. 282 L; Serv.4.166).

Tellus is invoked in the wedding auspices, but it is Juno, who gives the sign (Serv. 4.166). Pliny the elder informs us that the most favorable sign for the wedding auspices, according to the augurs, was a bird called an *aegithus* (Plin.*Nat.*10.21). This indicates that the technique focused on birds as signs. At the time of Cicero it had fallen into disuse.

Auspicia pedestria

The *auspicia pedestria* were taken from the tracks animals: fox, wolf, snake, horse and several four legged animals (Fest.286 L). Virtually nothing is known about these. They were probably oblativae (Valeton 1890: 208).

Auspicium ex acuminibus

The *auspicium ex acuminibus* was some sort of military auspices that were observed before the beginning of a battle (Valeton 1890: 209). It means “auspices from the points of spears”. Virtually nothing is known. It has been speculated that it was some sort of electrical spark

¹³⁷ Mommsen suggests that it comes from the time when the Tiber was the border between Latin and Etruscan land, and a crossing therefore meant war (Mommsen 1952: I, 97, n.1). Another suggestion comes from Bouché-Leclercq (1882: IV, 231), who thinks it was because water courses broke the continuity of the *templum*. These suggestions however do not account well for the explicit mention of the Perennia stream. It is impossible to trace precisely the age, but it seems safe to conclude that it is old.

¹³⁸ Maybe this is the kind of auspices found in a story in Cicero and Valerius Maximus (Cic.*Div.*1.104; V.Max.1.5.4), where Caecilia Metella’s daughter is taking the auspices in a sanctuary (*sacellum*), concerning her sister’s daughter’s future marriage. The proceedings here resemble those of the official auspices where silence (*silentio*) has to be established. Here however it is not possible to see what the purported sign is (cf. Valeton 1889, 444)

that issued from it (Pease 1963: 475). We know that the consul Marcellus abandoned this form in 222 BCE (Cic.*Div.*2.77). It may, contrary to the view of Mommsen (Mommsen 1952: I, 87, n.6), have been oblativum (sic. Pease 1963: 475).

Iuges auspicium

Iuges auspicium was when yoked cattle defecated (Fest.92 L). It might have been used in a more wide sense as signs from yoked cattle and had consequences for the magistrates seeing it.¹³⁹ It was, however, an oblativum sign (Valeton 1890: 208).

Sortition

Sortition is strangely not a very well researched form of divination in Roman history.¹⁴⁰ Sortition was used both privately and in public for a wide range of different purposes. Few of the other divination practices have so many different applications. In the following I will divide sortition into public sortition, private sortition and sortition oracles.

Public sortition

Whereas the auspices were used to decide whether or not one alternative should be carried out, sortition was used in cases where more than one alternative existed. In sortition inscribed lots were employed. The outcome was determined by the draw of an operator. The senate annually determined the duties to be carried out by the elected officials. These were allocated after the election by allotment among the elected officials (Stewart 1998: 23). Unfortunately sortition is not something the Romans cared to describe very thoroughly. What we can know about it has to be pieced together from a variety of sources.

¹³⁹ As can be gathered from a medieval scholion (Cf. Pease 1963: 477)

¹⁴⁰ It is curiously left out of Susanne William Rasmussen's *Public Portents in Republican Rome* (Rasmussen 2003), which presumes to be an exhaustive study of all public Roman divination. It is not either mentioned in the article on divination in the recent multivolume work on ancient religion, *Thesaurus Cultus et Rituum Antiquorum* (Rüpke & Belayche 2005). One could get the impression that the scholarly community did not consider sortition a form of divination. It does not seem that the ancient Romans shared that impression. We have for example evidence that the Roman augural college investigated a *vitium* (ritual fault) in sortition (Liv. 41.18.10), augural vocabulary is consistently used about sortition (Stewart 1998: 38-41) and Festus writes that sortition is the response of the gods (Fest. 380, L).

Technique Let us consider public sortition in the case of allotment of provinces. This is what we know most about. The place was in front of the temple of *Iuppiter Optimus Maximus* (Stewart 1998: 30). The implements for sortition were carried from the temple, where they were stored. The temple doors, which were usually closed, were opened (*App.B Civ.1.15.*). This might have emphasized the god's attendance, since the temple was seen as the god's house (Stewart 1998: 32). Then the actual sortition took place.¹⁴¹ The lots were wooden (*Pl.Cas.385*) and inscribed (*Pl.Cas.378*) probably with the duty to be performed for the consuls and praetors (Stewart 1998: 29). For the quaestors, the lots were inscribed with the name of the magistrate under whom they were to serve (*Cic.Sest.8*). The lots were then placed in an urn (*sitella* or *situla*) (*Pl.Cas.386*) and mixed (*Pl.Cas.387*). Then the lot was drawn and shown (*Pl.Cas.15*). The lot was then accepted like omens and prodigies (*sortem suscipere*).

Ritualization We find an interesting example of manipulated sortition in Cicero's Verrine speeches. In Syracuse Verres wanted his friend Theomnastus elected as a priest of Jupiter. The rules were that three candidates were proposed. The names of these three candidates were usually inscribed on lots and drawn to select which should be chosen. The literal specification was that the same number of lots as candidates should be used. Verres then got the idea to put three lots inscribed with Theomnastus' name in the urn, which resulted in the priesthood being given to Theomnastus. This satisfied the literal rule, but did not satisfy the Syracusans' sense of religious propriety (*Cic.Ver.2.126f*). Everything indicates that it did not satisfy the Romans' sense of religious propriety either. Otherwise there would have been no reason for Cicero to mention the incident. The reason seems to be that the three identical lots eliminated the displacement of intention in ritualized action. There was therefore no deficiency in the intentional structure, which is necessary for divination to work: the intention was very clearly Verres' and could not therefore be Jupiter's.

It is also interesting that the religious prescriptions were followed, which indicates that proper ritual was not just following the literal rules. Religious prescriptions are therefore not sufficient to constitute proper ritual.

¹⁴¹ We don't have any direct descriptions of this process. But one passage in Plautus' *Casina* gives us a relatively full description of sortition. The description is not of the official sortition by the Roman magistrates, but of a private sortition. It does, however, in all essential aspects, as far as can be reconstructed from other sources, accurately describe how sortition took place. Plautus also uses the official terminology of sortition used in administrative and judicial contexts (cf. Stewart 1998: 17). The only apparent difference from the public sortition is the use of water in the urn, which I have left out of the description here.

Direct prestige It is not stated who the operators of the sortition for offices were. A guess would be either the elected officials or the presiding magistrate. This indicates a high level of social status. Concerning the selection of vestal virgins, the operator was the pontifex maximus, who was the most prestigious priest in the Roman republic.

Indirect prestige The counterintuitive agent for the selection of tasks for the newly elected officials was putatively *Iuppiter Optimus Maximus* since his temple was opened and the sortition apparel was stored there. He was the highest god in Rome. In other cases the identity of the counterintuitive agent it is not explicitly stated.

Utility and Credibility value Sortition can determine either a sequence or determine which of two or more alternatives is to be decided. Examples are: Allocation of duties to consuls, praetors, quaestors and military tribunes (cf. Stewart 1998), determination of sequence of voting in election (Stewart 1998: 105-110) or of command among equal magistrates (Ehrenberg 1896), decision in cases of equal amount of votes¹⁴², sometimes appointment of legates in late republic¹⁴³, appointment of judges in the judicial process¹⁴⁴, appointment of Vestal virgins.¹⁴⁵ The credibility value is indirectly high, since, for example, the duties of the consuls had great consequence for the Roman republic.

History It probably came into use in the early republic in the shift from autocratic to democratic rule. That would probably place it in the 6th century where the expulsion of the kings and adoption of dual magistracy suddenly created the need for a way to decide the competences between equal magistrates (Cornell 1995: 226). The technique seems especially adapted to situations where a choice between two or more equal alternatives has to be made, and there is no superior authority to make it. The technique seems to have fallen into disuse again at the highest level with the reintroduction of autocratic rule in the principate.

Cultural model There are some indications that the allotment of provinces to magistrates was conceptualized as a decision made by Jupiter (cf. Stewart 1998).

¹⁴² Cf. Cic.*Planc.*53, CIL.2.1964, but this was probably only in the late republic (Ehrenberg 1896: 1495).

¹⁴³ According to Tacitus this was an old tradition Tac.*Hist.*4.8.

¹⁴⁴ Probably not regularly until the time of Augustus Suet.*Aug.*29.1 (Ehrenberg 1896: 1495)

¹⁴⁵ For the procedure see Gel.1.12.11

Private sortition

Private sortition is here understood as sortition used by private individuals, but it differs from sortition oracles which were also used by private people.

Technique In Plautus' *Casina* the question is which of two men should marry the slave *Casina*. The lots were wooden (Pl.*Cas.*385) and inscribed¹⁴⁶ (Pl.*Cas.*378). The lots were then placed in an urn (*sitella* or *situla*) (Pl.*Cas.*386) and mixed (Pl.*Cas.*387) or shaken (Hor.*S.*1.9.29-30). Then the lot was drawn and shown (Pl.*Cas.*415).

Ritualization Since the lots were seen as a response to a question and were put in a closed container and mixed, a displacement of intention takes place. In Plautus' *Casina* 375-418 there is an interesting exchange concerning a sortition between two slaves *Chalinus* and *Olympus* about who will get to marry the slave *Casina*. There is, first of all, a concern that the lots are equally distributed. The word *iniquom* (unequal) is used in a sense like unfair, but should probably rather be translated "improper", since it reflects the concern for ritualization of the action. If there is not equality in chance, it opens to the possibility of manipulation, which is the same as intentional control by a human. There are other indications that such a concern is present. Later, *Chalinus* asks if there is another lot in the urn. This could also ruin the equality if it was identical to one of the two. Later he asks whether the lots are made of the same wood (poplar or fir). This makes a difference since they use water in the urn. These two types of wood have different buoyancy; if one floats on top it will be picked more easily. It is worthwhile noticing that the concerns for the propriety of the sortition, reflects the degree to which the outcome could possibly be derived from a human intentionality.

Direct prestige Sometimes it seems that people operated sortition privately (Pl.*Cas.* 375-418). But we also find wandering *sortilegi* (Juv.6.582ff) probably often of non-Roman origin (Hor.*S.*1.9.29-30). Those who consult them are described as having low status (*vulgus*) in (Cic.*Div.*2.87.). The *sortilegi* themselves are not very highly thought of either (Cic.*Div.*1.132).

¹⁴⁶ In Plautus *Casina* they were inscribed with numbers (Pl.*Cas.*378). We know of another example where the lots were inscribed with the names of twelve gods (Fest.150 L).

Indirect prestige We know of sortition associated with Fortuna Primigenia (CIL.14.2989) and Venus Erucina (CIL.6.2274). Possibly Geryon as well (CIL.1.1438-1454), but this was in connection with established shrines (which will be treated under sortition oracles). Some associate sortition with Fortuna in general (Sen.*Q Nat.*6.14.1f) or the gods (Pl.*Cas.*416-418).

Utility and Credibility value Private sortition could be used to predict the future life of a child (Hor.*S.*1.9.30ff), or in case of a crisis such as disease (Fest.150 L). The credibility value is low since the potential use of resources is lower than that of the public versions. Also private sortition is explicitly denounced by the elite (Cic.*Div.*1.132).¹⁴⁷

History Since it is attested around 200 BCE in Plautus' works and still in the late republic and during the principate, there are probably no changes in the use and spread of it in the period under consideration.

Cultural model Festus writes that sortition is the response of the gods (Fest.380 L). The testimony from Plautus shows that it is understood along the same model as omens. The positive outcome of the sortition is correlated to the *pietas* of the "winner"; thus, success follows from *pietas* and sortition is the sign that it is so (see further in chapter 10).

Sortition oracles

The Romans did not have possession oracles like the Greeks (Latte 1939). Instead they employed sortition to communicate with the oracles. The most famous and well attested in our sources is the Fortuna oracle in Praeneste. Here a boy drew an inscribed lot from the urn and subsequently a *sortilegus* interpreted it.

Technique The technique resembles the technique used in private and public sortition. Lots engraved with archaic letters¹⁴⁸ were put in an urn (*arca*) made of olive wood. A child

¹⁴⁷ In this passage Quintus makes clear that he does not believe in *sortilegi*. This should be seen in connection with the fact that Quintus in the dialogue is the one defending divination.

¹⁴⁸ It seems to have been different what was written on the tablets. We have some archaeological evidence in 17 bronze lots (CIL.1.1438-1454) probably from a shrine of Geryon near Patavium (cf. Pease 1963: 73). The lots were inscribed with verses and the rhythm resembled the hexameter used by the first Latin historian Ennius (cf. Bouché-Leclercq 1879: IV, 155). The content was some kind of *bon-mots*: *Corrigi vix tandem quod curvum est factum credere* (straighten finally what you think has been bent), *Homines multi sunt*,

shuffled the lots and drew one¹⁴⁹ (Cic.Div. 2.85-86). Subsequently a *sortilegus* probably interpreted the lot for the consultants (Champeaux 1982: 71).

Ritualization The ritualization comes about in that a question is posed either explicitly or implicitly and a lot is drawn blindly from an urn. This lot is considered the answer to that question. The randomization entailed by the procedure creates a deficiency in the intentional structure since no intention determines the outcome. Consequently, a counterintuitive agent is inferred; the counterintuitive agent of the oracle. The ritualization is further emphasized in the sortition oracles in that it is a child who carries out the drawing of the lot. The child could not read or understand the implications of the sortition. This further severs any possible link to a human (adult) intention. The technique thus strengthens the displacement of intention since it is difficult to see how any human intention could be involved.

Direct prestige We know of a *sortilegus* of Fortuna Primigenia from Praeneste (CIL.14.2989). Although this is from the principate around the time of Vespasian, there is good reason to assume that this inscription reflects practice also in republican times (Champeaux 1982: I, 71). This *sortilegus* was previously a centurion and *flamen augustalis*. None of these honors indicate that he was of very high standing. It would probably be something like the higher middle class. We know of another one from Pompeii who was a *sortilegus* for Venus Erucina (CIL.6.2274). Unfortunately it cannot be decided the social standing of this person.

Indirect prestige We have attested Fortuna Primigenia¹⁵⁰, Hercules, Geryon, and Minerva. All of these are lower gods or not even gods, as in the case of Hercules, a hero, and Geryon, a titan. The indirect prestige is therefore not very high.

credere noli (There are many people who do not want to believe), and some of them are more enigmatic: *de incerto certa ne fiant, si sapis, caveas* (from the uncertain the certain doesn't happen, if you know it, beware). We also know of one lot from Falerii which read *Mauors telum suum concutit* (Mars is shaking his spear) (Liv.22.1.11). Here the spelling of Mars is archaizing. For more fragments of inscribed lots see (Champeaux 1982: 75-78).

¹⁴⁹ A similar scene is depicted in a bas-relief from Ostia probably dated between 80 and 65 BCE (Champeaux 1982: 64-66). Here a young boy draws a table (*tabula*) from an urn (*arca*) on which is inscribed *[S]ort(es) H(erculis)* (Hercules' lots). This suggests a similar procedure but a different god. The bas-relief is dedicated by a haruspex. Likewise, on coins struck by M. Plaetorius Cestianus on the reverse we see a small person holding a table on which is written SORS (lot) (Champeaux 1982: 64-66).

¹⁵⁰ There is no reason to assume as Bouché-Leclercq that it really was Jupiter, who pulled the strings in Praeneste, when no sources mention this (Bouché-Leclercq 1879: IV, 149).

Utility and Credibility value They were exclusively used for private consultation. The senate is even known to have prevented the use of the oracle at Praeneste in 242 or 241 BCE for public business (V.Max.1.3.2). We also know from Cicero that it was ordinary people (*vulgus*) who came to Praeneste (Cic.Div.2.87). Later the emperors came there to consult the oracle. The passage in V.Max.1.3.2. shows that members of the elite apparently used this oracle privately. This indicates that the credibility value was not as low as that of the wandering private *sortilegi*, but medium high.

History Different sortition oracles are known throughout Italy. The most famous is the one in Praeneste, but we know of a handful of other active oracles in Antium¹⁵¹, Caere¹⁵², Falerii¹⁵³, Patavium¹⁵⁴, Tibur¹⁵⁵, Ostia¹⁵⁶ and Clitumnus¹⁵⁷. Most are in relatively close proximity to Rome. The rest come from Italian areas. This could suggest a common Italian early origin of sortition oracles.¹⁵⁸ The oracle in Praeneste and its connection with Fortuna Primigenia seem to suggest a quite archaic origin (Bouché-Leclercq 1879: IV, 148; Champeaux 1982). Likewise, the early mention of the oracles in Caere and Falerri in the prodigy records suggests that already early such oracles were established. The rest of the oracles we hear of only after the end of the republic. They might have experienced a revival after that. This would correspond with use by the emperors¹⁵⁹, which probably raised the prestige of the oracles, especially those in Praeneste and Antium. We do not, however, know anything about that.

Extispicy

¹⁵¹ Later used by the emperors for private purposes (Suet.*Cal.*57.3) Achieved prominence during the principate (Champeaux 1982: 158)

¹⁵² We know this oracle only from the prodigy records in 218 (Liv.21.62.5 & 8). Caere was in South Etruria close to Rome.

¹⁵³ We also know this from the prodigy records (Liv.22.1.11). Falerii was in South Etruria close to Rome. It had a large Sabine population (Bouché-Leclercq 1879: IV, 146)

¹⁵⁴ This is in Venetia and is attested only in the 1st century CE, but must have been working much earlier as well (Suet.*Tib.*14.3).

¹⁵⁵ This oracle is also known from the principate from Stat.*Silv.*1.3.79 (cf. Champeaux 1982: 64)

¹⁵⁶ See (Champeaux 1982: 64-66)

¹⁵⁷ Is attested by Pliny the younger in the 1st century BCE, but from is description it is visible that the sanctuary is an old one (Plin.*Ep.*8.8).

¹⁵⁸ The places were inhabited by Sabines, Umbrians, Latins, Etrurians and Venetians.

¹⁵⁹ Tiberius used the oracle in Praeneste (Suet.*Tib.*63); Domitian consulted the oracle in Praeneste at the start of each year (Suet.*Dom.*15); Caligula consulted the oracle in Antium (Suet.*Cal.*57); Augustus also may have consulted the oracle in Antium (Bouché-Leclercq 1879: IV, 154).

Extispicy is a form of divination where the technique consists in the observation of the intestines of sacrificial animals. It was practiced in public as well as in private contexts.

Public extispicy

Public extispicy was used in connection with public sacrifices. Its purpose was overall to ascertain whether the sacrifice and what it entailed was accepted.

Technique After the killing of a victim in a public sacrifice¹⁶⁰, the entrails (*exta*)¹⁶¹ were inspected¹⁶² to ascertain whether *litatio*¹⁶³ had been achieved or not. The *exta* could be said to be positive (*laeta*) or negative (*tristia* or *turpia*) (Liv.27.26.14; 29.10.6). The parts used were primarily the liver, but also the heart (Plin.Nat.11.186)

Ritualization Ritualization is achieved because the state of the entrails is taken as answer to a question and the operator has no control of this state. This creates a deficiency in the intentional structure. The question is entailed by the prayer: In the prayer something is asked for and the animal is given as a sacrifice to that end (Liv.31.5.4). The acceptance or rejection of the sacrifice is therefore also an answer as to whether the prayer will come true.

Direct prestige The specialists inspecting the entrails were called *haruspices*.¹⁶⁴ Their status was most likely low. This can be deduced from the *Lex Coloniae Genetivae*. Here *haruspices* are ranked at the level of scribes (*scribae*) and flute players (*tibicines*) (CIL.2.5439). It can also be seen from the fact that in the principate we hear of freed men being *haruspices* (Thulin 1912: 2441)

¹⁶⁰ The Roman sacrifice consisted of different phases. First comes a *praefatio* with preparatory offerings of wine and incense and a prayer signifying to which god, then the *immolatio* in which the victim is marked with the *mola*. At this point the victim is killed and immediately following this the entrails are inspected (Latte 1960: 386-392; cf. Scheid 2005: 44-57).

¹⁶¹ The Romans looked at all parts of the entrails, whereas the Etruscans only concerned themselves with the liver (Schilling 1979: 185).

¹⁶² Whereas the Romans used the term *inspicere exta*, the term used for Etruscan extispicy is *consulere exta* (Serv.A.4.64). On the difference (cf. Thulin 1912: 2449). The entrails were inspected without cutting them from the victim (Ov.Met.15.136).

¹⁶³ *Litatio* is a technical term denoting the approval of the god. This was the purpose of the Roman extispicy not the Etruscan (Blecher 1905: 219, 223; Thulin 1906b: 7)

¹⁶⁴ Other forms are known such as *aruspex*, *harispex*, *arispex*, *aryspex* but *haruspex* is the most frequent (Thulin 1912: 2431).

Indirect prestige The counterintuitive agent is the god to whom the sacrifice is made and can therefore vary (Cic.*Div.*2.38, Liv.41.15.4). The status was therefore variable for each sacrifice, but it would often be high since public sacrifice was given only to state gods.

Utility and Credibility value The purpose of public extispicy was simply to ascertain whether the sacrifice was accepted or not.¹⁶⁵ If it was not accepted it could indicate that the action to which the sacrifice pertained was wrong, but usually it would just lead to the repetition of the sacrifice. The situations in which we hear of the use of extispicy are primarily in the consular sacrifice when the consuls take up office (Liv.41.14.7), or before a new war (Liv.31.5.3) (Thulin 1912: 2454). We can see in the case of the consular sacrifice how the entrails were interpreted. In Liv.31.5.7 we hear that the entrails were favorable (*laeta*), which was taken to mean that victory would be achieved¹⁶⁶. It could be argued that this was an interpretation that exceeded the right positive/negative answer postulated to operate in public extispicy (Pfiffig 1975: 120; Rasmussen 2003; Schilling 1979). But this interpretation is merely a reiteration of the contents of the prayer.¹⁶⁷ The victims sacrificed were great (*hostiae maiora*), which indicates a sacrifice to Jupiter. The meaning of the sacrifice could then be interpreted as a question to Jupiter about whether the consuls would succeed in winning the war in which they were to engage. The entrails gave affirmative signs, why they portended victory.

We have some knowledge of the different meanings. Especially the so-called head of the liver (*caput iocineris*) (cf. Rasmussen 2003: 126) was especially significant. If it was double or big it was good (Liv. 27.26.13; Plin.*Nat.*11.189; V.Max.1.6.9). If it was missing it was the worst sign (Cic.*Div.*2.32) and would surely lead to death (Plin.*Nat.*11.189; Liv.41.14.7, 27.26.13-14; Obs.17, 35, 47, 52, 55). If a small fissure was observed in the liver it was also a dire sign (Plin.*Nat.*11.190); Cic.*N.D.*3.14; Cic.*Div.*1.16). Attention was also paid to the heart. If it was missing it was a bad sign (Plin.*Nat.*11.186; Cic.*Div.*1.119). These examples of

¹⁶⁵ While this is the classical view going back to Wissowa, put most precisely by (Thulin 1906b: 5), some scholars do not accept a rigid distinction. This is based on the fact that the sources mix terminology (Rasmussen 2003: 118; Schilling 1979: 118). I think the following examples of public use demonstrate that there is a rigid distinction between public and private use. The public is like the other forms of public divination a yes/no form, whereas the private can give richer information regarding the future.

¹⁶⁶ (...) *haruspices respondere laetaque exta fuisse et prolationem finium victoriamque et triumphum portendi* (Liv.31.5.7)

¹⁶⁷ *Quod senatus populusque Romanus de republica deque ineundo novo bello in animo haberet, ea res uti populo Romano sociisque ac nomini Latino bene ac feliciter eveniret* (Liv.31.5.4).

public use of extispicy are performed in connection with public sacrifices such as the sacrifice on entering office.

The necessity to merely repeat the sacrifice, if a bad sign was obtained, indicates a low credibility value. If we compare with the *auspicium*, it can be seen to be less important in practice. No consuls abdicated because of a bad sign from extispicy and no armies were lost.¹⁶⁸ If one type of divination approaches a formality, this would be the one.

History Livy tells us that *haruspices* were employed according to legend already in the time of the Etruscan kings in Rome (Liv.5.21.8). This is not surprising since the *haruspices* were central in Etruscan culture. The first time we hear of them in the Roman republic is when they were employed by Decius in 340 BCE (Liv.8.9.1), and we hear of them later in 275 (Plin. Nat.11.186), 215 (Liv.23.36.10), 212 (Liv.25.16.3), 209 (Liv.27.26.14) and 208 (Plin.11.186). It is difficult to trace the historical origin beyond this. Some have tried to trace it through Etruscan extispicy to the Babylonians, but extispicy is so common that all peoples in the Mediterranean seem to have had one form or another (Blecher 1905; Thulin 1906b). This is a point also noticed by Cicero (Cic.Div.1.16). There were naturally differences and there does seem to exist some differences between the Etruscan and the Roman (Pfiffig 1975: 120; Thulin 1912: 2449). These divergences may reflect either adaptation to the Roman context, a separate history or a common source. Either way the differences suggest a long period of divergence from the Etruscan form, which is the closest. I think it is possible that the Romans adopted extispicy in the time of Etruscan domination, and then adapted it to their own purposes. That would explain why public extispicy conforms to the same rules as auspices, that is, a yes or no answer.

Cultural model In 176 the consuls Cn. Cornelius Scipio Hispalus and Q. Petilius Spurius were elected consuls. On the day of entering office they were both sacrificing an ox, but in Petilius' ox the liver did not have a head (Liv.41.14.7) and subsequently Scipios' liver disappeared from the boiling pot (Liv.41.15.2). They were ordered to keep sacrificing until *litatio* was obtained. In the end they obtained *litatio*, but Petilius did not obtain *litatio* from *Salus* (health) (Liv.41.15.4). Eventually Petilius died in war against the Ligurians (Liv.

¹⁶⁸ At least not based on this alone. There are, though, reports of consuls dying on duty after not obtaining *litatio* (e.g. Liv.41.15-18), but loss of entire armies are not attributed to bad prognostications from extispicy. In practice the information was merely used to determine whether extra sacrifices had to be made.

41.18.11). This indicates the familiar pattern of divination expressing a sign of fortune or misfortune. The fact that it was Salus who did not accept the offer indicates that the health of the consul was going to be jeopardized.

Private extispicy

Private extispicy differs from the public in the ability to give richer information than a simple yes or no. It was probably mostly Etruscan diviners (Thulin 1912).

Technique There were two types of victims *animales* and *consultatoriae* (Macr.3.5.1, *Serv.Dan.* 4.56). Only the last type was used for consultation (Thulin 1906b: 11-16). The victim was tried to make sure it wouldn't run from the altar during the sacrifice (Macr.3.5.8). The most frequent type of victim was sheep (*Ov.Fast.*4.935, *Prop.*4.1.24))¹⁶⁹ and chicken (*Plin.Nat.*10.49; *Cic.Div.*2.29), but also calves were used (*Plin.Nat.*11.195). The private sacrifice follows the same general structure as the public sacrifice (Scheid 2005: 319). There is therefore no reason not to assume that the same was the case when private extispicy took place. The *haruspices* held the liver in their left hand with the gall-bladder to the left facing south.¹⁷⁰ The entrails were then read (*consulere*) by the *haruspex*.

Ritualization Ritualization is achieved through the slaughter of an animal with the expectation that the entrails answer questions about the future. Usually slaughter of an animal is carried out to get meat, not to hear about the future, so this creates a deficiency in the intentional structure of the action.

Direct prestige The social status of the operator seems to be extremely variable. It goes from the back-alley *haruspices*¹⁷¹ widely considered unreliable and cheating by the elite (*Cato.Agr.*2.51) to very prestigious Etruscan aristocrats employed privately by the elite¹⁷²

¹⁶⁹ This can be seen from the fact that the bronze liver from Piacenza is a sheep's liver (Rasmussen 2003; Thulin 1906b: 17)

¹⁷⁰ This is what can be gathered from the archaeological and pictorial evidence (Jannot 2005: 20).

¹⁷¹ Plautus mentions *haruspices* working at the market at the Velabrum (*Pl.Cur.*483), which is between the Capitol and Palatine (Platner & Ashby 1929: 549). Cicero demotes what he calls *vicanos haruspices* (*Cic.Div.*1.132.). It is reasonable to assume with Pease that these were the same unofficial wandering *haruspices* mentioned in other sources (*Cato.Agr.* 2.51, *Pac.*1.131) (Pease 1963: ad.loc.)

¹⁷² Cicero also mentions a *summus haruspex* (highest *haruspex*), who is considered a lot more prestigious (*Cic.Div.*2.54). The same is the case for Spurrinna, the *haruspex* used by Caesar (*Cic.Div.*1.119, *V.Max.*8.11.2), and Sulla's Postumius (*Cic.Div.*1.72).

(North 1990). In Etruria these individual *haruspices* could gain a significant individual reputation based on his divination (North 1990: 67). The Etruscan families of the Roman elite also seem to have transmitted the knowledge of haruspicy from father to son.¹⁷³

Indirect prestige Many different gods could be associated. The different parts of the liver were associated with different gods (Thulin 1906b: 8). It was thus not just one god, who was thought to give the answer.

Utility and Credibility value Although the details are largely unknown, a few different meanings are known. The overall appearance of the entrails seems to have been important. Notice was made of the color (Luc.1.618) and to whether something was missing from the entrails (Sen.*Oed.*357). Concerning the heart we know that a missing heart portends death (Plin.*Nat.*11.186; Cic.*Div.*1.119), a flattened or weak heart was bad (Luc.1.621f; Sen.*Oed.*356), if it was fat it was a good sign (Plin.*Nat.*11.186). An incision in the lungs meant what was planned should be postponed (Cic.*Div.*1.85). Most important was the liver. If it was double it meant increased power (Plin.*Nat.*11.190; Dio Cass.65.35; Suet.*Aug.*95), if the skin around the liver was thick it was a good sign (Amm. Marc.22.1.1). If it was thin it was bad (Sen.*Oed.*361). The liver was divided into three major parts the *caput*, the *pars familiaris* and the *pars hostilis/inimica*. If the *caput* was big or double it was a good sign (Liv.27.26.13), if it was missing it was the worst sign and usually portended death (Cic.*Div.*2.32; Plin.*Nat.*11.189).¹⁷⁴ If it was cut it meant bad luck (Plin.*Nat.*11.190), if it had a circle around it, it meant victory (Plut.*Sull.*27.6; August.*C.D.*2.24). A good sign on the *pars familiaris* meant something good and a bad sign something bad for family and friends. Likewise, on the *pars hostilis*, a bad sign was bad and a good sign good for the enemy (Liv.7.9.1; Sen.*Oed.*362; Luc.1.621). Stripes (*fissa*) were important signs (Cic.*N.D.*3.14; Cic.*Div.*1.16, 1.118). They could lead to something good or bad depending on where they were observed (Cic.*Div.*2.34). Possibly also spots (Luc.1.618), veins (Sen.*Oed.*364f) and the rising or falling of the liver (Sen.*Oed.*363) were observed.¹⁷⁵ Another part of the liver

¹⁷³ This can be seen in a letter from Cicero to Caecina (Cic.*Fam.*6.6.3)

¹⁷⁴ All instances of a missing *caput iocineris* portended death, but Pliny and Sallust mention it as a positive sign in the case of Marius in Utica (Plin.*Nat.*11.189; Sall.*Iug.*63.1). This is odd, since all other instances are invariably negative and lead to death. It could be that Sallust as a Greek had not gotten the details of Roman extispicy right, and subsequently Pliny built had the observation from Sallust. This admittedly is pure speculation.

¹⁷⁵ These are more doubtful since they are only known in dramatic context in the two sources by Lucan and Seneca. Lucan was Seneca's nephew and the two passages have so great similarities that they could be

frequently observed was the gallbladder. It was devoted to Mars and Neptune. On the Piacenza bronze liver, the letters for Mars and the first letter of Neptune can be made out in Etruscan (Thulin 1906b: 20-22). If the gall bladder was big, it signified a naval victory as in the case of Augustus before the battle at Actium (Plin.*Nat.*11.195). If it was black it was a bad sign (Sen.*Oed.*358).

The private form of extispicy seems to have been used in all possible situations where an answer to something in the future was needed (e.g. Sall.*Jug.*63.1; Plin.*Nat.*11.195). It did not involve a high amount of resources since it could only be used for private decisions. The Roman state did not accept decisions concerning battle based on private extispicy. Only in the last century BCE do we hear of military commanders using *haruspices* for decisive answers concerning attack, but at that time, the armies were to a large degree effectively private. Consequently from around 100 BCE there is an increase in the credibility value attached to extispicy.

History According to legend extispicy was used already at the time of the kings (Liv.2.42.10). In the 3rd and 2nd century BCE it seems to have been widespread (Cato.*Agr.*5.4; Pl.*Poen.*463). It continued to be so. From around the turn of the last century BCE it was increasingly being used by the great men of the republic such as Gaius Gracchus (V.Max. 9.12.6), Marius (Sall.*Jug.*63.1), Sulla (Cic.*Div.*1.72), Verres (Cic.*Ver.*2.27.33) and Caesar (Cic.*Div.*1.119). The trend continued into imperial times with Augustus, Caius, and Claudius all using *haruspices* as consultants in their decision making (Plin.*Nat.*11.189). The reason for the use is probably its utility, since *haruspices* could give rich answers to any question at any given time. The traditional practices, the auspices, could only give a yes or no answer.

Cultural model The gods were seen to express their will¹⁷⁶ in the entrails, possibly in the belief that the gods entered the victim at the time of death.¹⁷⁷ The entrails could also be seen to declare whether the gods were satisfied.¹⁷⁸ The gods give answers to the future and what can be done to obtain success.

directly related. That would effectively leave us with only one source.

¹⁷⁶ (..)voluntas dei per exta disquiratur(..)Macr.3.5.1

¹⁷⁷ (..)in pectora tauri/Inferni venere dei(..)Luc.1.633f.

¹⁷⁸ nuntia fibra (Tib.2.1.26), fibra locuta (Prop.4.1.103)

Sibylline books

The Sibylline Books were books of oracles of the prophetess, called the Sibyl, written in hexameter. It is not known precisely how they were used, but they could only be consulted on the order of the senate.

Technique Nothing is known about the method used to locate passages in the Sibylline Books. It is probable that some sort of randomization, such as lots¹⁷⁹, was used. Sacred books in themselves seem to inspire such processes (Petersen 2007). We do know that the books were written in Greek (Zonar.7.11) and contained verses in hexameter (Rzach 1926: 2106). They seem to have contained oracles as well as purifications (Parke 1988: 137)

Direct prestige The priesthood responsible for consulting the Sibylline Books, the *decemviri sacris faciundis*, was the third most prestigious in the Roman republic and it counted many who held the highest magistracies (Szemler 1972: 186-187).

Indirect prestige The associated counterintuitive agent is not directly specified. Most often it is just described as the gods (Lactant.*Div.Inst.* 1.6; Gel.1.19.11). Sibyls were in general connected to Apollo. There is good reason to assume that Apollo was seen to be the ultimate agent behind the prophecies (Parke 1988). A further indication that this was the case is that the *decemviri* were known as priests of Apollo (Liv.10.8.2).

Utility and Credibility value The Sibylline Books were only consulted on the order of the senate. The senate ordered them to be consulted in the case of prodigies or great misfortune for the Roman state (Dion.Hal. *Ant.Rom.*4.62.5). The books also specified ritual remedies to avert the impending danger. These were often sacrifices that could be very costly, such as human sacrifice (Oros.4.13.3). The credibility value can thus be seen to be high.

¹⁷⁹ According to Parke, Varro, through Lactantius, implies the use of lots (Parke 1988: 47, n.20), but that reading of Lact.*Div.*1.6 is only testified by two of the manuscripts. The fact that sortition oracles were widespread in Italy (see above) does however lend credibility to this possibility.

History According to legend the king Tarquinius Superbus¹⁸⁰ entrusted two men to interpret the books (Dion.Hal.*Ant.Rom.*4.62.2; Gel.1.19). According to Livy, mentioning a law probably ultimately from the *Annales Maximi*, the number was raised to 10 in 369 BCE (Liv.6.37.12). The books were consulted 50 times between 496 and 100 BCE (Parke 1988: 137). According to Parke the contents of the books indicate that they were compiled in the 6th century BCE. This is in agreement with a date in the regal period.

Cultural model Roughly the same story of the acquisition of the Sibylline Books by Tarquinius Superbus is told in all sources (Lact.*Div.*1.6; Gel.1.19; Dion.Hal.*Ant.Rom.*4.62.2-4): a foreign woman offered Tarquinius nine books, but he refused because the price was too high. The woman then burned three books, and returned demanding the same price for the last six. The king would still not pay, and she burned three more, returned, and demanded the same price. Now the king got suspicious and consulted with the augurs who advised him to buy the remaining three books, which he did. The Sibyl was considered to be able to see the future and give advice about the proper rituals in times of crisis through the prophecies contained in the book. Sibylline prophecy can be said to be a further specification of a bad sign in cases where its meaning is not clear.

Miscellaneous divination

The above are the most important and often mentioned types of divination found in our sources. There are however a number of practices that do not fit into either of the above types. We will here review those and the sparse evidence for them.

Vates

We sometimes hear of a group of diviners, called *vates* (Ov.*Am.*1.24; Luc.5.85; Verg.*A.*3.356). They are often, but not always, described as ecstatic and connected to divine inspiration according to the Greek model of the oracles (eg. Luc.6.770, 8.824; Serv.*A.*6.12).

¹⁸⁰ Lactantius quoting Varro has Tarquinius Priscus (Lact.*Div.*1.6), but that is the only source attesting to the Tarquin as being Priscus (cf. Parke 1988: 33-35)

The word *vates* can probably be traced to Celtic (Walde & Hofman 1954: II, 737). It may therefore be that *vates* were Celtic diviners. Celtic diviners were, however, not specialized in ecstatic divination, but instead in the flight of birds and extispicy.¹⁸¹ Livy may sometimes be alluding to such Celtic *vates* (Liv.2.42.10). Almost nothing is known of them and ecstatic divination in general is absent in Roman republican times (Bouché-Leclercq 1879: 119). In general the word is used in a very loose way and virtually all descriptions are poetic or mythological fictions. It is therefore difficult to see exactly what sort of diviner was the historical basis of the term *vates*.

Astrology

Whereas astrology as a form of divination can be traced back to the Mesopotamian cultures of the 3rd millennium BCE, the form with the zodiac and the astrological chart, which gained great influence in the Roman Empire, was established through Greek influence in the 5th century BCE (Von Stuckrad 2005). It would thus be very likely that we could find astrology in the Roman Republic already very early. Before the end of the republic, however, we have only two mentions of astrology. They concern the 2nd century BCE. The first concerns an expulsion of astrologers from Rome (V.Max.1.3.3). The second concerns Cato's order to his *vilicus* (estate manager) not to consult astrologers among others (Cato.Agr.1.5.4). Astrology was actively eliminated in the middle republican period, and was probably used by the lower classes to judge from the Cato reference. The next we hear of astrology is in 86 BCE where the consul Octavius was killed and an astrological diagram was found on him (Plut.Mar.42.4-5). We also hear that astrologers were used by Sulla (Plut.Sull.37.1) and Caesar (Cic.Div.2.99), and that the Etruscan friend of Cicero's, Nigidius Figulus, should have been an expert on the stars (Luc.1.639-672).¹⁸² Thus, at the end of the republic it seems that astrology was rapidly gaining momentum and peaked during the principate (Barton 1994; Von Stuckrad 2005). It was used exclusively for private purposes.

¹⁸¹ Strabo speaks of οὐρατεῖς among the Gauls. They are described as ἱεροποιοὶ καὶ φυσιολόγοι (Strabo.4.4.4). We would expect μαντεῖοι if they were diviners, not ἱεροποιοί. But that the Gauls had a special class of diviners is confirmed by Diodorus Siculus (Diod.5.31.3). They, however, used the flight of birds and slaughter of animals to predict the future.

¹⁸² Plutarch may very well project something common in his era into the past for dramatic purposes as Barton suggests (Barton 1994: 191, n.41). Lucan's testimony is a dramatization that appears in a tour de force of divination forms that show all the bad signs that portend the demise of the republic. We are therefore left with the testimony of Cicero as the only solid one. It does seem probable, though, as Barton suggests, that at the time of Cicero Etruscan haruspices were inspired by astrology and tried to incorporate it into their art, which already operated with a division of the sky, although they had 16 regions and not 12 houses (Thulin 1906a: 15-22). For further evidence of this see (Barton 1994: 39).

Conclusion

In this section I will summarize the results of the empirical analysis in light of the theoretical model developed in chapters three through six.

Motivation

We found that divination was typically motivated by situations of actual or potential misfortune as was stipulated in the theoretical chapter. It could be before a battle (*auspicium ex tripudio/ ex caelo/ ex avibus*), in situations of danger to the nation (Sibylline Books), the allotment of provinces (public sortition), and in a private context, for example before a wedding (*auspicium nuptiarum*). Some techniques are not so obviously connected to actual or potential misfortune: public extispicy could be said to merely ascertain whether a sacrifice was good or bad, but frequently it is seen to indicate whether the consul or other sacrificers will prosper or die. *Auspicium peremne* is in general quite enigmatic. The private techniques are very poorly attested. It is clear though that private divination practices were sought for knowledge on, for example the future fortune of a child, disease, love or marriage. In general, the Roman sources indicate the same sort of uncertainties related to the ideal life found in chapter four that motivate people to use divination today.

It may seem self-evident that questions were about actual or potential misfortune, but they could as well have been about the origin of words (a deep rooted concern of Varro), the nature of the Gods (the subject of a treatise by Cicero), the true nature of lightning (the focus of prolonged arguments by Seneca, Pliny the Elder). These are questions that also greatly interested the Romans, but were never put to divinatory inquiry.

The motivations of the Romans to engage in divination were in short: perceptions of actual or potential misfortune or lack of fortune.

Ritualization

All divination techniques in the survey employed ritualized action in the sense stipulated in chapter four. They featured a displacement of the intention of the operator which provoked a deficiency in the intentional representation of the action. This was often achieved by asking of a question and performing an action that would allow the production of signs without the direct control of the operator. These signs were subsequently represented as stemming from a

counterintuitive agent. In all the techniques great attention was paid to whether the operator was able to influence the divinatory pattern. That would have resulted in a lack of displacement of intention. We saw some examples of this. Cicero mentions that the sacred chickens were starved in the *auspicium ex tripudio* in order for them to eat and therefore give a good sign. He clearly does not see this as leading to credible information, since the *pullarius* who starves them, and not the gods, is represented as the intentional agent. In other words there is thus no displacement of intention and therefore no deficiency in the intentional structure. The same is the case with the story about Verres who followed all the ritual rules, but puts three identical lots with the name of his preferred candidate, instead of three different ones, in the urn. There has been no displacement of intention since the outcome is derived from Verres intention. A third case is the debate in Plautus' *Casina* concerning equality of the lots. This can be understood as a debate about whether proper displacement of intention took place. If the lots were not equal, they did not have an equal chance of getting picked. They would thus be amenable to the manipulation of an intentional agent, i.e. the opponent and not the gods. A displacement would not take place.

As stipulated, these stories have usually been taken to show that the Romans knew that divination was mere manipulation without any belief in the gods, but the present analysis points to another interpretation. They show that a lack of ritualized action results in lack of credibility. The Romans told these stories precisely because manipulation should be averted in order that the divination should give a credible answer. Paradigmatic stories such as those about Flaminius, and Appius Claudius Pulcher show that indeed failure to perform the ritual in a proper (ritualized) way leads to great misfortune. The stories about manipulation show that the absence of ritualized action did not achieve credible information from the gods, which would lead to disaster. Ritualized action is a *sine qua non* for all divination practices reviewed here.

Categories employed in technique

Based on the findings in chapter 4 we would expect that techniques employing humans as producers of signs, e.g. ecstatic techniques, were more credible than techniques using animals and these in turn were more credible than those using physical objects. Surprisingly, however, we find that no techniques employ humans. Ecstatic techniques were altogether absent from Roman culture at large. Out of the 13 known practices, 7 made use of physical

objects and 6 made use of animals in the sign production. It still could be partly correct if the animal techniques were more credible, but out of the six practices with a high credibility value 3 are object techniques and 3 are animal and out of six practices with low credibility value 3 were object techniques and 3 were animal. The conclusion must therefore be that the category used in the sign production has no consequences for the credibility of divination in Roman republican times. This also reflects back on the experiment. The results may be culture specific or they may measure something else.

Direct prestige

The direct prestige was stipulated to be of great consequence to the credibility of the divinatory information. It was stipulated to work directly through the agent associated with the action, that is, the operator or in case where this differed, the interpreter.

There is an almost perfect correlation between direct prestige and credibility value. The practices with the highest credibility values (auspices) were also reserved for the most prestigious individuals, the highest magistrates, and the practices with the lowest were performed by the least prestigious, often foreigners outside or below the Roman status system. Even within practices the credibility value was divided. In the auspices the higher auspices belonged to the higher magistrates, and the lower to the lower magistrates. The higher overruled the lower. We also see this result in practices that are used privately. For example we see the *haruspices* employed by the lowest stratum of society. They were ridiculed and mocked by the elite. But the *haruspices* of the elite were employed by the greatest men of the Republic and their interpretations were well respected and had a high credibility value.

Indirect prestige

It was also stipulated that the indirect prestige of the counterintuitive agent correlates with the credibility value. The example of public extispicy however shows that although the public *haruspices* would often sacrifice to Jupiter the credibility value of their pronouncement was not high. Conversely, sometimes in private extispicy the entrails would give messages from Jupiter. This did not make the credibility value higher. The indirect prestige of the associated counterintuitive agent is thus secondary to the direct prestige and seems to depend on it.

However, there are practices in which indirect prestige makes a significant difference in credibility. Concerning the Sibylline Books, the priesthood responsible was of the same overall social class as the augurs. The only difference was that the Sibylline Books were not associated with Jupiter, but with the Sibyl or Apollo, which were of lower status in the Roman pantheon. This difference in the prestige level of the counterintuitive agent seems to account for the credibility value being lower for the Sibylline Books.

Utility

In chapter 4 we found that the utility characteristic of a practice were a combination of form and subject. We identified three different types of form: binary, discrete and rich plus two types of subject constraints: restrained and open. These two characteristics can be combined in a two by three matrix. Each combination corresponds to an actual Roman divination practice.

	Form	Binary	Discrete	Rich
Subject				
Restrained		Auspices	Public sortition	Sibylline Books
Open		Roman extispicy	Private sortition	Private extispicy

Table 9.1. Utility of Roman divination practices

If we look at the binary/restrained form, all kinds of auspices fit into this category. An example is the *auspicium ex tripudio* where the goal is to determine whether or not to attack. Public sortition is also restrained, but it is a discrete type because two or more alternatives are offered. An example of this is the assignment of provinces. In the practice involving the Sibylline Books we also see a restrained practice, but combined with a rich form. It is restrained because it is only in a specific situation, one of national crisis, that the senate orders them consulted. It is rich because it can give a lot more details and information in the form of interpretation and recommendation of rites. The open practices can be used to give answers to a wide range of questions. Roman extispicy is a binary and open type because it answers whether or not what is specified in the prayer will come true. In principle anything could be asked for in a prayer. Private sortition is open because anything could be asked, and discrete because specific alternatives should be attached to the lots used for the draw. An

example of a rich and open practice is the private extispicy operated by Etruscan diviners. We have examples of them giving detailed predictions about future occurrences.

Cultural model - reflective representation of divination

In virtually all instances we explicitly read about a communication with a counterintuitive agent: that the birds were messengers of Jupiter in the auspices, that the entrails speak on behalf of gods or that the gods respond through the lots. In some practices, as in the case of public sortition, the involvement of the counterintuitive agent is often not explicit.

Concerning astrology and the *auspicium peremne* we hear nothing, but that is probably more due to the fact that the sources are severely limited.

In all instances where it is possible to test, we find a reflective conceptualization of divination as a communication with a counterintuitive agent in Roman divination. For every practice, apart from the two most obscure (*auspicium peremne*, and astrology) it has been possible to determine which god is answering. Thus the answer is seen explicitly as coming from a counterintuitive agent.

Often, as in the case of private sortition or the *auspicium ex tripudio*, a cultural model is found, resembling the one we will see for oblativ divination in the next chapter. The fact that omens and divination are conceptualized by reference to a similar cultural model indicates a mutual reinforcement that may also have stimulated the dissemination of divination in general. Table 9.2. Shows a summary of the different factors considered for each of the different practices.

Technique	Descriptives			Credibility value factors				Utility factors	
	Credibility value	Dissemination	CIA	Ritualization	Category	Direct Prestige	Indirect prestige	Form	Subject
Augurium	Very high	Small	Iuppiter O. M.	Yes	Animal	Very high	Very High	Binary	Restrained
Auspicious ex caelo	Very high	Small	Iuppiter O. M.	Yes	Object	Very high	Very High	Binary	Restrained
Auspicious ex avibus	Very high	Small	Iuppiter O. M.	Yes	Animal	Very high	Very High	Binary	Restrained
Auspicious ex tripudii	Very high	Small	Iuppiter O. M.	Yes	Animal	Very high	Very High	Binary	Restrained
Auspicious peremne	Low	Small		Yes	Object	Variable		Binary	Restrained
Auspicious nuptiarum	Low	Small	Tellus/Juno	Yes	Animal	Low	Medium/High	Binary	Restrained
Public sortition	High	Medium	Iuppiter O. M.	Yes	Object	Very high	Very High	Discrete	Restrained
Private sortition	Low	Wide	Fortuna Fortuna Primigenia, Hercules, Geryon,	Yes	Object	Low	Medium	Discrete	Open
Sortition oracles	Medium	Wide	Minerva	Yes	Object	Medium	Low	Rich	Open
Public extispicy	Low	Medium	Variable	Yes	Animal	Low		Binary	Restrained
Private extispicy	Medium	Wide	Variable	Yes	Animal	Variable		Rich	Open
Sibylline Books	High	Small	Sibyl/Apollo	Yes	Object	High	Medium/High	Rich	Restrained
Astrology	Low	Small			Object	Low		Rich	Open

Tabel 9.2. Summary of factors for Roman impetrative divination

Factors in the dissemination of divination

We may now sketch more precisely the interrelations between the different factors we found in the analysis. We isolated four primary factors: credibility value, utility, cultural model and motivation. The motivation was in all cases to achieve fortune and avoid misfortune. The cultural model in all cases implied communication with a counterintuitive agent. The motivation and the cultural model are therefore, as far as we can see, constant in the entire period in question and do not vary significantly. Credibility value is composed of three factors. It is now possible to see which of the factors seem to be most important in determining the credibility value of divination. We can rank them in order of importance: the most important factor is ritualization. All divinatory techniques employ ritualized action. Second most important is the direct prestige. This is the most fine-grained predictor of credibility value. Third, we have the indirect prestige of the associated counterintuitive agent. These three factors quite precisely determine the credibility value of the divination technique. The utility is determined by a combination of form and subject, but it only attains importance in a context. We can therefore not say anything in general about the degree of utility.

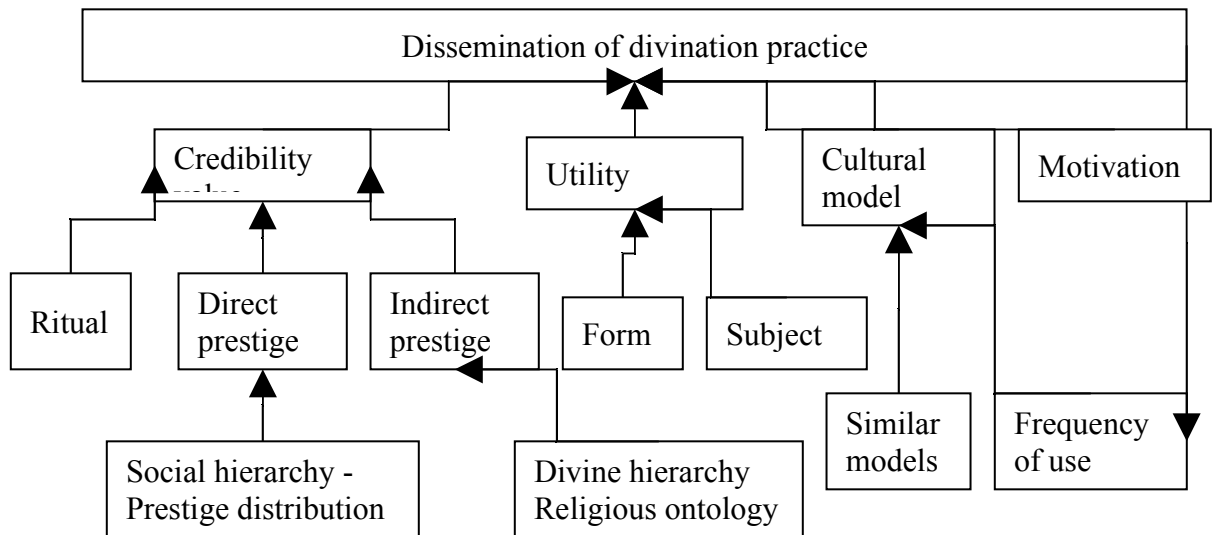


Figure 9.1. Relations between relevant variables for dissemination of a divination practice

History

Let us see how these observations can help us understand the historical dynamics. We only know of a couple of divination practices that became extinct: The *auspicium nuptiarum*, *auspicium peremne*, astrology, and some sortition oracles seem to have disappeared. They all had low credibility value. Astrology however returned and came into prominence later, but that is a different story involving the endorsement of the practice by the emperors, thus dramatically increasing its credibility values. The survival of a divination practice therefore seems to depend on the credibility value of the divination practice. The assumption that high credibility value provided a divination practice with a higher probability of survival is consistent with the findings here. We should, however, also notice that the practices that became extinct were also not widespread. Many other practices that had low credibility value and were widespread did not become extinct. In light of this we may assume that the dissemination of the practice is likewise a factor in determining the resilience of it.

The divination practices that appear to have been widespread all have a low credibility value as well. This is probably due to economic reasons. The actual value of the use of a divination practice correlates with the credibility value. Since most people don't have a lot of resources, the costly practices, i.e. the ones with high credibility value, will not be as widespread.

Utility was also an important factor in determining the historical trajectory of a divination practice. The utility of a practice does not tell us anything in itself as to whether it will be adopted or not. It is only the utility in relation to a context. A practice is adopted because it is useful in a situation. If the context arises often the practice will have a higher probability of becoming widespread. We can see some instances where the utility of a practice in a given context is the primary reason it was adopted. Four cases lend themselves to this interpretation.

1) The adoption of public sortition should be found in the utility of sortition in deciding between several alternatives. After the expulsion of the kings the command of the armies were divided between two equal magistrates or several military tribunes. Thus, a context arose where it was necessary to choose between several discrete alternatives. In this context sortition had a high utility because of its form.

2) The *auspicium ex tripudio* is not seen as being as old as the other kinds of auspices. The difference between *auspicium ex tripudio* and the other kinds of auspices is primarily that the former can be operated by anyone and that it could be used privately for any purpose. During the Roman expansion eventually more armies were deployed than could be commanded by the consuls, therefore a context arose in which the *auspicium ex tripudio* was useful since it could be used by anyone. It may also have been useful in other cases, such as making wills, in the military context. In these contexts the traditional auspices could not have been used.

3) The use of the Sibylline Books, while enigmatic in its details, offers another glimpse of how the utility accounts for its use. The Sibylline Books were used in contexts where the senate was in doubt what to do, as in the case of severe crisis, or especially mysterious or frightening prodigies. Through the details of the prophecies, most notably a specification of rituals to be performed, a rich interpretation of the situation at hand was arrived at. None of the traditional public forms could be used in this context because they were all either binary (auspices, extispicy) or discrete (sortition). Therefore in the rare cases where the senate did not know what to do a context arose in which the Sibylline Books were useful because of its form.

4) The last example shows that the *auspicium ex tripudio*, although more useful to non-consular military commanders, still was constrained by the binary form. From around the turn of the 1st century BCE big military commanders like Sulla started to employ private Etruscan *haruspices*, because their divination practice allowed, not only open, but also rich information to be acquired. Often a context would lend itself where the commander would not know exactly what to do, maybe several tactical possibilities were open. In this context the Etruscan form of extispicy was more useful because it could give rich information. These four examples offer a glimpse of how utility can account for the historical dynamics of divination practices.

It can therefore be seen that the overall historical tendencies of the different factors are explained by the credibility value and utility. One could wonder why the cultural model and the motivation do not figure here. The reason is that they are both constant as far as can be seen in the period in question. There is no change in the basic cultural model of divination. Furthermore, the motivation is constant because its basis, misfortune, was also constant.

Summary

To summarize the conclusion, we have a list of factors that all seem to contribute to divination pervading Roman culture for centuries. First, we found that the motivation is constant across different practices and across the period considered. Second, the credibility of a practice depended, in descending order of importance, on ritualization, the direct prestige and the indirect prestige. Third, the spread of a practice is inversely proportional to its credibility value. Fourth, it is possible that historical developments can explain why some practices have been adopted by reference to their utility, because it made them useful in a new context. Fifth, divination is in all cases, where we have sources to determine it, conceptualized as a communication with a counterintuitive agent.

We can sketch these observations in a more formal way. The key relations between the factors can be expressed as a series of equations. First a note on these equations: they are not intended to signify laws in a universal sense, but are meant to highlight regularities that hold for the period and culture under investigation here. Whether they hold more generally cannot be decided on the basis of this singular example, but requires more research. It should also be noticed that they are not deterministic but probabilistic. This means that one counter example does not falsify the regularity, but if the proportion of counter examples to predicted examples exceeds the normal limits for statistical significance it would invalidate the equation. Another problem is whether different factors can even be compared against each other, that is, do they even have the same currency? In economy similar equations of incommensurable factors are frequently employed. Since this does not pose a problem in economy, it should not either be a problem in religion (cf. Alles 2006).

$$1) C = aR + bDP + cIP, a > b > c$$

$$2) P(D) = 1 - C, 0 < C < 1$$

$$3) P(A) = C + U * F$$

$$4) P(S) = C + D$$

C = Credibility value, D = Dissemination, R = Ritualization, DP = Direct prestige, IP = Indirect prestige, U = Utility in a given context – the degree to which the practice gives the type of

information sought, F = the frequency that this context arises, S = Survival – probability that the practice will survive, A = Adoption of a new practice.

Ad 1) This equation states that the credibility value of a divination practice is composed of three factors which have a different weight each (a , b and c). We don't know the exact value of these factors, but we do know that ritualization is the most important. The second most important is direct prestige, and the least important is indirect prestige. Thus the weights of the three factors are $a > b > c$. Ritualization is a binary factor. Indirect prestige varies with the direct prestige and may be slightly higher or slightly lower. IP probably depends on $R > 0$, but it is a different problem whether the IP remains a factor outside ritual divination.¹⁸³ The equation also predicts that the credibility value of an utterance which is not ritualized, that is when $R=0$, can be evaluated according to the normal human heuristic of prestige bias. This is because only DP remains.

Ad 2) Equation 2 states that the probability that a practice will be disseminated is inversely proportional to the credibility value of the practice. The reason for this can be learned from a basic insight from economics. Divination is a service and as such economically a commodity. Like all commodities it has a value. This value correlates with what we have here called credibility value. It should not be controversial that the more credible some information is (credibility value) the more valuable it is (actual value). The probability of dissemination correlates with demand. In economics this relation between value and demand of a commodity is expressed in, what has been termed, the demand curve. The basic prediction of the demand curve in economics is that *ceteris paribus*, high price of a commodity results in low demand and low price in high demand (Mulhearn & Vane 1999: 28-30). Likewise in divination we should expect high credibility value to result in low demand and low credibility value in high demand. It is however necessary to remember that this is a *ceteris paribus* claim, so other factors may result in a low credibility value practice not being widely disseminated, just like a cheap good does not necessarily result in high sales. It could also be argued that utility should be part of this equation

¹⁸³ One could here imagine revelations or prophecy as positive examples, because the ultimate communicator is a god. For an interesting analysis of these implications see (Levy 2007)

as specified in equation 3, but it does not matter how useful a divination practice is, it will still follow the demand curve.

Ad 3) This equation states that the probability that a practice will be adopted in a given context depends on the credibility value of the practice plus the utility of the practice in that context times the frequency that the context arises. We saw four examples of this in the history section above.

Ad 4) This equation states that the probability that a practice will survive for a longer period of time depends on its credibility value and dissemination. Although the probability is $C + D$, we have to take in to account that C and D are related as specified in equation 2. The probability that a practice will survive can be sketched as in figure 9.2. below:

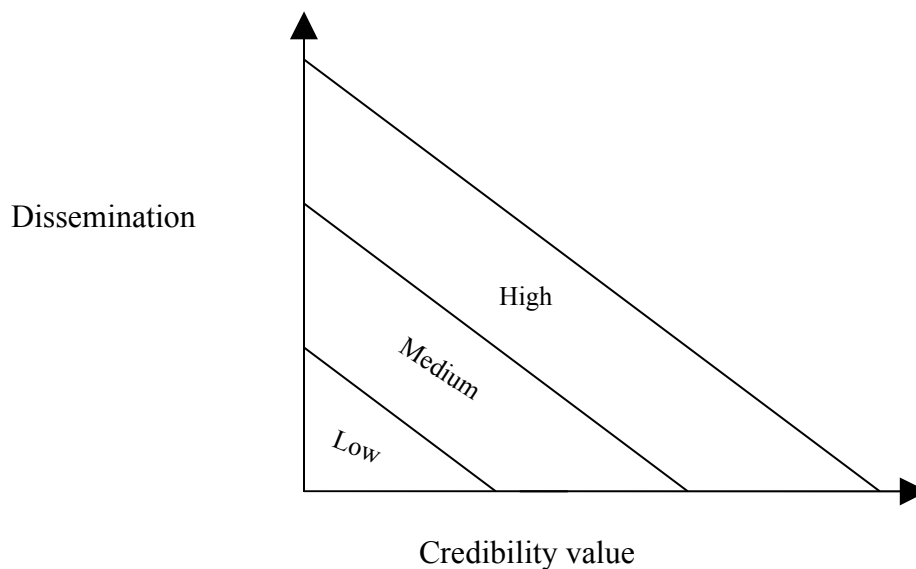


Figure 9.2. Probability of survival of a divination practice

The reason why the lines decline towards the right is because they denote the probable cut off determined by equation 2). This follows from the demand curve that similarly declines towards the right (Mulhearn & Vane 1999: 28): It is therefore improbable that there would be any

practices above the upper line. We can compare this with the 13 practices we have investigated (cf. fig.9.3).

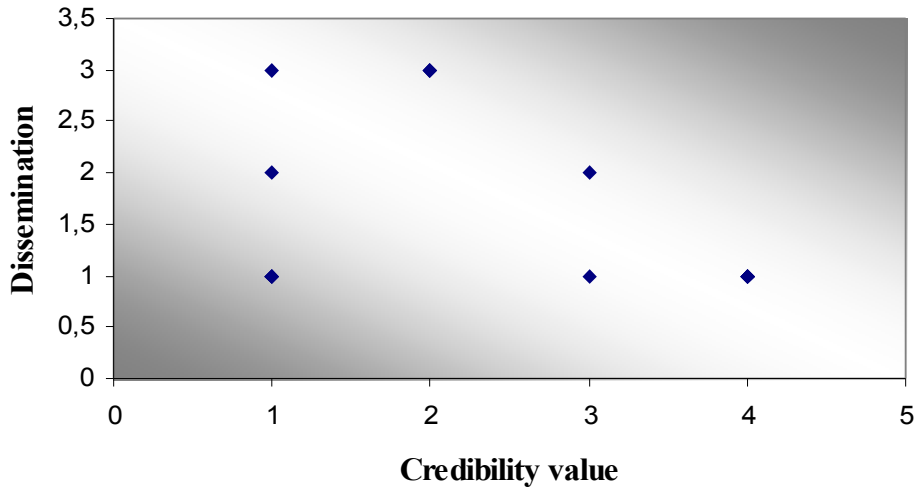


Figure 9.3. Survival of divination practices¹⁸⁴

We can see that there are no examples in the upper right corner, as we expected from equation 2. We can also see that the different practices are located in the high probability zone across the diagram (the bright rim): Some rely on high credibility value, while others rely on high dissemination. We do have three practices that do not follow this picture in the lower left corner, but they are exactly the two that died out, as was expected from equation 4. The actual names of the practices can be seen on figure 9.4. where those that do not survive are marked with a cross.

A strong word of caution on the interpretation of these figures is however necessary here. First, the values in the graph are the product of interpretation, not accurate measurement. Second, the interpretation is very insecure and conjectural since the sources very rarely directly address dissemination or credibility value. Third, there are so few data points (13) that the introduction of one new one could upset the picture. We cannot therefore be very certain about the results. While the graph does not prove, it is still in accordance with, what we would expect based on the theoretical model.

¹⁸⁴ Table 9.1 was converted into numerical values to make the diagram. Credibility value: Very high=4, High=3 Medium=2, Low=1; Dissemination: Wide=3, Medium=2, Small=1

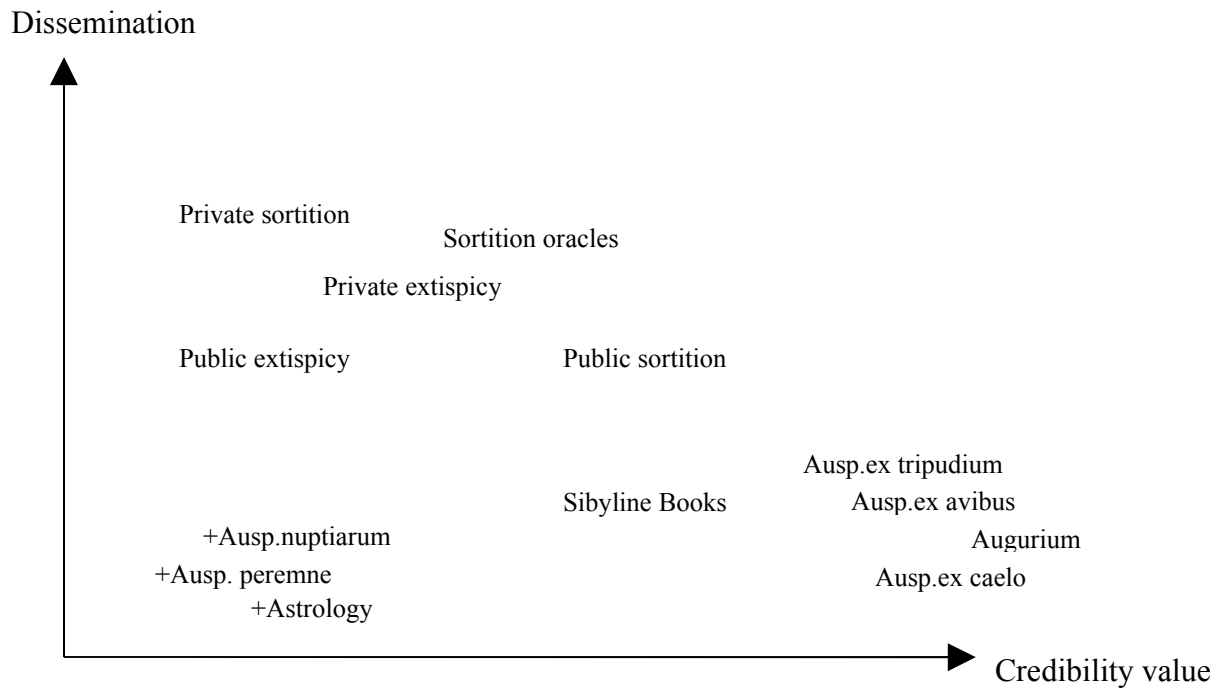


Figure 9.4. Survival of named divination practices

Chapter 10 - Signa oblativa

In this chapter we see how omens were conceptualized and how widespread this conceptualization was in Roman republican times. The English term omen is used as a general term for all words meaning omen. When using the Latin term I shall use *omen* in italics. First, the omen vocabulary will be analyzed and then the different types of omens. All instances of omens are conceptualized according to a simply cultural model. This model specifies that omens are communications from the gods about future success or misfortune. In order to see whether this was widespread, the frequency of omen words will be analyzed. It will be argued that the cultural model for omens was widely disseminated. Subsequently the prodigy system will be analyzed as it is the most detailed record of omens over a long period of time.

The omen vocabulary in Latin

Let us first look at the vocabulary which the Romans used to describe omens. In Latin there are several different words, which would simply be rendered omen in English. The nouns are *augurium*, *auspicium*, *dirum*, *monstrum*, *portenta*, *ostenta*, *miraculum*. There are many adjectives denoting either a good omen (*faustus* and *bonus*) or a bad omen (*dirus*, *detestabilis*, *funestus*, *sinister*, *tristis*, *infaustus* and *adversus*). In actual use there is a great overlap and figurative usage, but it is possible to sketch the primary senses of the different nouns.¹⁸⁵

An *Omen* is in general a sign to an individual, but it may also be directed towards a group signified by that individual, such as the army in the case of an army commander, or the state in the case of a consul. It signifies something that will happen in the future, either good or bad. It is not always described explicitly as stemming from the gods. There is, however, a Latin idiom used frequently by Cicero “*quod omen di avertant*”¹⁸⁶, which could be translated to something like

¹⁸⁵ For general accounts of the omen vocabulary in Latin see (Bloch 1963: 84f; Riess 1995: 355-358; Wülker 1903: 1)

¹⁸⁶ There are other variants like *quod di immortales omen avertant* (Cic.Har.41) *quod Juppiter omen avertat* (Cic.Brut 1.12.1), *quod di omen obruant* (Cic.Har.20).

“may the gods avert (bad) omens”. This could indicate that omens were in general conceptualized as stemming from the gods or Jupiter.

- *Augurium* in a technical sense is confined to the acts by the augurs watching the birds, that is an impetrative sign (see above chapter 9), but, since many of the same birds used in the augural discipline were also observed as oblativ signs, the word *augurium* came to be applied to omens as well (Linderski 1986: 2294-2295).
- *Auspicium* is likewise a technical term denoting impetrative observation of signs, mostly birds, by non-augurs, that is, magistrates or private people (Linderski 1986; see above chapter 9). For the same reasons as the *augurium* the *auspicium* could be used for oblativ signs as well.
- *Dirum* is a bad sign taken to show the anger of the gods.
- *Monstrum* is the most common designation of the strange or unnatural (Riess 1995: 355). It is described by Festus as what shows the future and reminds one of the will of the gods (Fest.122 L). It is most often something negative, i.e. a warning (Bloch 1963: 85)
- *Portentum/Ostentum*. *Portentum* is according to Festus a bad sign, while *ostentum* is a good sign (Fest. 284 L). This is, however, not an accurate description of the actual usage since they often appear as synonyms. They seem to be more vague and general terms (Bloch 1963: 85).
- *Prodigium* was usually described as a sign of divine anger. It concerns the state in general and foreshadows a disaster if nothing is done. Usually some ritual has to be performed to avert the disaster.

There is, as mentioned above, also a large number of adjectives that modify the omen to express whether it is good or bad. They can sometimes be used elliptically without the noun to designate an omen.

Detection of an omen

There are, as we saw above in chapter 5, three basic ways a physical occurrence can become salient and interpreted as an omen. First, the occurrence in some way relates to a current concern of the agent; second, the occurrence belongs to a culturally established catalogue of signs; third, the occurrence is so attention demanding in itself that it seems to demand an explanation.

The first type is by far the most common. Let us look at a paradigmatic example. It can be read in Cicero's *De divinatione* (Cic.Div.1.103) and it is also one of the stories selected for illustration of omens by Valerius Maximus (V.Max.1.5.ext 3).¹⁸⁷ When Lucius Paulus was elected consul for the second time (in 168 BCE), he received the command of the war against Perses by lot. The same day he came home and kissed his daughter Terentia. He noticed that she was sad and asked what was wrong. She said that Persa was dead. Persa was her puppy. He took that as an omen signifying that he would conquer Perses. We can see that the occurrence is nothing out of the ordinary in itself, but in the context of the current concerns of Lucius Paulus it becomes salient and is identified as an omen. This type is very typical for omens.

The second category also most often occurs in relation to a specific concern of the agent, but they can in principle be identified by themselves. Examples are observation of an owl (*bubo*) (Ov.Met.5.549f) or *volucres* (a special kind of birds) (Ov.Ep.13.49; Cic.Planc.23.57). They were bad signs. The observation of a thunderclap to the left is an example of a good sign (Cic.Div.2.74). They are so in virtue of the augural discipline, which has encoded a body of knowledge into their practice. This type of signs often depends on a group of specialists or a written codification to maintain them. It is therefore probably not by chance that we only find omens with fixed meaning among signs used in the augural discipline.

Examples of the third type are very hard to find among the *omina*, one example is: Caesar's door to his sleeping room closed by itself the night before he was murdered (Suet.Jul.81). This type is much more common among prodigies as we will see.

Contents of the omen

The contents of omens were not just predictions of the future, although that is a central component. There is more information in them. In order to understand this, it is necessary to step back a bit and look at some very general characteristics of Roman religion, and how this is related to fortune and misfortune.

A well known quote from Cicero describes the basis of Roman religion very well: "but in piety [*pietas*], in devotion to religion [*religio*] and in that special wisdom which consists in the recognition of the truth that the world is swayed and directed by divine proposal, we have

¹⁸⁷ The story is also related in Plut.*Aem.*10

excelled every race and every nation”.¹⁸⁸ According to Cicero, the Romans exceed everyone else in *pietas* and *religio*. These two concepts have been the focus of many investigations. Still, diverging opinions about what their exact meaning exist. There does, however, seem to be common agreement that they refer to something essential in Roman religion, namely the regulated religious practice according to prescribed rules (Latte 1960: 212; Liebeschuetz 1979: 1; Wissowa 1912: 380). *Pietas* is described by the Latin-English dictionary of Lewis and Short as “*dutiful conduct* towards the gods, one’s parents, relatives, benefactors, country etc.” This points to something central, namely acting in accordance with obligations in a social exchange system. The Roman society was pervaded by dependence through exchange relations of the *cliens – patronus* type. The same was the case in relation to the gods. Like dutiful conduct brought fortune in the form of help from a patron or superior friend, *pietas* in relation to the gods brought good fortune in the form of help from the gods. Whereas proper behavior towards a *patronus* might entail offering gifts or political support, proper behavior towards the gods meant to perform rites properly and to observe the correct religious prescriptions down to the smallest detail (Latte 1960: 40f; Liebeschuetz 1979: 9; Linderski 1995: 487; Wissowa 1912: 390). This adumbrates the contours of a basic model where proper religious behavior is the cause of fortune and neglect the cause of misfortune. The purpose of the pious Roman was therefore in the words of Wissowa “Fernhaltung alles Bösen und herbeiführung alles guten” (Wissowa 1912: 381).

The problem for the Roman was that the many and frequently obscure rules could easily be forgotten. Therefore every Roman could unknowingly have neglected proper religious conduct and be heading towards misfortune. Fortunately the gods could then be trusted to give a sign that this was the case. This is where omens come in to the picture. Omens are indications of whether the person, to whom the omen is directed, has behaved in accordance with religious duty or not. Sometimes there was an indication of what could be done in order to re-establish the proper relation to the gods. This is the basic cultural model for conceptualizing omens. It is possible to sketch a figure of this cultural model with the most common terms to describe the various aspects. The gods are above everything as exchange partners and giving the signs. For illustration see figure 10.1.

¹⁸⁸ “*pietate ac religione atque hac una sapientia, quod deorum numine omnia regi gubernarique perspeximus, omnis gentis nationesque superavimus*” (Cic.*Har.*19). Similar thoughts are expressed in Cic.*N.D.*2.3. This impression was also persistent among foreign observers of Roman culture (cf. Polyb.6.56.6, Sall.*Cat.*12)

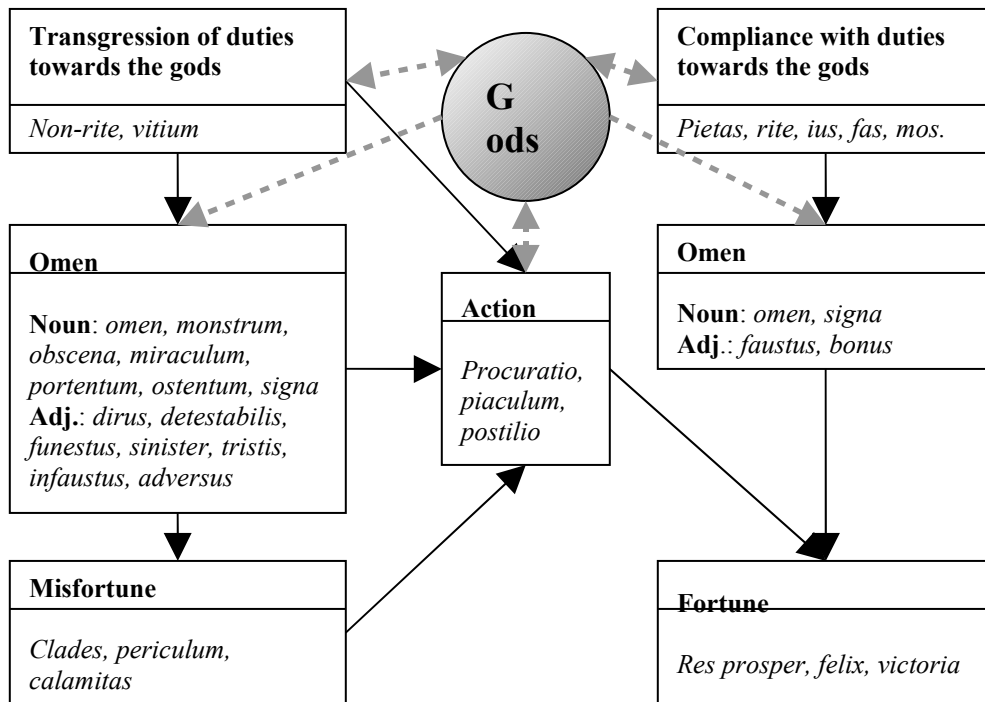


Figure 10.1. Cultural model for conceptualization of omens

A paradigmatic case illustrating this model can be seen in the story about Gaius Flaminius (Liv.21.62-22.6). It takes place at the height of the second Punic war in 217. Hannibal is threatening Rome from the North. Gaius Flaminius was elected to the consulship and was allotted the army lying near Placentia. Flaminius had already been consul once before, in 223, and had a history of disagreements with the senate. He therefore feared that they would falsify the auspices and use any means, such as obstruction of rituals, to detain him in the city.¹⁸⁹ Therefore he decided to disregard the religious duties in the city and travel to his army straight away. This meant that he would not enter office at the temple of Iuppiter Optimus Maximus, he would not sacrifice to Iuppiter Latiaris at the Latin festival, he would not receive the auspices and take his vow on the Capitol as was customary. The senate recalled him in order that he could carry out these obligations to the gods, but he did not comply. A few days later he entered office with his army with the sacrifice of a calf. That much was performed according to custom. The

¹⁸⁹ The consuls had many religious duties they had to carry out before they could leave the city. If a ritual was not performed properly it had to be carried out again.

calf ran away and spattered many of the bystanders with blood. This was the worst possible sign in a sacrifice (Latte 1960: 388). He was advised to wait for his colleague before engaging Hannibal in direct battle, but he did not like that advice and ordered them all to attack immediately. When he mounted his horse it stumbled and threw him over its head. This was seen as a bad *omen*. Further the standard bearer reported that he could not pull up the standard. This was seen as another *omen*. Flaminius' army made it to the lake Trasumennus, where Hannibal attacked the Romans by surprise. This is one of the most memorable defeats of the Romans. Livy tells us that 15000 Romans and Flaminius himself perished in the battle. It can be seen that the omens almost literally suggest that Flaminius should wait for the other consul.¹⁹⁰

There are not so many examples of positive omens, but one example involves Publius Scipio Africanus, who conquered Hannibal (Liv.29.27.12-13). He was renowned for his religious reverence (Liv.26.19.3-4; Gel.6.1.6). At the close of the second Punic war Scipio was sailing along the African coast looking for a place to disembark his troops. He asked what the nearest promontory was called. He was told it was called *pulchri promuntorium*, the promontory of beauty.¹⁹¹ Scipio took this as an omen and landed the ship there. The troops were disembarked without any problems and eventually Scipio celebrated many victories in Africa.¹⁹²

These two stories both relate to probably the most central war in Roman self consciousness, the second Punic war. Their value is not in whether they describe any historical realities, but in that they were told and express common assumptions among the Romans. The first shows how omens were foretelling the defeat of Lake Trasumennus because of neglect of religious duties; the second shows how an omen foretells the eventual victory because of compliance with religious duties. We can fit the different components within the cultural model for omens we found above (see fig.10.2).

¹⁹⁰ There are many other stories like this one, see for example Verg.*A.* 3.358; Ov.*Ars.*1.212, Ov.*Met.*10.4; Cic.*Dom.*55; Cic.*Ver.*2.6.18.

¹⁹¹ Loeb's edition has "Cape of the Fair God". This is because Polybius in a parallel passage makes reference to Apollon. That does not seem an accurate translation. The modern name is Ras Sidi Ali el Mekki.

¹⁹² Similar examples can be found in Ov.*Met.*10.277; Ep.17.159; Pl.*Per.*4.8.6; Hor.*S.*3.11.45

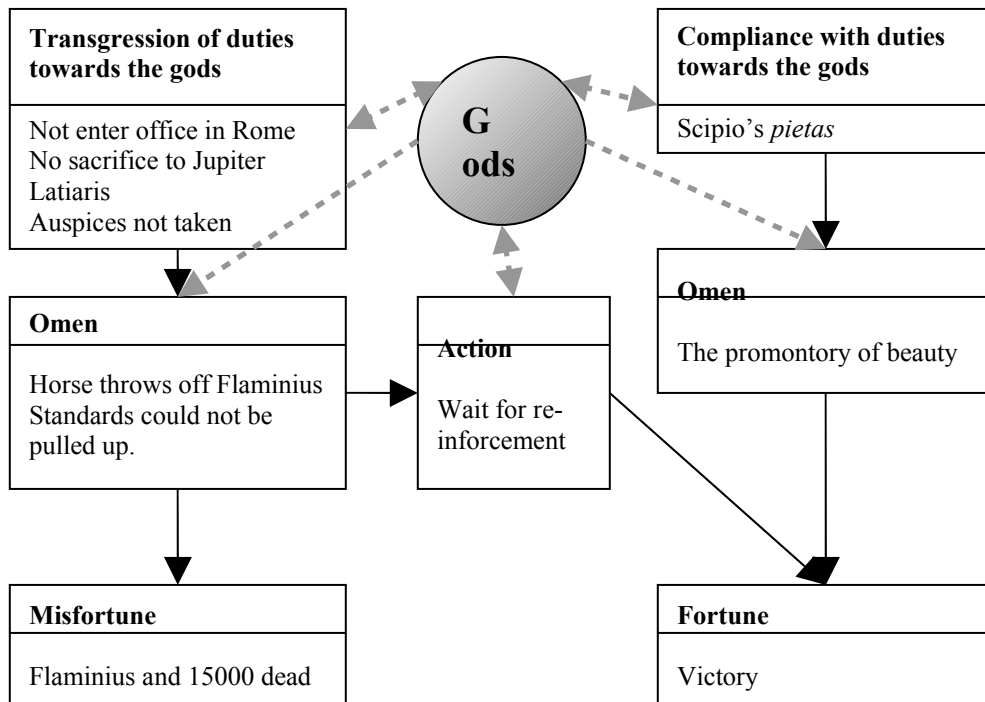


Figure 10.2. Cultural model of omens with examples

The model rarely includes all parts explicitly. Sometimes, the cause is not disclosed (Liv.9.14.8), sometimes the actual fortune or misfortune is missing (Pl.Ep.396-399, Ov.Ep.17.159, Ov.Met.5.546-550) and sometimes there is no action suggested (Cic.Phil.4.4.9). Omens in Roman culture are always related to the fortune or misfortune of the one it is perceived to be directed against. They are never about neutral or irrelevant things, such as how many pigeons will be at the market next time, but always related to the concerns of the interpreter. Sometimes this is an individual, sometimes a group and sometimes the state. They are conceived of as signs from the gods, and were integral parts of the most central narratives.

The frequency of omen words

In order to assess how widespread knowledge and awareness of the cultural model behind omens was. I will investigate how frequently omen words are used. The basic assumption is that the frequency with which omen words occur, will tell us something about the frequency with which

the cultural model of omens, identified in the previous section, was instantiated. To this end I will use the Perseus project database¹⁹³, which allows you to see the frequency of each word in the works featured in the database. Only authors who wrote before the Common Era were chosen, since the meaning seems to change in the principate.

There are three problems facing such an investigation. First, the words identified may actually be other words. This happens when two different words, because of inflection, yield the same word. The database cannot analyze which of the words the inflected form comes from, but only which possible words they could be derived from. In all cases where there are more than one possibility of deriving the word it gives a frequency in which all cases of doubt are counted (maximum frequency), and another where all cases of doubt are not counted (minimum frequency).¹⁹⁴ Second, the meaning of the word may not refer to an omen in all cases. This is the case for some words, like *signum* and *ostentum*, *augurium* and *auspicium*, but not in the case of *omen* or *prodigium* for example. There is no way to be certain that all instances mean omen. Third, some of the words may appear together, which would make the frequency with which omens were discussed appear larger. In order to test for this I have analyzed which words often appear together and which don't. *Ostentum* and *portentum* appear together relatively often, likewise for *prodigium* and *monstrum*. *Prodigium* and *omen* rarely, if ever, appear together in this database. This indicates that we can be certain that *omen* and *prodigium* frequencies do not overlap. *Ostentum* and *portentum* overlap and *portentum* may sometimes overlap with *prodigium*. We cannot, therefore, just add all the frequencies.

The word *signum* was excluded because it has many other meanings, and is not typically used for omens. It would have skewed the results if it were included. Similarly, *miraculum* only rarely signifies an omen. It should also be borne in mind that *augurium* and *auspicium* only rarely means omen. In order to see whether these frequencies indicate that the Romans spent a lot of

¹⁹³ http://www.perseus.tufts.edu/cache/perscoll_Greco-Roman.html (7 October 2006). This database has the most frequently read Latin and Greek authors and features 5.272.848 Latin words and 7.836.556 Greek words. In most cases only some of the works by the author in question are featured, not all. For example only the first 10 books of Livy, and only Cicero's speeches and letters. Further the database spans early Latin from the end of the 3rd century BCE until the 4th century CE. The biggest concentration of sources is around the 1st century BCE to the 1st century CE. The figures of the selected authors can be seen in appendix 4. The Perseus database is not complete, but large and relatively representative to give an overview of Latin and Greek culture and language.

¹⁹⁴ Results will be given in brackets with maximum number of possible instances/minimum number of possible instances.

time communicating about omens or only a little, some control words were included. They were selected because they indicate things that the Romans also were interested in, such as dinner (*cena*)¹⁹⁵ and gladiator fights (*gladiator*). While no control words can ever be completely accurate, these two seem to indicate areas of life that the Romans found very interesting. The results can be seen on Figure 10.3 below

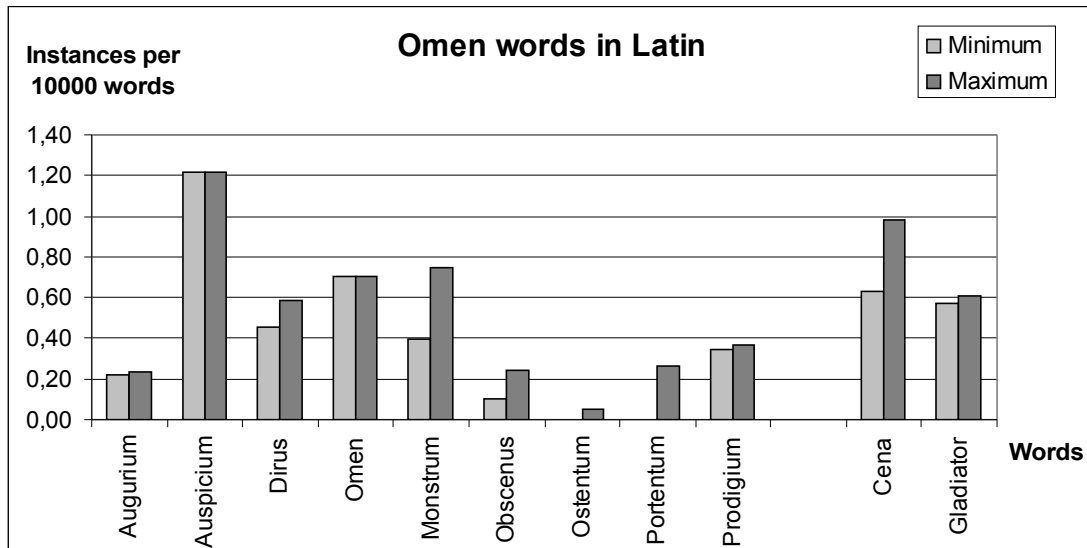


Figure 10.3. Omen words in Latin

This shows that in the corpus of Latin literature surveyed here dinner and gladiators are just about as common a subject as omens are and smaller than the auspices. If we summarize the different distinct words for omen we can see that communication about omens exceeds the control words. This could indicate that the cultural model for conceptualization of omens was

¹⁹⁵ It could be as in the case of omens that the vocabulary is equally varied for terms denoting meals. But in Latin only *cibum* and *epulum* could come close. *Cibum* is a more general term, which is also used for animal fodder the frequency is therefore also higher (2,51/1,66), while *epulum* (0,28/0,06) is used for banquets. So *cena* appears to be an acceptable indicator of the topic of dinner.

very widespread¹⁹⁶ and along with it the idea that it was the gods who communicated with the Romans through signs.

Using frequencies of omen words as a measure of how widespread the cultural model for omens was raises some possible objections. First, it might be that, what we are comparing to, was more widespread, but not talked about as much, that is, people might have engaged in it without speaking much about it. While this may be true, the simplest assumption is that, all else being equal allowing for great individual differences in the sources, the Romans wrote about things they were interested in and not things they found to be of irrelevant. Given the size of the sample here surveyed these individual differences should be leveled out.

Second, it could be that omens were particularly apt for writing, but not speaking. This assumes a modern understanding of writing not consistent with the ancient Roman. Roman writing was read aloud. It might then be that omens were apt for certain genres. That is indeed the case, but this, can be answered as the previous objection: we must assume that the contents of the genres of the Romans with great individual differences reflected their interests. A popular genre must have been popular because it reflected topics of interest. The size of the sample should even out the individual differences. We find genres employing many omen stories, but we also find genres that hardly employ them at all.

Third, it could also be argued that the sources only reflect the elite's view on the world. That is obviously true since we have no philosophical treatises from the poor slave in the silver mines of Spain. There does not, however, seem to have been any significant differences in view on omens between the elite and the lower social classes. This can be seen from Plautus' comedies, which were not meant for the elite, but for the masses. They frequently employed omens as part

¹⁹⁶ It indicates that the cultural model implied by omen words was often communicated. We can try to estimate it a bit more precisely. Normal audio books in English have about 150-175 words per minute. While there probably is a difference in word length between Latin and English, it is not likely to be great since they are both more or less of the same type in this respect (not agglutinating, which would have made a difference). If we take the low estimate that the Romans spoke 150 words per minute, an average of 95 minutes of conversation would pass between the encounter of the word omen if the frequencies in the corpus used here are sufficiently representative. Add to this the other ways of signifying omen. Given this very loose and hypothetical calculation a very low estimate would have it that the average Roman spoke or heard about omens once every one or two hours. It may ofcourse also be that the sources transmitted to us are completely unrepresentative of what the Romans talked about. We simply don't know. I have not been able to come up with any reason that this should be the case.

of the plot and the use and understanding does not differ from the cultural model found in the “elite sources”.

Fourth, it might be that omen stories were nothing special for the Romans, but something normal in their immediate cultural surroundings. In order to see whether the Romans really were particularly strong believers in omens, we can compare with the Greeks. This is also an interesting comparison since it has been a common assumption in previous research that Roman culture was a bad copy of the Greek without any individuality (Feeney 1998). A similar survey of omen words, as the one undertaken above, in Greek gives us only one proper word for omens, namely *τεραζ*. As in the Roman case, we also have several terms that are sometimes used as meaning omen. *φαντασμα* and *φασμα* can mean omen, but it is not their primary meaning and they are only rarely used as such. *σεμα* and *συμβολον* also have as secondary meanings omen, but they are used even rarer in the sense of omen. They have all been included for comparison anyway to give as full a view as possible. As control word the Greek word corresponding to *cena*, *δειπνον*, is used. As in the case of the Latin analysis only authors writing before the Common Era are included in the analysis.¹⁹⁷ The results can be seen on figure 10.4.

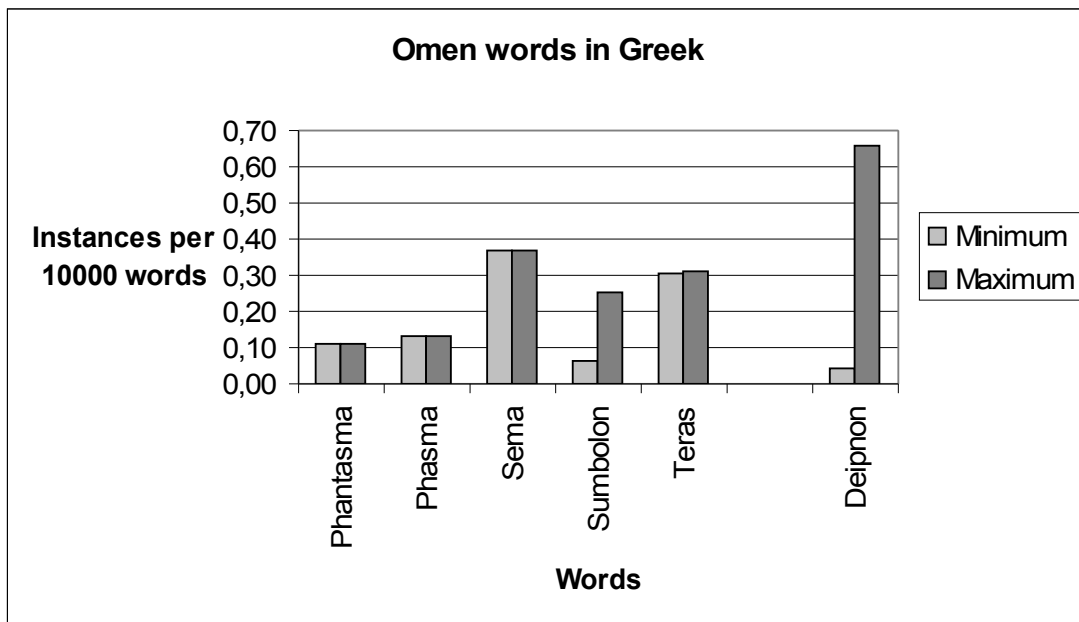


Figure 10.4. Omen words in Greek

¹⁹⁷ The exact selection along with the exact figures can be seen in appendix 4

Although there is great imprecision with the measure of the control, that is, a possibility that we are measuring another term, a glance through the results seem to indicate that most instances really are of $\delta\epsilon\iota\pi\nu\nu\nu$. This would indicate that the Greeks more rarely engaged in the topic of omens (as only $\tau\epsilon\rho\alpha\zeta$ is a reliable indicator) than they did in the topic of dinner. It still may indicate an enormous appetite, or at least appetite for discussing food, among the Greeks. To make a direct comparison let us compare the frequency with which the Greeks used omen words with that of the Romans. The results can be seen in figure 10.5.

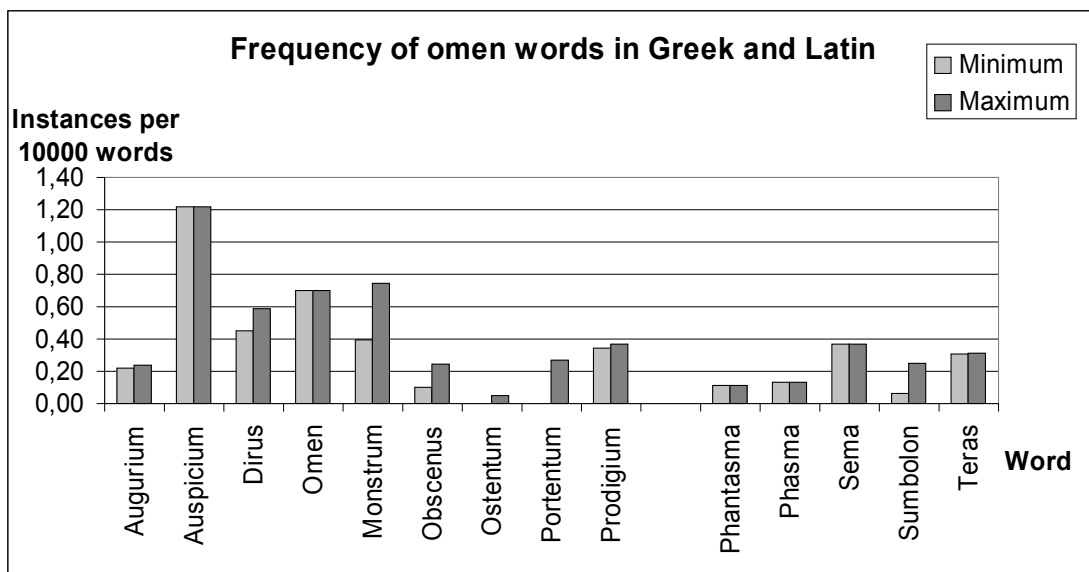


Figure 10.5. Frequency of omen words in Greek and Latin

From this figure it can be seen that the Romans more often engaged in communication about omens. There is, though, the possibility that the difference might be attributable to a different composition of the genres in the two corpora. They are not balanced. In the Greek Corpus, for example, we find a large amount of rhetorical material. In order to assess whether the results are a result of different genres, we can compare the two genres that most closely resemble each other, and which most obviously engage the widest public, namely drama and rhetoric.

Since we only have Roman comedies, we can compare Roman comedy, that is, the works of Plautus and Terrence, with Greek comedy, that is, the works of Aristophanes. It should be said that, although they are close there are two important differences: first of all the aristophanic

comedy is Old Greek Comedy, while Plautus and Terrence imitate the New Greek Comedy. Second, there is a difference between the Roman and Greek comedy. Roman comedy was more for the average people, high as well as low, whereas Greek comedy was more for the elite. The results of the comparison can be seen in figure 10.6.

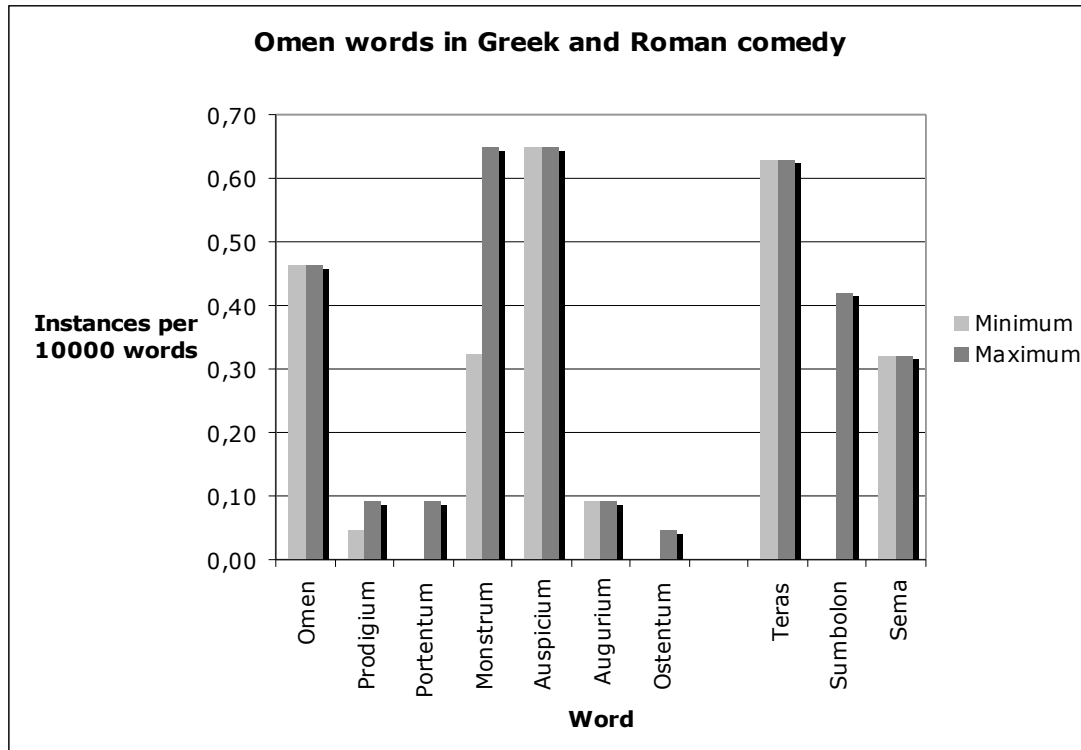


Figure 10.6. Omen words in Greek and Roman comedy¹⁹⁸

Although the result is not as clear, we see the same trend. The Roman comedy used more different words and, taken together, more often than Greek comedy did.

The result might still be attributable more to the genre of Comedy, than because of an actual difference. We can test this by comparing another genre: rhetoric. Speeches are also a good source for assessing what people knew, since the success of a speech depends on convincing the audience. Audiences are rarely convinced when they don't know what is being spoken about. We can compare Cicero's speeches, which is the only proper source for Roman speeches we possess, with the Greek speeches. The results can be seen in figure 10.7.

¹⁹⁸ Phantasma and phasma were excluded because there were no instances of them.

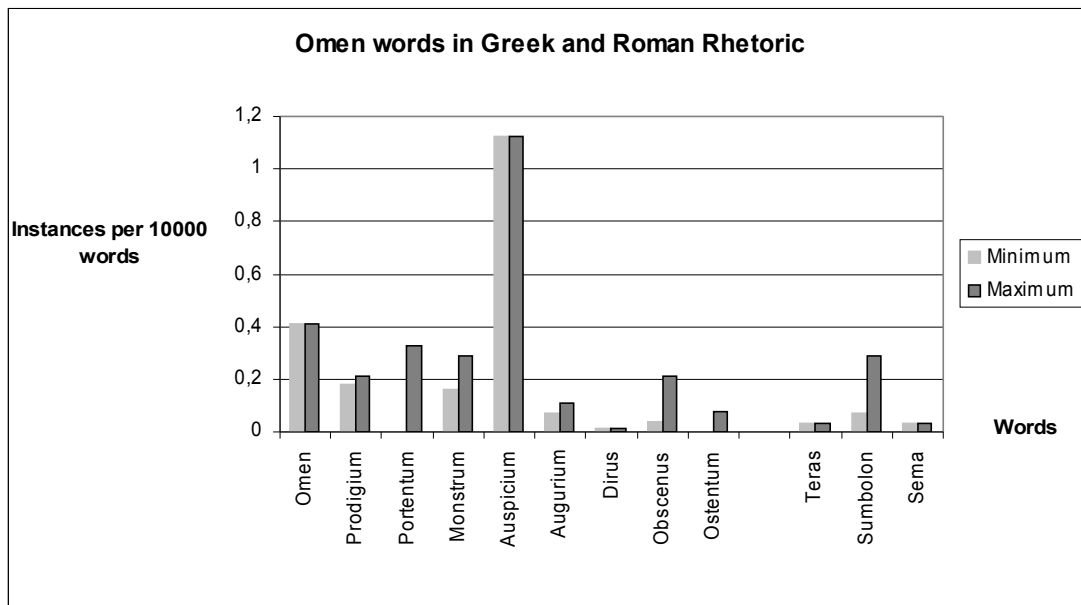


Figure 10.7. Omen words in Greek and Roman Rhetoric

Here it can be seen that the Romans used omens significantly more often in rhetoric than the Greeks.

It therefore seems safe to say that the ancient Romans often communicated about omens in comparison with the Greeks. It is also worth noticing that this result goes against the general assumption that the Roman culture was just a bad copy of the Greek.

The results mentioned above cover a large time span, so it would be obvious to ask whether there were any differences in frequency of omen words in a temporal perspective. There does seem to be a difference in the frequency of omen words (see appendix 4). The Augustan poets Ovid and Virgil have very high frequencies, several times the total average, while Plautus and Terrence have an average below the total average. Cicero is in general also a bit below the total average. But he is as well for the control word *cena*, but not *gladiator*. This could indicate that the Romans came to talk increasingly about omens, towards the end of the 1st century BCE.

Summary about omens

There are three ways a physical occurrence can come to be interpreted as an omen. An occurrence can become salient either because the occurrence in some ways relates to a current

concern of the agent, or because the occurrence belongs to a culturally established catalogue of signs, or finally because the occurrence is so attention demanding in itself that it seems to demand an explanation. Omens imply a basic cultural model: This model specifies the relation between the omen and fortune and misfortune by reference to the gods as communicators of the omen. We further found that this model was widely disseminated in Roman culture. We can therefore conclude that the conceptualization of omens as signs from the gods of impending fortune or misfortune was widespread in Roman culture.

The prodigy system

Now let us look in more detail at omens directed towards the state at large. These were called *prodigia*. We have reasonably good sources concerning their character, identification and interpretation. Prodigies were a special kind of omen that circulated among the population and was eventually reported to a magistrate. This magistrate related it to the senate, which decided whether it should be accepted or rejected. If it was accepted it was given to one of three priestly colleges for interpretation. They produced a response on the basis of which the senate decided what to do.

Brief sketch of acceptance procedure.

There are several distinct parts of what we could call the prodigy system.¹⁹⁹ The overall purpose of the prodigy system is to identify and interpret prodigies. The reason is that, as we saw in the previous section, prodigies are omens to the state in general. They are signs that the state is on the way towards some misfortune. It is therefore necessary to interpret what action is necessary to avert the impending misfortune and achieve a fortunate result. Prodigies were probably reported all year, but it was the duty of the consuls, after their assumption of office on the ides of March²⁰⁰, to expiate the prodigies according to the decisions of the senate (Bloch 1963: 120; Wülker 1903: 27). From a passage in Livy (Liv.22.1.14-16) five distinct parts of the process can

¹⁹⁹ For descriptions see (Bloch 1963: 120-129; Linderski 1995: 58; Rosenberger 1998: passim; Wülker 1903: 26-50). For an analysis of the different parts of the prodigy institution as a distributed cognitive system see (Lisdorf 2004c).

²⁰⁰ We do occasionally hear about prodigies at the end of the year, for example Liv.39.56.6 and Liv.41.28.1. It is possible that the system changed or Livy moved the annalistic material.

be distinguished: *nuntiatio*, *relatio*, *susceptio*, *responsum* and decision. The prodigies that had been reported (*nuntiatio*) to a magistrate were related (*relatio*) to the senate, who decided whether or not to accept them (*susceptio*): the senate then sent the prodigy to one of the specialized priesthoods for interpretation, which was written down in a *responsum* which forms the basis for what the senate decides to do. Let us consider these in more detail.

Nuntiatio

Nuntiatio is the designation used for the report of a potential prodigy to a magistrate. But we should briefly consider what comes before this process. Different terms are used for how the prodigies occur: *factum* (Liv.21.62.1), *apperare* (Obs.54, 56; August.C.D.3), *evenere* (Liv.40.59.6), *accidisse* (Cic.Div.2.19) and *visum* (Liv.40.19.1) (cf. Luterbacher 1967: 43-44). There seems to have been no single term for how the prodigy occurred contrary to the other parts of the process. Sometimes we hear that a person or persons have themselves seen what is reported (Liv. 40.19.1; Gel.4.6.2), but more commonly we just hear that they were reported. There does not seem to have been any restrictions as to who could report it. We hear of reports by priests (Liv. 40.19.2; Gel.4.6.2), administrators (Strabo 6.2.11; Liv.32.1), a governor (στρατηγόν), proconsuls, a *propraetor* and finally a private person (45.16.5) (Wülker 1903: 26-27). That it was probably relatively common to report prodigies can be seen from a senatorial decree from 193 BCE that stipulates that a prodigy of earthquakes should not be reported when it has already been reported and treated.²⁰¹ Some reports were written down and sent to the senate. An example of this is a proconsul writing from Macedonia to report a prodigy (Liv.32.1.11).

In a way prodigies resemble urban myths. Before they were reported they had probably gone through a period of oral circulation. This, at least, is the impression we get from Cicero. In *De responso haruspicum* we hear of a prodigy which has not been reported yet, but which is apparently widely known (Cic.Har.62). Another indication that oral circulation was prior to a report is the existence of doublets. Sometimes we hear of a prodigy and just a couple of years later we hear it repeated (Rawson 1991a: 4-5). An example is the birth of a colt with five legs in

²⁰¹ The passage runs: “*Ne quis, quo die terrae motu nuntiato feriae indicate essent (..) eo die alium terrae motum nuntiaret*” (Liv.34.55.4). The passage is a bit difficult and has been used by Kurt Latte to show that the Romans used prodigies as manipulation (Latte 1960: 265-268). This however is pushing the conclusion too far, since the passage only stipulates that when a prodigy has already been reported and treated it should not be reported again. It seems to be more concerned with bureaucratic efficiency than with manipulation.

Lucania in 200 BCE (Liv.31.12.7) and the same in Bruttium in 199 (Liv.32.1.11). It seems that the prodigy story kept circulating and was eventually reported again as a new prodigy.

Let us investigate what qualities of occurrences made them prodigies.²⁰² We saw that there were three ways omens in general could be detected. But since prodigies are not directed against the interpreter directly and not interpreted at the spot, they differ slightly from *omina*: they do not relate to an individual's own private concerns. Salience can therefore not be achieved by reference to an individual's personal current concerns. Some were identified according to common knowledge, but this was only a minority.²⁰³ We should therefore expect prodigies to be more attention demanding in order to achieve salience. In chapter 5 above we found that minimally counterintuitive events were more attention demanding than bizarre ones, which in turn were more attention demanding than normal events. We should therefore expect more minimally counterintuitive, than bizarre and more bizarre, than normal prodigies.

In order to assess whether this was the case, all extant prodigies from the year 218 to 44 BCE²⁰⁴ were rated according to the above mentioned descriptions of counterintuitive, bizarre and common concepts based on Boyer's and Barrett's work. Common concepts were those which were not either counterintuitive or bizarre. Determining whether a given prodigy involved counterintuitive concepts, that is violations of domain-level expectations, was relatively easy, but

²⁰² The following section is based on (Lisdorf 2004a)

²⁰³ Some prodigies do resemble each other and probably many persons knew of typical prodigies (Lisdorf 2004a: 167), but they are not encoded in an explicit body of knowledge like the Babylonian omens (Labat 1933).

²⁰⁴ 218 BCE is chosen as the starting date because prodigies seem only to become regular from this date. 44 BCE is chosen as a somewhat arbitrary end, since the prodigies become irregular somewhere around this date. 44 BCE marks the official end of the republic with the assassination of Caesar. It is after this time, and to a certain extent also before, difficult to ascertain whether the system is still working, since the republic as it had existed prior to the assassination of Caesar was significantly changed. Good lists of the known prodigies exist in (MacBain 1982; Rasmussen 2003). They have been used as a starting point, but not followed in all instances. In appendix 5 I have listed all the individual observations and discussed possible points of contention. The basic premise for labeling an observation as a prodigy is that it seems to be directed at the state and has been treated according to the prodigy system as described here. I have therefore not included many observations described as omens, which Rasmussen has included. Other kinds of occurrences such as ritual faults or consuls' death that may have been portentous but not technically prodigies, have not either been included when they did not go through the prodigy system, but were dealt with in isolation. One important justification for this selective use of the sources is that our main sources for the prodigies were writing during the principate, where the prodigy system known from republican times had collapsed. This sometimes makes them blend private omens with public prodigies. That said, it is rare that we have any difficulty in identifying a prodigy as such. Since the initial publication of this research in 2004, further research has revealed another 10 prodigies. There is therefore a slight inconsistency between the tables presented here and the number of prodigies in appendix 5. The prodigies do not, however, differ in character from the others in the list, so it does not change the general conclusions.

rating whether a prodigy involved a common or bizarre concept, that is, kind-level violations, often proved to be more a question of degree. A case could be made for most common concepts being bizarre, as they do involve some kind of violation of expectations.²⁰⁵ An example is the birth of triplets, which is a violation of regularity. Another example is storms, which are sometimes reported and sometimes not. The bizarre concepts often depart from culturally specific expectations, hence the animals in awkward places: wolves or owls within the city walls or in temples during the day. These prodigies are only bizarre given a kind-level expectancy for wolves to remain in nature outside the city. The largest group of bizarre prodigies is lightning strikes against temples or sacred areas accounting for 19% of the total amount of prodigies. These have been categorized as bizarre, because this clearly has been felt to be a violation of expectations concerning sacred areas, whereas lightning strikes against normal buildings were not seen thus. Another possibility is that lightning being a central part of Roman and Italic religion, often seen as expressions of divine will, had a special significance when it struck sacred areas, which in Roman culture was the property of the given god. The ratings were checked by an independent rater familiar with Roman prodigies and the theories of counterintuitive and bizarre concepts. Cases of doubt were discussed. Examples of what prodigies were classified as counterintuitive, bizarre and common can be found in appendix 6.

	Year BCE						Total
	218-190	189-162	160-132	131-103	102-74	73-44	
Counter Intuitive	0.55	0.60	0.63	0.55	0.58	0.38	0.56
Bizarre	0.43	0.32	0.35	0.39	0.39	0.59	0.41
Common	0.02	0.08	0.02	0.07	0.03	0.03	0.04
N	212	106	51	77	101	58	605

Table 10.1. Distribution of types of concepts in the prodigy reports from 218-44 BCE

The results can be seen in table 10.1. The distribution fits the findings of Barrett & Nyhof, and Boyer & Ramble. It follows the expectation that prodigies would be attention demanding: counterintuitive prodigies are more frequent (56%) than bizarre prodigies (41%) and the

²⁰⁵ This seems to be a general problem (cf. Norenzayan, Atran, Faulkner, & Schaller 2006: 544)

common prodigies, so to say, are quite uncommon (4%). To test for temporal differences the years were divided into periods of 29 years²⁰⁶ and common prodigies were eliminated, as the count was too small. When we look at these findings (table 10.2) we see a significant difference in the distribution of counterintuitive and bizarre prodigies ($\chi^2(5) = 11.361, p < .05$). The differences are found especially in the period from 189 to 132. The overall tendency can be seen in all periods except the period 73-44, where the tendency is inverted and we have more bizarre than counterintuitive prodigies. The distribution in this period can be attributable to the fact that many accepted prodigies are probabæy *omina* to big men and as we saw above *omina* are not typically counterintuitive.

	Year BCE						Total
	218-190	189-160	160-132	131-103	102-74	73-44	
Counter Intuitive	0.56	0.65	0.64	0.58	0.60	0.39	0.58
Bizarre	0.44	0.35	0.36	0.42	0.40	0.61	0.42
N	208	98	50	72	98	56	582

Table 10.2. Distribution of counterintuitive compared to bizarre concepts in the prodigy reports from 218-44 BCE

The overall distribution may still be attributable to a few single years where a lot of counterintuitive prodigies were observed. If that is the case we would not have a general trend. In order to test for this, each year was coded as either having most counterintuitive, bizarre or common prodigies. The results can be seen in table 10.3. We find the same pattern: the largest number of years has most counterintuitive prodigies, then bizarre and fewest have an equal amount. No years have most common prodigies. The difference between years with most counterintuitive and bizarre prodigies is significant ($\chi^2(2) = 10,133, p < .001$).

²⁰⁶ 29 years was chosen to have an arbitrary period that divides the total number of years, 174.

	Year BCE						Total
	218-190	189-162	160-132	131-103	102-74	73-44	
Years with most CI	16	12	8	9	9	2	56
Years with most BIZ	9	5	2	6	3	2	27
Years with equal	2	2	3	1	4	1	13
N(reporting years)	27	19	13	16	16	5	96

Table 10.3 Amount of counterintuitive and bizarre prodigies per reporting year.

It therefore seems safe to conclude that the more attention demanding the occurrence the more probable was it that it would be identified as a prodigy. Prodigies are thus a type of sign that in itself is attention demanding and thus achieves salience as an omen.

Relatio

The new consuls seem to have related the reported prodigies to the senate (Liv.22.1.14; Cic.Har.62). This is one of the obligatory actions the newly elected consuls had to carry out when they entered office. In Livy (Liv.22.1.14) we hear of an interrogation by the senate of the persons who reported the prodigy, but this was hardly the usual procedure.

Susceptio

Susceptio means acceptance of a report as a prodigy. The principles behind acceptance or rejection has been the focus of much previous research (Krauss 1933; Latte 1960; Luterbacher 1967; MacBain 1982; Rasmussen 2003; Rawson 1991a; Rosenberger 1998; Warde-Fowler 1971; Wülker 1903). Unfortunately it is one of the most obscure parts of the process. Except for two examples we only have evidence of the prodigies that were accepted. We are therefore left to guess what principles lay behind the acceptance procedure.

The key evidence is two prodigies that were not accepted. The passage runs as follows: “Two portents were not treated as public matters, the one because it took place in a privately owned spot: “Titus Marcius Figulus reported that a palm had sprung up in his catch-basin”. The other because it had occurred in a non-Roman place: “at Fregellae, in the house of Lucius Atreus, a

spear which he had bought for his son's service in the army was said to have blazed during the day for more than two hours in such a way that the fire consumed none of it."²⁰⁷ From this passage previous research deduced two principles: a prodigy could not be accepted if it had occurred in a private (*privatus*) place and consequently had to be in a public (*publicus*) place. It could not either be accepted if it occurred in a foreign (*peregrinus*) place, it had to be in a Roman (*romanus*) place.²⁰⁸ That is not altogether unreasonable assumptions. The problem is that it does not account for all the known prodigies, since there are examples of prodigies occurring in both foreign and private places. Let us start with the private prodigies.

Until recently it has been completely ignored that there are examples of private prodigies (Rasmussen 2003: 220; Rosenberger 1998: 29, n.52). A small number of prodigies occur in houses which are private areas (Liv.41.16.6; Obs.51; Obs. 53). Another example of private prodigies is prodigies of hermaphrodites or monstrous births. They must likewise have occurred on private ground (MacBain 1982: 27). We can therefore conclude that the rule that prodigies had to occur in a public place is not a necessary rule, although it does fit most occurrences.

The Romans did distinguish between foreign land (*ager peregrinus*) and Roman land (*ager Romanus*), but the Romans also operated with many other categories in between that are difficult to put a clear juridical term on. The individual relations between a city and Rome could be very different. Prodigies are reported from all these different categories of places.²⁰⁹

Attempts have been made to reconcile the discrepancy between the rule and the known prodigies. Franz Luterbacher thought that the distinction was just not very rigid (Luterbacher 1967: 30). He has, though, been criticized for this since it is an *ad hoc* explanation. Elizabeth Rawson explained the discrepancy by stipulating that it came from the integration of local prodigy lists into the Roman ones after the areas had become Roman (Rawson 1991a: 5-9). Unfortunately there is no evidence of such local collections. Bruce MacBain thinks that the

²⁰⁷ *Duo non suscepta prodigia sunt, alterum, quod in private loco factum esset, palmam enatam in inpluvio suo T. Marcius Figulus nuntiabat, alterum, quod in loco peregrino; Fregellis in domo L. Atrei hasta, quam filio militia emerat, interdiu plus duas horas arsisse, ita ut nihil eius ambureret ignis, dicebatur* (Liv.43.13.6). These two prodigies are listed at the end of the other prodigies of the year. There are several puzzling features, most importantly that Livy or his source overlooks, as pointed out by (Rasmussen 2003: 219-223), that they are both actually private prodigies.

²⁰⁸ As demonstrated by Susanne William Rasmussen, this is still the most common view (Rasmussen 2003: 219-223)

²⁰⁹ Bruce MacBain has shown that 21 % of the prodigies from outside of Rome come from foreign land (MacBain 1982: 25). For a thorough treatment of the question see (Szemler 1972: 34-36).

distinction between public and private, and Roman and foreign had simply disappeared (MacBain 1982: 28). This does not, however, occur in Roman society in general. This solution therefore raises more questions than it answers: Why would the senate suddenly stop making such discriminations, which are absolutely central to Roman culture all the way through the republic and well into the principate? We can conclude that previous efforts have not been able to elucidate the basic principles behind acceptance of prodigies.

Since the theoretical model proposed here assumes that omens activate an inference of a counterintuitive agent, and since prodigies were often explicitly conceptualized as communications, most often warnings, from the gods, it would be natural to assume that they followed principles from normal communication. According to the relevance theory of Dan Sperber and Deirdre Wilson, reviewed above in chapter 4, a communicative stimulus should be maximally relevant. A communicative stimulus is interpreted as being the most relevant the communicator could have chosen to communicate his informative intention to the interpreter. Given that the informative intention of a prodigy is already known to be a warning to the Roman state, the most relevant communicative stimulus is one that involves the Roman state. We should therefore expect that the stronger the connection of a prodigy to the Roman state, the more likely it was that it would be interpreted as a prodigy to the Roman state. The two previously suggested principles can be derived from this principle since public as opposed to private and Roman and as opposed to foreign land more directly involve the Roman state. We can therefore explain the two rejected prodigies by reference to only one rule and not two.

It might also explain all the excepted prodigies. An all round rough measure of the degree of connection to the Roman state would be simple distance to Rome. Based on the assumption that prodigies were taken as communicative stimuli from a counterintuitive agent and the principle of optimal relevance, we should expect it to be more probable that a prodigy was accepted the closer it was to Rome. Fortunately this can be tested since we know the place, and therefore the distance to Rome, for many prodigies. Consequently, we would expect the number of prodigies accepted to increase the closer we get to Rome. Mathematically that is a correlation between distance and number of prodigies.

The number of prodigies for each named location was summarized²¹⁰ and the beeline distance from this location to Rome was measured based on the map in *Putzger Historischer Weltatlas* (Putzger, Hansel, & Leisering 1961). We could have taken the raw correlation between number of prodigies for each location and its distance to Rome, but we are not interested in exact distance, and single observations from close by places would have skewed the data: if we had observation of a single prodigy from 10 different places very close to Rome and only one kilometer apart, and a few from one place 500 kilometers from Rome the correlation coefficient would appear mathematically to indicate a function linearly increasing with distance although the reverse is true. In order to avoid this, the observations were grouped in ranges of 25 kilometers. That would also have been more in accordance with the perceptions of the Romans: they would not have taken out a map and measured the precise distance, but rather have made a loose assessment of distance. In the context of ancient Roman transportation 25 kilometers would have been a salient difference in distance. In consequence a measure of distance based on ranges of 25 kilometers appears to be a better measure than exact distance. The number of prodigies in each 25 kilometer zone will then be summarized.

The distances for each observation were recoded into a variable designating the range. Thus the range 0-25 km was recoded as 1, 26-50 km as 2 and so forth. There were three outliers (more than 500 kilometers away). They were from Syracuse, Croton and Etna. They were excluded since they were most likely omens.²¹¹ Their inclusion would, however, not change the conclusion. The number of prodigies for each range was summarized. A scatter plot with distance by range on the abscissa and summarized number of prodigies for each range on the ordinate indicated a possible logarithmic function, why a regression analysis for a linear as well as a logarithmic model was made. The R square for the linear model was 0,53, which is significant ($p < 0.001$), but the R square for the Logarithmic was 0,82, and an ANOVA revealed a significant result $F(1,14) = 67.15$ $p < 0.001$. A scatter plot and the curve fit can be seen on figure 10.8.

²¹⁰ The same list as in the previous section was used. See Appendix 5

²¹¹ They are all only known through Iulius Obsequens, who mixes all manners of omens, prodigies and weird occurrences without distinction.

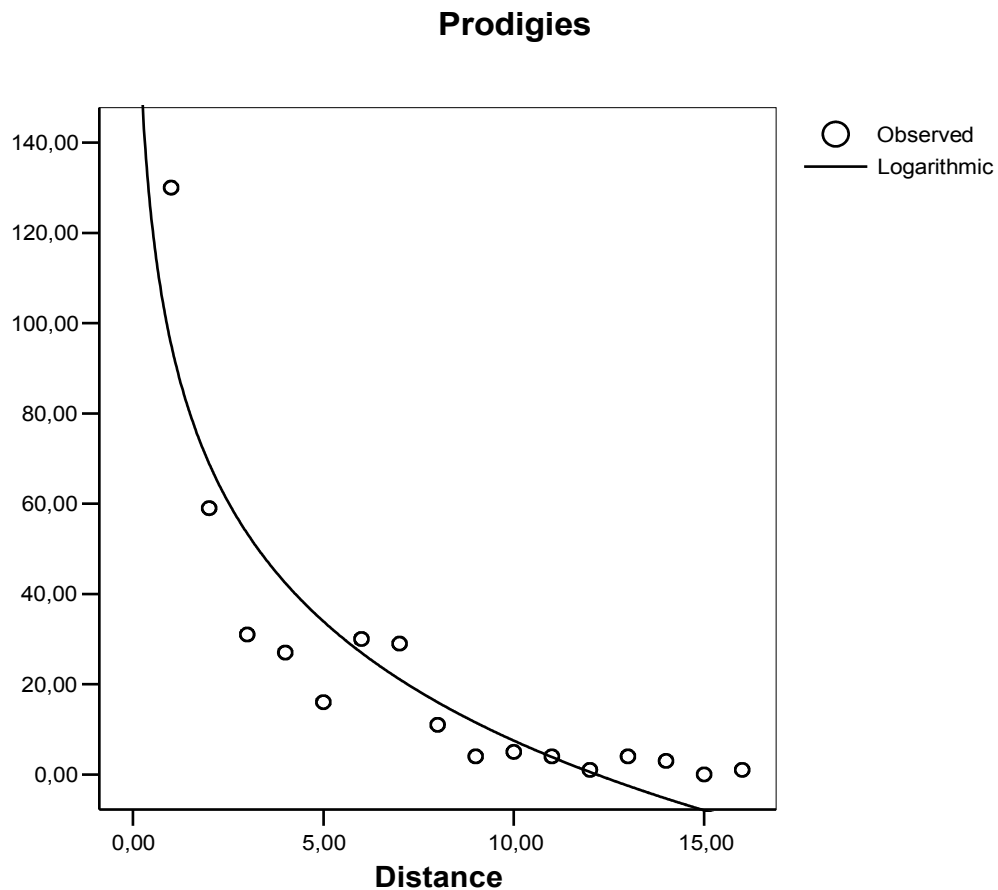


Figure 10.8. Correlation between number of accepted prodigies and distance.

We can see a very clear relation between distance and number of accepted prodigies. This is consistent with what we expected based on the hypothesis that prodigies were taken as communicative stimuli from a counterintuitive agent and the acceptance of them as pertaining to the Roman state at large was based on the basic communicative principle relevance. There are some reservations though. First, it should be mentioned that the distribution is also consistent with other explanations: we would also expect that more prodigies would be reported to Rome the closer the location since people would come to Rome more frequently the closer they lived. The distribution would thus reflect the prodigies reported to the senate. This explanation would,

however, also assume that the senate blindly accepted every prodigy. The only way to decide whether this or the alternative explanation proposed here is closer to historical reality, would be to measure the accepted prodigies against the rejected. We have two rejected prodigies which indicate that there was a conscious selection, but that is all we know. It then depends on whether this is seen as something usual or unusual. Were prodigies often or rarely rejected? The mention by Livy noted above, that earthquake prodigies should not be reported, seems to indicate that the general willingness to report prodigies was great, but the number of accepted prodigies rarely exceed twenty. That would indicate a large number of rejected prodigy reports. All this is ofcourse almost pure conjecture. I personally would find it peculiar if the senate accepted any prodigy, especially since we know that they sometimes called in witnesses and also actively rejected prodigies.

Another possible objection is that the distance is measured in beeline distance, whereas the experienced distance through the roads would have been what was important. It would be a minor thesis of its own just to calculate the distances through the actual roads known and even that changed with time as new roads were constructed. We are therefore left with this admittedly rough measure.

In conclusion, what can be gathered from the sources about the acceptance of Roman prodigies with all the possible imprecissions is consistent with the hypothesis that they were accepted according to the principle of relevance as stipulated in relevance theory. This interpretation is simpler than previous explanations that stipulated two principles, for both of which many exceptions could be found in the sources.

Responsum

Following the acceptance of a prodigy the senate would in most cases not be able to interpret it itself. They would therefore send it to a priestly college of specialists for an interpretation. These could be the *decemviri*, the *haruspices* or the *pontifices*. They were expected to produce a *responsum* which, as a minimum, included the necessary expiatory rites (*procuratio*). The first

two seem to have been used in the case of more uncommon prodigies, whereas the pontifices and the senate itself dealt with common prodigies.²¹²

Decemviri The full name of the *decemviri* was *decemviri sacris faciundis* “the ten men for the performance of sacred actions”. This is a common way of designating a group with a special purpose. Originally there were only two. In 367 it was raised to 10. Sulla further increased the number to fifteen, why they are sometimes called the *quindecemviri* (Wissowa 1912: 534). It was one of the four major priestly colleges (Beard 1990: 44; Szemler 1972: 21). It ranked as the third most prestigious after the pontifices and the augurs (Szemler 1972: 186-187). In order to become a *decemvir*, the person had to be co-opted by members of the college (Wissowa 1912: 535). This meant that the Roman elite occupied the college.

The primary task of the *decemviri* was to consult the Sibylline Books (Gel.1.19.11). As we saw above in chapter 9, the Sibylline Books were a collection of oracles, which was kept in the temple of Apollo on the Capitol. The most important content of the books, and what we hear about, was the expiatory rites needed in the case of a prodigy (Var.R.1.1.3). This was most often rites, but it could be the institution of games²¹³, or the import of a god.²¹⁴ The books could only be consulted at the initiative of the senate. This happened in cases of great crisis or misfortune for the state or in the case of prodigies (Rosenberger 1998: 51). What we know of the interpretations of the *decemviri* is thus that they only focused on the ritual action necessary to expiate the prodigy. They did not speculate in the causes or the possible outcomes.

Haruspices The *haruspices* are, contrary to the *decemviri*, not a traditional Roman priestly college. The term is used for a wide range of religious specialists ranging all social classes (North 1990: 56-61). Those we hear of that interpret prodigies were Etruscan experts most likely derived from the elite (MacBain 1982: 43). Nothing is known about the organization of these

²¹² Concerning the general procedure used by the senate to get advice from the priestly colleges see (Szemler 1972: 34-36). From the sources we can gather that the *decemviri* were questioned alone 36 times and with others 15 times, the *haruspices* alone 23 times and with others 13 times, the *pontifices* alone have only been questioned once in 213 BCE and with others 7 times (Wülker 1903: 33-37). Most often, however, we don't hear who were questioned.

²¹³ As the *Ludi Apolinarie*s in 212 (Liv.25.12.11) or the *Ludi Saeculares* in 249 (Liv.Per 49).

²¹⁴ As is the case with Asklepios because of a plague in 293 (Liv.10.47.7) and Magna Mater from Pessinus in 205 (Liv.29.10.5-6).

haruspices in Republican times. They could very well have been an *ad hoc* group called in to give advice. Since they were Etruscan, they drew on the Etruscan art of divination, which was different from the traditional Roman in many ways. It gave more detailed and richer interpretations and could produce predictions (Thulin 1906b; Thulin 1906a). This was something alien to traditional Roman divination (See above chapter 9). This meant that responses from the *haruspices* were richer in their interpretation compared to the *decemviri*'s and *pontifices*', who were content with identifying the proper rites. Although they were of Etruscan origin we have to keep in mind that the Etruscan elite was thoroughly Romanized in this period (Rawson 1991b: 294).

We are in the unique position that we have a *responsum* from the *haruspices* through Cicero, which gives us insight into how prodigies were interpreted by them. Let us take it line by line²¹⁵:
 1) *Loca sacra et religiosa profana haberi* (Cic.Har.9): “sacred and holy places have been profaned. That means that religious duties have been violated.”

2) *in agro Latiniensis auditus est strepitus cum fremitu* (Cic.Har.20): “in the Latiensis a groaning noise was heard.” This is the prodigy.

3) *Exauditus in agro propinquo et suburbano est strepitus quidam reconditus et horribilis fremitus armorum* (Cic.Har.20): “a loud and groaning noise of weapons was heard.”²¹⁶ This is also a *prodigium* possibly a reiteration.

4) *Postiliones esse Iovi, Saturno, Neptuno, Telluri, dis caelestibus* (Cic.Har.20): “compensation is due to Jupiter, Saturn, Tellus the Gods of the Heavens.”

5) *Ludos minus diligenter factos pollutosque* (Cic.Har.21): “the games have been celebrated without enough care and polluted”. Games were also religious actions and dedicated to the gods.

6) *Oratores contra ius fasque interfectos* (Cic.Har.34): “envoys have been slain against all faith and right.”

7) *Fidem iusque iurandum neglectum* (Cic.Har.36): “trust and sworn oaths have been neglected.”

²¹⁵ Translations are from (Beard et al 1998: II, 176). This is a reworking of a part of (Lisdorf 2004c)

²¹⁶ This is my own paraphrase, since the line is not included in the translation of (Beard et al 1998: II, 176).

8) *Sacrificia vetusta occultaque minus diligenter facta pollutaque* (Cic.Har.37): “old and secret rites have been celebrated without enough care and polluted.”

9) *Ne per optimatum discordiam dissensionemque patribus principibusque caedes periculaque. Creentur, auxilioque divinitus deficiantur, qua re ad unum imperium provinciae redeant exercitusque deminutioque accedat* (Cic.Har.40): “in order that murders and perils should not be caused by discord and dissension amongst the senators and the leading men; and that there should be no lack of divine help in preventing the power falling to a single man and the army from weakening and losing its strength.”²¹⁷

10) *Ne occultis consiliis res publica laedatur* (Cic.Har.55): “in order that the Republic be not harmed by secret plans.”

11) *Ne deterioribus repulsisque honos augeatur.* (Cic.Har.56): “in order that honor should not be increased for men of low worth and political failure.”

12) *Ne rei publicae status commutetur* (Cic.Har.60): “in order that the basis of the Republic remain unchanged.”

We can summarize this in the following way. Religious duties have been violated: sacred areas have not been respected (1), games have not been conducted with sufficient care (5), legates have been killed (6), oaths have been neglected (7), and ancient rites have not been properly carried out (8). There is a prodigy: noise and noise of weapons (2 and 3).²¹⁸ There is a description of the disasters that will happen if nothing is done: hostility will lead to killings, all power will fall into the hands of one man (9), secret plots will destroy the state (10), and unworthy people will increase their honor (11). There is a specification of what has to be done: Compensatory sacrifice (4). What will happen if this is done: the status of the state will not change (12), and by implication that killings will not occur (9) and that power will not fall into the hands of one man

²¹⁷ The translation is awkward because the Latin text probably is corrupt.

²¹⁸ This type of prodigies is not uncommon, noise: Obs. 45, 46, 48, 53, 57, 59; Sound of weapons: Obs. 45; Liv. 24.44.8.

(10), secret plots will not destroy the state (9), divine assistance will be achieved (9). This text fits with the cultural model we found for omens in general, as can be seen from figure 10.9:

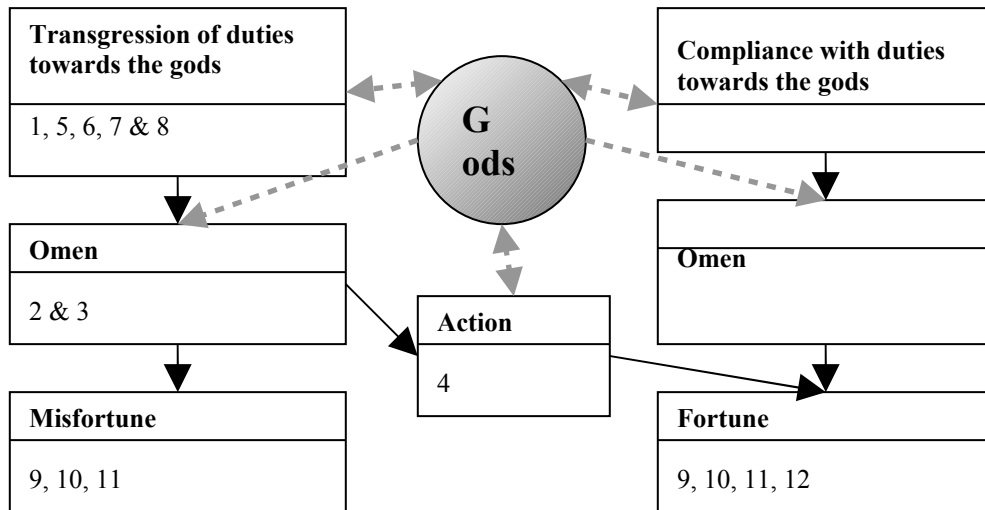


Figure 10.9. The cultural model of omens as seen in *De Responso Haruspicum*

Pontifices The pontifices were the most prestigious priesthood in republican times.²¹⁹ Their responsibility was sacral law: *sacra* and *caeremonia* (Cic.*Leg.*2.21). They had access to a large amount of written sources on religious details: *libri pontificales*, *acta*, *indigitamenta ritualia*, *commentarii*, *fasti* and *annals* (Szemler 1972: 22). They could issue *responsa* and *decreta* like other priesthoods, when asked to do so by the senate (Linderski 1986: 2154-2155; Wissowa 1912: 395). There is no evidence of the method they used to interpret. It does, however, seem likely that they consulted their records. They after all had access to the records of previous prodigies in the *annales*.

²¹⁹ This can be seen from Cic.*Dom.*1. On the special position of the pontifices see (Szemler 1972: 22-24). For general treatments on the pontifices see (Beard 1990: 19-25; Wissowa 1912: 501-523)

The actual interpretations we hear from the pontifices are standard Roman sacrifices, such as sacrifice of *hostiae maiores* (Liv.27.4.15) or a one day *supplicatio* (Liv.39.22.4), which are two of the most common expiations. They may have gathered them from the records, since they were the religious bookkeepers of the Roman republic.

Decision

The senate could in principle decide whether they wanted to accept the prodigy or not (Linderski 1993: 58; Wülker 1903: 38f). We have only one example where the senate rejected a *responsum*. The story is from Aulus Gellius who has it from the *Annales Maximi* and Valerius Maximus. Here it seems that the *haruspices* had willfully given a wrong interpretation and admitted to it. In this case naturally the senate did not follow the advice.

Summary about prodigies

In this chapter we have dealt with the acceptance procedure of prodigies in the Roman republic. This has allowed us to see in more detail certain aspects of how omens were identified and interpreted. Prodigies were directed towards the Roman state in general and differed from *omina* in that those who identified it did not interpret it. What is done by one person for *omina*: the identification, relation to the persons concern, interpretation and decision on action, is distributed to several different persons and institutions for the prodigies.

We found that the occurrences perceived as prodigies were more attention demanding than normal day to day occurrences. It was stipulated that this attention demanding character of the occurrence would make it salient and turn it into a communicative sign from a counterintuitive agent. Therefore it was assumed that the principle according to which prodigies were accepted or rejected as signs to the Roman state seemed to be derived from normal communication. This principle was identified as the principle of relevance of the communicative sign. The distribution of all accepted prodigies in the period and the two not accepted was found to be consistent with this hypothesis.

Prodigies were conceptualized along the lines of the cultural model we found for omens in general. This could be seen in the interpretations of the prodigies. The different priestly colleges give emphasis to different aspects of this model, but all supply an action to be performed to

achieve success. The prodigies were interpreted by the highest authorities giving the interpretations credibility. The direct prestige of these authorities increase the credibility value of the information entailed in the interpretation.

Conclusion

We found that the Roman vocabulary for omens was exceptionally rich. In Latin there are numerous nouns describing different types of omens, and even more different types of adjectives describing them as good or bad. Although there is great diversity in the terms they all build on one basic model, according to which omens were conceptualized. This model (cf. fig. 10.1) first of all identifies omens as an utterance from the gods or Jupiter to a person. The content of the utterance is that the person is on a path towards either success or misfortune. The success or misfortune depends on prior transgression of or compliance with duties towards the gods. In some cases the omen also specifies that something can be done to avert an impending misfortune. Since all omen words build on this basic model an analysis of a corpus of the most important republican sources was carried out to assess whether it was often communicated. Compared to two control words (dinner and gladiator) that also specified things that the Romans took an interest in, and therefore most likely communicated a lot about, omen words were a lot more frequently employed in the corpus. This suggests that the Romans really did communicate about this relatively often, and that the cultural model was very widespread. A comparison with a similar Greek corpus showed that the Greeks did not communicate about omens to the same degree. It was also found that this difference was there when controlled for genre. The Romans were simply a lot more interested in omens than their neighbors. We can therefore not explain Roman omen practice with simple historical influence from the Greeks.

In chapter 5 we stipulated that an omen is an event that achieves salience in one of three ways. We found all three ways among the Roman omens. The normal omens, primarily described as *omina* and related to individuals, achieved salience by the relation of the event to the individual's current concerns. The event was not in itself something remarkable. We also found a number of omens that were salient because they were part of a catalogue of signs. These signs ultimately derived from the discipline of the augurs and thereby from their written records. We also found

this type among the *prodigia*, where the explanation similarly is that they were written down. The last type of events becomes salient in virtue of their character as attention demanding. We found that the omen type called *prodigia*, were of this type. Prodigies were more attention demanding and therefore were identified as omens in virtue of the event itself.

Since omens were conceptualized according to the cultural model, we were able to offer a possible explanation of the spatial and numerical distribution of the accepted and rejected prodigies found in the prodigy records. Following the simple principle of relevance of the relevance theory of Dan Sperber and Deirdre Wilson it was expected that the closer to Rome a prodigy had occurred the more likely it would be accepted. An analysis of the extant prodigies with known provenance revealed that the number of prodigies accepted was exponentially decreasing with distance. At the same time the principle of relevance offered an explanation of the two only known rejected prodigies with recourse to only one principle, where two had been stipulated earlier.

The fact that prodigies, as a representative of the basic cultural model for omens, were handled by the senate and the most prestigious priestly colleges in Roman culture, would have functioned as a legitimating context giving credibility to the cultural assumption that the gods could communicate whether you were on a path towards fortune or misfortune.

Now we can connect the factors that seem important in determining the dissemination of omens (see fig.10.10).

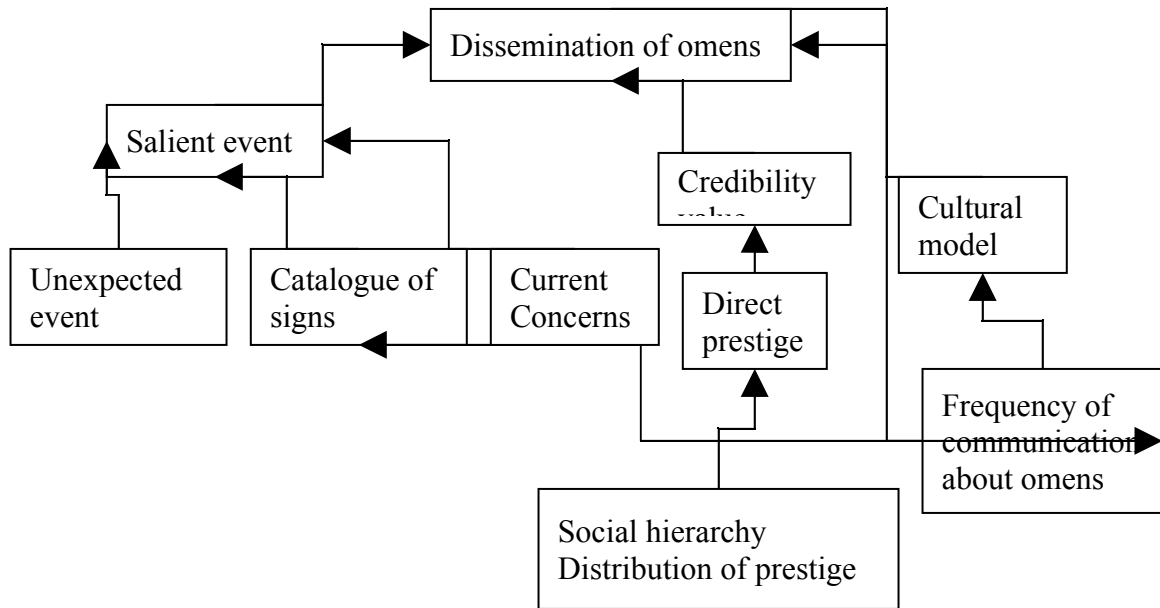


Figure 10.10. Dissemination of omens

We can see that there are plenty of opportunities for a salient event to become an omen. Unexpected events probably never cease to occur, and people never cease to have concerns. The catalogues of signs may disappear, but this category was not found to be the most important for the Romans. We also see that the credibility value of omens was high because prodigies were treated officially. Omens were not considered, as they would become, futile superstition, but a central part of official policy. Furthermore omens were often the subject of communication. This would have given the effect of constantly sensitizing the Romans to the possibility of the gods giving a sign. This is what we called a “cultural prime” in chapter 5. While the number of salient events is probably constant the last two factors are probably important factors. The wide dissemination is self reinforcing: the more people talk about omens, the more they are sensitized to them and the more they identify omens, which in turn makes them talk more about it. The only thing that can stop this is if the credibility value is low. Today, people very rarely bother to tell that a black cat ran across the road, because the credibility value of the omen is so low. The same would have been the case for the Romans. As long as they believed that omens gave credible knowledge about the future they would keep talking about it. In the period under

consideration here the cultural model for omens is legitimized by the state in their treatment of prodigies.

Chapter 11 - Conclusion

In the introduction it was stated that the purpose of this dissertation was to answer the basic question “why did divination pervade Roman culture through centuries”. In order to do this, it was argued that it was necessary to build a general theoretical model of divination as a cultural phenomenon. Therefore the dissertation was divided into two primary halves. The first part, consisting of chapters 1-6, was aimed at building a general theoretical model of divination. The second part, consisting of chapters 7-10, was aimed at an empirical analysis of the Roman sources in light of this theoretical model of divination.

Chapter 1 investigated the prehistory and history of the Latin word *divinatio* from which divination is derived. It showed that the word is ultimately derived from an Indo-European root. It seems originally to have meant something like “making something clear”. This suggestion is new compared to prior etymologies of divination, which have based the understanding of the term on something involving gods. The alternative etymology is argued to provide a more coherent account for the use of the term in historical times, most notably in the criminal process where nothing godly is involved. It was not until Cicero’s *De divinatione* that the word came to be used as a general term describing what we today would call divination. It was further shown that the work of Cicero has had a lasting effect until modern times on how divination as a general phenomenon has been conceptualized. According to Cicero two basic types of divination exists: natural and artificial. This forms the basis of his typology and analysis of divination. It is based on an ancient stoic conception of the gods and the soul. An analysis of key modern lexicon entries on the general conceptualization of divination revealed that Cicero’s ancient stoic model was implicitly and explicitly still forming the basis of how divination was conceptualized. It was argued that this conceptualization is not necessarily helpful in scientific work, since it is based on a stoic ontology involving souls and gods. Such entities are not consistent with a modern scientific worldview.

Chapter 2 surveyed modern theories of divination, something that has not been attempted on an interdisciplinary level before. It was argued that modern reflection on divination as a general cultural phenomenon started in the end of the 19th century. It was stimulated by the colonial

encounter of people using it to a great extent. The basic problem facing scholars was why the primitives differed from the modern Europeans. The first explanations were formulated in evolutionist terms, but two distinctive threads seem to run through the research history. The first thread, the British, explained the difference in terms of a deficiency among the primitive to make inductive generalizations. This reflects the British empiricist philosophical tradition. In France the rationalist tradition resulted in a concern for collective representations and classification. With the work of Evans-Pritchard something new happened. He combined elements of these two traditions with a new current that emphasized extended fieldwork. This produced the landmark study *Witchcraft, Oracles, and Magic among the Azande*. Subsequent research has to a great extent been an elaboration on these early foundations. Although many important theoretical explanations have been offered, it was argued that two important points are lacking in previous research. First, there is no sufficient account of the cognitive basis for divination. Second, there is no account of the dissemination and historical dynamics of divination.

In chapter 3, the outline of a theoretical model of divination that would make up for the deficiencies in the previous research, was sketched. As a starting point a stipulative definition of divination was offered: “Divination is the acquisition of credible knowledge about matters not otherwise available to normal human perception or reasoning”. From the point of view of cognitive science, the core function of divination is a representation of a communicative relation with a counterintuitive agent, who has access to matters not available to normal human perception or reasoning. There are two basic ways this relation can lead to acquisition of knowledge by the human communicant. Either the divination is represented as a response or an unsolicited address to the human communicant from the counterintuitive agent. By looking at the basic cognitive process behind divination it was possible to provide a theoretic platform that could integrate ritual divination and omens. This has not been attempted since the breakdown of evolutionist anthropology. The basic character of divination as a communicative interaction with a counterintuitive agent forms the basis of the distinction between two types of divination, which were termed impetrative and oblativ divination. This typology escapes the Ciceronian identification of natural and artificial divination as the basic distinction of divination. Expanding on this typology, divination in general was argued to be composed of three primary elements that

are necessary to facilitate the cognitive representation of a communicative interaction with a counterintuitive agent: motivation, sign production and interpretation.

In the case of impetrative divination there are five empirical components: the motivation of the questioner, the operator, the technique he performs, the sign produced by the technique and the interpreter of this sign. In oblativ divination only sign production differs, since in this case a salient event is the empirical component. These components are related to each other in ways that were treated in the subsequent chapters.

Chapter 4 investigated the different elements of impetrative divination. It was argued that motivation is ultimately derived from emotion, which in turn represents the central mechanism in an organism's homeostatic system. Cognitive experiments have demonstrated the existence of an idealized life model in humans, which guides expectations about life and therefore functions as a set-point for motivation. This model has universally common elements in addition to some culturally specific ones. In cases where one's life deviates from the life model, it will provoke a negative emotion which motivates correctional action. Divination is an example of such correctional action. This was supported by an analysis of actual motivations for divination in four different cultures. In general motivation for divination can be described as a perception of actual or potential misfortune or lack of fortune.

The sign production consists of an operator performing a technique. In order to be successful the action has to be ritualized. Ritualized action is according to contemporary cognitive theories of ritual distinguished by a displacement of intentionality. This displacement is characterized by the fact that the human cognitive system will tend to repair gaps in action sequences, such as the lack of a clear performing agent. In this case, the action is repaired by the replacement of the original incomplete intention with that of a counterintuitive agent. In divination the effect of ritualization is that the counterintuitive agent and not the operator comes to be represented as the author of the sign produced by the divination technique. Counterintuitive agents are cognitively represented without the epistemic restrictions that characterize normal humans; they have perfect access to reality. This is why the divinatory sign is considered able to give information about matters not otherwise available to human perception or reason. By using an experimental method from cognitive science the thesis was investigated. The results of this experiment showed that ritualized action was considered significantly more credible than other comparable types of

action. It was argued that these results supported the overall thesis. Based on insights from cognitive science in how humans categorize the world into psychological, biological and physical domains, it was further hypothesized that these ontological domains had a consequence for the ratings of credibility. This was similarly tested with another experiment which demonstrated that the ontological domain employed in divination had an effect on the evaluation of credibility. Forms of divination employing humans as sign producers were more credible than those employing animals. These in turn were more credible than those employing natural objects

The interpretation part of impetrative divination starts from the identification of the divinatory sign as intentional. It was argued that the popular theory in the cognitive science of religion about hyperactive agency detection (HADD) was not adequate to account for this identification. Instead it was argued that some sort of hyperactive intentionality detection (HIDD) must be responsible for the identification of a counterintuitive agent as the ultimate author of the sign. The interpretation proceeds with the identification of the outcome as, not merely an intentional act, but also a communicative sign. This is facilitated by the question posed in the beginning. The concrete interpretation of the content follows the same principles as normal communication and it was argued that Dan Sperber's and Deirdre Wilson's cognitive communication theory, relevance theory, provided an adequate description of the process of interpretation in divination. Still, important differences between divinatory communication and normal communication were found. Most notably, the relation between the sign and its reference was found to be less "coded" in divination than in normal communication. Further it was argued that divination was restricted in its utility. Whereas normal language can be used to express anything, divination practices are usually restricted in their form and subject. Three types of form restriction exist: binary, discrete and rich. Two further types of subject restriction was found: either the divination practice is restrained, because it can be used only for a limited range of subjects, or it is open and can therefore be used for many types of subjects. Another part of interpretation has the function of assessing the credibility of the information produced. Here it was found that a cognitive bias towards attaching greater credibility to prestigious individuals existed. A review of cognitive and social psychological studies revealed that this prestige bias was the most powerful factor in assigning credibility value to testimony in general. This kind of prestige was called direct prestige. Since divination cognitively stimulates a representation of a counterintuitive agent as

the ultimate communicator it was argued that the prestige effect should also be detectable with regard to counterintuitive agents. A psychological experiment indicated that the prestige of the counterintuitive agent, seen as the ultimate agent in the divination practice, did influence judgments of which divination practice was considered most credible. High prestige counterintuitive agents were judged to be more credible than low prestige counterintuitive agents, when all else was equal. This kind of prestige was termed indirect prestige.

Chapter 5 dealt with oblativ divination. The main difference from impetrative divination was the sign production. The basic problem in oblativ divination is to pick out salient events in the daily stream of events. In principle any event could become salient, but three primary ways of identifying such events were distinguished. The first type relied on the event becoming salient in light of the current concerns of the perceiver. The second type relied on a pre-established catalogue of signs. It was argued that they would often be encoded in writing. The third type relied on the event itself being so unexpected that it demanded extra explanation. These three types were found in different cultures from around the world. Based on a psychological experiment, it was possible to say that priming with stories that stipulate the ability of a counterintuitive agent to send signs, greatly stimulates the identification of an event as an omen. It was argued that this priming can be constant if a cultural model stipulating this ability of counterintuitive agents to send communicative signs is often communicated. This constantly sensitizes people to the possibility of communication from a counterintuitive agent and was taken to be a contributing factor in picking out an event as an omen.

In Chapter 6, first an overview and summary of the cognitive processes involved in the two types of divination was provided. Whereas the previous two chapters dealt with the cognitive basis of divination, and thereby made up for the first lack found in previous research, this chapter tried to make up for the second lack, namely a framework for dealing with the dissemination and historical dynamics of divination. It was argued that the cultural epidemiology originally proposed by Dan Sperber is a viable framework for understanding dissemination of cultural phenomena such as divination. A few modifications to the approach were, however, suggested. The benefit of the epidemiological approach is that it is multi-factorial and that it allows us to integrate cognitive factors with social and ecological ones. In epidemiology a standard tool for analyzing dissemination of disease is the web of causation. This technique was adapted to

investigate the dissemination of divination by integrating the factors found in the previous chapters. Such an application of actual epidemiological methods has not been attempted before in the cognitive science of religion. These factors form the basis of the empirical investigation in chapters 9 and 10.

Chapter 7 marks the beginning of the empirical analysis. In this chapter we saw how previous research had explained Roman divination. It was argued that four general theses seem to go through the research history. The historical thesis explained Roman divination based on historical contingencies. It was argued that this explanation did not qualify as an explanation. The formalist thesis stipulated that Roman divination was a mere formality which the Romans did not take seriously and could be dispensed with at leisure. A close reading of the sources, however, revealed that the Romans did indeed take divination very seriously. The fear thesis explained Roman divination by recourse to fear in one way or the other. Nevertheless a systematic examination of the sources could not support the conclusions of this thesis. The functional thesis explained the continuing existence of Roman divination by its functionality. The problem with this thesis was that it was difficult to test. The only case where we could test it, we found that it did not adequately account for the results. It was therefore concluded that previous research in Roman divination had not been especially successful in its attempts to explain why divination pervaded Roman culture through centuries.

Chapter 8 reviewed the character of the most important sources we have for divination in Roman culture.

Chapter 9 contained the analysis of impetrative divination. In this chapter all known impetrative divination practices were analyzed with respect to the factors stipulated in chapter 6. It was found that divination in all cases was motivated by the perception of actual or potential misfortune. All practices employed ritualized action. We also found that the cases where divination was seen as manipulation were exactly cases in which the divination practice was not performed with ritualized action. Further we saw, contrary to the results we found in Chapter 4, that the categories employed in the divination technique seemed to have no effect on how credible it was deemed. It might therefore be that this factor is either specific to modern western culture or just too insignificant to have an effect in the real world. We found that the direct prestige had a very high correlation with the credibility value of the divination practice, as was

stipulated. Even within individual divination practices, differences in credibility value correlated with the difference in direct prestige of the operator or interpreter. The indirect prestige largely followed the direct prestige, but in cases where the direct prestige was the same, the indirect prestige determined which practice had higher credibility value. We also found that Roman divination had all possible different combinations of utility. The utility characteristics could account for why a given divination practice was adopted in a given context. We also found that all practices were explicitly conceptualized as communications with a counterintuitive agent.

All predictions of the theoretical model, with the exception of one, were seen to be in accordance with expectations based on the theoretical model developed in the first part. It was further shown how this model might throw some light on certain aspects of the historical dynamics of the dissemination and survival of individual divination practices. This was done by recourse to changes in only two factors: Credibility value and utility.

Finally, it was argued that four simple equations, specifying the relations between the factors stipulated to be of importance in the theoretical model, could explain the dissemination and survival of individual divination practices. First of all, we found that the credibility value of a divination practice depended on ritualization, direct prestige and indirect prestige in descending order of importance. The probability of dissemination of a practice was found to be inversely proportional with the credibility value. This has to do with a correlation between credibility value and actual value: divination practices with a high credibility value could only be afforded by very few and vice versa. The probability that a divination practice would be adopted was found to be predicted by the credibility value plus the utility of the practice in a context times the frequency with which that context arises. If a divination practice is very useful in a given context and that context suddenly arises more often the prediction is that the divination practice will become more widespread all else being equal. The last equation stipulates that the probability that a divination practice will survive depends on the credibility value plus the dissemination. A divination practice may therefore survive through centuries even when it is not widely disseminated if it has a high credibility value. Conversely if it has a low credibility value it may likewise survive if it is widely disseminated. If, however, it has a low credibility value and is not widely disseminated it is not probable that it will survive. The predictions of these four equations were in accordance with what we could find in the sources for Roman divination practices. The

practices that did not survive were exactly those with low credibility value and low dissemination. It is, to my knowledge, the first time that a model based on insights from cognitive science has been used to interpret historical material to that amount of detail. Still, the sources are very fragmentary and we have only considered 13 different practices.

Chapter 10 dealt with oblativ divination. It showed that omens in general were conceptualized according to one basic cultural model. This model specified the omen as a sign from the gods about future success or misfortune. All omen words implicated this basic model although they each had different nuances. Based on an analysis of the frequency with which omen words occurred in republican Latin texts, it was argued that the cultural model was frequently communicated and very widespread in Roman culture. This could have produced a “cultural priming” effect like the real priming effect referred to in the experiment in chapter 5. Since an omen depends on a salient event to be identified, we investigated how this took place. We found evidence of all three ways of identifying omens. The omen type typically denoted by the Latin term *omen* was found to be largely of the first type, where an event achieves salience based on a relation to the current concerns of the agent. Some *omina* were found to belong to the second type, the catalogue type. They could be traced to the augural discipline and were therefore ultimately based on a written record. Another type represented in this group was some of the *prodigia*. They had likewise been recorded in writing. The third type, the unexpected type, accounted for the *prodigia*. The more unexpected or attention demanding they were the more likely they were to be identified as *prodigia*. Based on the insights derived from the theoretical model it was also possible to distinguish one single principle that would account for which prodigies became accepted and rejected. This is an advance on earlier research, which has stipulated two principles and even for these two principles exceptions could be found. Further, we found evidence that the same direct prestige effect, as we found in impetrative divination, was detectable for oblativ divination. Omens interpreted by prestigious persons were more credible than those interpreted by less prestigious persons.

We can therefore conclude that the theoretical model of divination proposed here provides a possible explanation for why divination pervaded Roman culture through centuries. At the same time it provides a couple of advantages compared to previous research.

First, it provides a more coherent explanation of aspects that can be derived from the extant sources. The novel account presented here provides an integrated explanation of the formalism, apparent manipulation, the role of fear and the functionality of divination. Ritual is characterized by rigidly prescribed and apparently inconsequential actions that can appear formal, but the integration of cognitive insights allowed us to see that the purpose of these characteristics was to facilitate the representation of a counterintuitive agent as the ultimate communicator of the sign. From this identification also followed that what has previously been identified as evidence of manipulation were exactly a lack proper ritualization. We saw that fear is an important motivating factor, but that it is constant. In a way it could also be argued that the account provided here is functional, since the function of divination is to provide answers. That is probably accurate and the credibility value is a good measure of this ability. It will always be possible to say something about a sign, but if the credibility value is zero or too low, it could be said that an answer was not provided. Then the divination practice would not be fulfilling its function and would therefore not have great probability of being used and hence disappear. Conversely, as long as it fulfills its function it will continue to be used. This, however, is another kind of function than has previously been suggested.

Second, whereas earlier explanations have been monocausal, the model presented here is multicausal. We have seen how such diverse factors as the utility of the divination practice, ritualization, prestige of interpreter and prestige of the gods associated with divination all combine in explaining the dissemination and historical dynamics of divination. It is also worthwhile to remember that the identification of which factors were important depended on the elucidation of the cognitive processes forming the basis of divination.

Third, while earlier functional or structural explanations have been unable to account for historical dynamics, we saw how the proposed theoretical model could aid us in understanding historical changes. It could throw new light on the historical developments such as the rise of the importance of the *haruspices* in the course of the 1st century BCE, the widespread adoption of sortition in the 6th and 5th centuries BCE. It can possibly also explain the ultimate decline and disappearance of divination in the Roman Empire with the rise of Christianity: The traditional Roman gods were derogated with the assumption of Christianity. The Christian god, not Jupiter, was now at the top of the prestige hierarchy. This lowered the indirect prestige associated with

divination. At the same time the operators and interpreters of divination suffered a similar lack of prestige, because prestige came to be distributed according to the hierarchy of the Christian church and not according to the hierarchy of offices in the Roman Empire. Given equation 1 in Chapter 9 the credibility value decreases and given equation 4, the prediction is that the probability of survival decreases. Although more work needs to be done to substantiate this claim, it points to a possible answer.

In this light it can be seen that the application of cognitive theory to historical material has been fruitful for the historical study. The application of cognitive science allowed us a number of crucial insights. First of all the studies of cognitive psychologists demonstrating the existence of a cognitive model of the ideal life, allowed us to understand what motivates the use of divination. The way that the cognitive system represents action provided the key to understanding why ritualized action seems so crucial for impetrative divination. In oblique divination we saw how the effect of priming a subject with a story of the possibility of a counterintuitive agent communicating through a sign, was important for perceiving an event as an omen. In general the credibility of an interpretation of divination seemed to depend on a cognitive bias towards conceptualizing prestigious agents as more credible than less prestigious. It has also been fruitful from the point of view of cognitive science. We saw how the framing of the question of representation of divination stimulated new questions to be researched in cognitive psychological experiments. On the other hand, the application has allowed us to see that not all things found in psychological experiments turn out to be important in real life since the categories employed in divination turned out to be insignificant. These are all insights and experiences that have been made possible by the experiment that this dissertation is.

The theoretical model offered here may also explain dissemination and survival of divination in other societies as well, since it is intended as a general model. Nevertheless, only further research will be able to say whether it is accurate or not. The model may also be adapted to analyze knowledge producing practices in general, such as science, gossip, news, commercials etc. This could be done by taking out the ritualization parameter and possibly adding other factors. This would allow us to analyze how certain information is assigned differential

credibility value in different societies. That could in turn help us explore the differences between the particular ideas of different cultures.

More generally, it is possible to further develop this approach to account for other cultural phenomena. The focus on risk factors and web of causation is a helpful heuristic that may serve to finally integrate cognitive, ecological and social factors as Dan Sperber originally proposed. This would have to be done with a focus on specific phenomena in specific cultures, which in turn could also stimulate new questions for cognitive experiments.

In general I hope to have shown that a cognitive historiography is at least feasible, but also that it may even be helpful. It can throw new light on both history and cognitive science. On the one hand we saw that traditional historical problems such as the distribution of prodigies, or the apparent formality of divination ritual could be explained by integrating cognitive explanations. On the other hand we also saw that the real life importance of cognitive factors such as direct and indirect prestige, ritualization and category employed in divination, could not be deduced from the isolated cognitive experiments. Only in the investigation of concrete practices could we see that ritualization was a *sine qua non*, direct prestige the most important factor, indirect prestige only vaguely important, and finally the category employed in divination as altogether insignificant. Based on the cognitive research, they all seemed to be equally important. Thus the results of the cognitive historiography proposed here may aid both history and cognitive science. The experiment has been to combine the *in vitro* methods of cognitive science with *in vivo* methods of history to provide a synergic effect that can improve our knowledge of the phenomenon of divination.

Appendix 1

The Kurabi among the Mwambesi in Africa

Among the Mwambesi in Africa they have a kurabi who, they say, can predict the future by throwing pebbles to the floor. From the configuration of pebbles he throws to the floor he can tell what will happen in the future. Kalanga, a Mwambesi, had planned to go to a nearby city tomorrow. The road to the city is sometimes hit by raiders, and some have even been killed. Kalanga doesn't know when they will be there, and he has to go to the city to sell his produce soon. He has heard that the kurabi can foretell the future, so he has come to find out when he should go to the city. Kalanga pays the diviner a sizeable amount of money. The kurabi, who has no knowledge of the whereabouts of the pirates,

- 1) Takes the pebbles in his right hand, puts them in a pattern on the floor...
- 2) Takes the pebbles in his right hand, beats his hands against each other 5 times, and throws them to the floor...
- 3) The kurabi had just finished putting the stones into a pattern when he came...
- 4) The kurabi's hand bumps into a chair and he drops the pebbles to the floor...

The kurabi looks at the pebbles and says that it is safe to travel today.

How likely do you find it that Kalanga will embark on this trip today?

1(very unlikely) - 5(very likely)

How likely do you find it that Kalanga feels he got good advice?

1(very unlikely) - 5(very likely)

The dendrologer in Toronto

In Toronto they have a dendrologer who can determine whether a choice is good or bad by the use of two sticks. Eva, who has just finished high school, doesn't know whether to study chemistry or medicine. He has to decide today, and he knows that the choice will influence the rest of his life. He likes both, but each in a different way. A close friend of his told him that the dendrologer could help him make his choice. So Eva goes to the dendrologer, who has never seen Eva before, and pays a significant amount of money to tell him whether he should study chemistry.

- 1) The dendrologer puts the two sticks into a V shape...
- 2) The dendrologer places the sticks beside of each other in an upright position and lets them fall. They end up in a V shape...
- 3) The dendrologer looks at the sticks lying at the table in a V shape...

- 4) The dendrologer steps on the sticks lying on the floor on the way to his desk to get a pen. They fall into a V shape...

The dendrologer looks at the sticks and says Eva should study chemistry.

How likely do you find it that Eva will decide to study chemistry?

1(very unlikely) -5(very likely)

How likely do you find it that Eva feels she got good advice?

1(very unlikely) -5(very likely)

The banban among the Katchikvi in Vietnam

Among the Katchikvi on the Vietnamese highland they have a banban, who can tell you the solution to your problem by looking at the footsteps of the mountain rabbit. Okchiva, who is a native Katchik, has a mother who has been very ill for along time and it gets worse every day. Okchiva has heard of the banban and goes there although it is far up in the hills. Okchiva pays a significant amount to the banban in order to know what to do.

- 1) The banban goes to a clearing in the forest draws a square, and takes a stuffed paw of a mountain rabbit and makes some footsteps in the square...
- 2) The banban goes to a clearing in the forest draws a square, waits until the next day and goes to the square where the mountain rabbit has made footsteps...
- 3) The banban goes to a clearing in the forest and discovers a previously draw square in which there already are footprints from the mountain rabbit...
- 4) The banban goes to a clearing in the forest draws a square, when the banban is done and gets a better look at the square it can be seen that there already were footprints from the mountain rabbit there...

The banban looks at the tracks and says that Okchiva should get some kalikatvi. This is a kind of medicine, which is very expensive. The medicine has been known to cure people in some cases, but not in others. The price of the kalikatvi would mean that Okchiva's entire family would have to starve for months.

How likely do you find it that Okchiva buys the kalikatvi to his mother?

1(very unlikely) -5(very likely)

How likely do you find it that Okchiva feels she got good advice?

1(very unlikely) -5(very likely)

Appendix 2

The Guzul

In Central Australia lives a people called the Guzul. They have different specialists who they often use to determine hidden causes. They are all considered very reliable and have a good reputation.

- 1) The wulul communicates with Ulu, a god, through ecstatic possession
- 2) The yizia communicates with Yayo, a god, by reading the flight of the birds
- 3) The oto communicates with Ila, a god, by listening to the sound of the wind in a cave

A Guzul man is trying to find out why he has been sick for months, and what to do to get well. Which of the specialists is he most likely to consult?

Appendix 3

The Kalungi

The Kalungi in West Africa have different specialists, whom they often employ to reveal hidden causes of people's misfortune. They are all considered reliable and have a good reputation.

- 1) A parawa specialist communicates with Para, a god whom is sometimes given small offerings of dried bread.
- 2) An umbuwu specialist communicates with Umbo, a god whom is sometimes given elaborate feasts of the finest food.
- 3) An olowo specialist communicates with Olo, a god whom is offered a meal daily.

A Kalungi man is trying to find out why his wife is barren, and what he has to do to get a child. Among the Kalungi children are very important, and barrenness is considered a great misfortune. Which of the specialists is it most probable he will consult?

Appendix 4

Roman Corpus	Words Total	Omen		Prodigium		Portentum		Monstrum		Auspicium		Augurium		Dirum		Obscenus	
		Max.*	Min.*	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Augustus	2619	0	0	0	0	0	0	0	0	3.82	3.82	0	0	0	0	0	0
Caesar	83674	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Catullus	12857	0.78	0.78	0	0	0	0	3.11	1.56	0.78	0.78	0	0	0.78	0.78	0.78	0
Cicero	760420	0.41	0.41	0.21	0.18	0.30	0	0.29	0.16	1.12	1.12	0.11	0.07	0.01	0.01	0.21	0.04
Horace	30754	0.98	0.98	0	0	0.33	0	1.95	1.30	0.65	0.65	0	0	1.95	1.63	0	0
Livy	159131	0.82	0.82	1.89	1.82	0.38	0	0.06	0	4.59	4.59	0.82	0.82	0.19	0.13	0	0
Lucretius	49039	0	0	0	0	1.02	0	0.41	0	0	0	0	0	0.41	0.41	0	0
Ovid	140275	2.14	2.14	0.29	0.29	0.07	0	2.35	1.28	0.50	0.50	0.21	0.21	2.64	2.14	1.00	0.50
Plautus	165242	0.54	0.54	0.12	0.06	0.12	0	0.42	0.06	0.85	0.85	0.12	0.12	0	0	0	0
Sallust	31907	0	0	0.63	0.63	0.31	0	0	0	0	0	0	0	0	0	0	0
Terence	50684	0.20	0.20	0	0	0	0	1.38	1.18	0	0	0	0	0	0	0	0

Greek Corpus	Words Total	Teras		Phantasma		Sumbolon		Phasma		Sema	
		Max.*	Min.*	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Aeschines	44356	0.23	0.23	0	0	0	0	0	0	0	0
Aeschylus	40104	2.24	2.24	0.25	0.25	0.75	0.25	0.75	0.75	2.24	2.24
Andocides	17424	0	0	0	0	0.57	0	0	0	0	0
Antiphon	18159	0	0	0	0	0.55	0	0	0	0	0
Apollonius Rhodius	38814	2.83	2.83	0	0	0	0	0	0	3.09	3.09
Aristophanes	94797	0.63	0.63	0	0	1.17	0.27	0.13	0.13	0	0
Aristotle	303262	0	0	0	0	0.42	0	0	0	0.32	0.32
Bacchylides	4697	4.26	4.26	0.10	0.10	0.49	0.26	0	0	0	0
Callimachus	9538	2.10	2.10	0	0	0	0	0	0	4.26	4.26
Demades	2006	0	0	0	0	1.05	0	0	0	5.24	5.24
Demosthenes	294302	0	0	0	0	0	0	0	0	0	0
Dinarchus	10659	0	0	0	0	0.41	0.14	0	0	0.03	0.03
Diodorus	191882	0	0	0	0	0	0	0	0	0	0
Euclid	152651	0	0	0.05	0.05	0.10	0.05	0	0	0.05	0.05
Euripides	147583	0.88	0.88	0	0	0	0	1.02	1.02	0	0
Herodotus	184921	1.14	1.03	0.20	0.20	0.47	0.07	0.54	0.54	0.54	0.54
Hesiod	16193	0.62	0.62	0	0	0.11	0.11	0	0	0.65	0.65
Homer	199047	0.95	0.95	0	0	0	0	0	0	2.47	2.47
Homeric Hymns	16082	0.62	0.62	0	0	0	0	0	0	2.66	2.66
Hyperides	11809	0	0	0	0	1.24	0	0	0	3.11	3.11
Isaeus	33315	0	0	0	0	0	0	0	0	0	0
Isocrates	111925	0.09	0.09	0	0	0	0	0	0	0.30	0.30
Lycurgus	10914	0	0	0	0	0.09	0	0	0	0	0
Lysias	56314	0	0	0	0	0	0	0	0	0	0
Old Oligarch	3195	0	0	0	0	0.53	0	0	0	0	0
Pindar	21258	1.88	1.88	0	0	0	0	0.47	0.47	0	0
Plato	561388	0.23	0.23	0	0	0.47	0	0.11	0.11	1.88	1.88
Polybius	311345	0.06	0.06	0.55	0.55	0.09	0	0	0	0.09	0.09
Pseudo- Apollodorus	35087	0	0	0	0	0.10	0	0.97	0.97	0	0
Sophocles	61714	0.97	0.97	0	0	0.29	0	0	0	0.29	0.29

Theocritus	21261	1.88	1.88	0	0	0.32	0	0	0	0.49	0.49
Theophrastus	6716	1.49	1.49	0.47	0.47	0	0	0	0	2.35	2.35
Thucydides	150116	0	0	0	0	1.49	0	0	0	0	0
Xenophon	312275	0.03	0.03	0	0	0	0	0	0	0.53	0.53

* Frequency per 10000 words

The specific texts by the individual authors in the corpus can be seen at:

http://www.perseus.tufts.edu/cache/perscoll_Greco-Roman.html#text1 (March 19 2007)

Appendix 5

Prodigies between 218 and 44 BCE

In this appendix the prodigies in the sources are recorded as paraphrases with specification of year and place. There are cases of doubt as to whether it is a prodigy or an omen, or whether a prodigy should be counted as one or two. These are however not very frequent and should not significantly alter the overall number of prodigies. Such cases are mentioned in the notes.

218	Liv.21.62.1-6, V.Max.1.6.5	
6 month old infant of freeborn cried “Triumph” in the Forum Holitorium		Roma
Cow crawls to the third floor and jumps out Forum Boarium		Roma
Ship seen in the sky		
Temple of Spes struck by lightning Forum Holitorium		Roma
Slain victim moved by itself		Lanuvium
Raven flew into the temple of Juno and sat on her couch		Lanuvium
Apparitions of men dressed in white seen from afar		Amiternum
Oracle lots shrank		Caere
Wolf stole the sword of a guard		Gallia
Shower of stones		Picenum

Note: The omens mentioned in Liv.21.46.1-3 are included by Rasmussen (Rasmussen 2003: 61). They are however more likely omens to Scipio since they occur in his camp. They have therefore not been included

217	Liv.22.1.8-13, V.Max.1.6.5, Oros.4.15.1	
Javelins of soldiers had taken fire		Sicilia
Truncheon had taken fire		Sardinia
Fires blazed at the shore		Sardinia
Two shields sweated blood		Sardinia
Soldiers struck by lightning		Sardinia
Sun seemed smaller		Sardinia
Glowing stones had fallen from the sky		Praeneste
Sun seemed to fight the moon		Arpi
Two moons seen in the daytime		Capena
Blood mixed with water in the spring of Hercules		Caere
Bloody ears of corn while reaping		Antium
Great fissure in the sky bright light shone through the crack		Falerii
Lots had shrunk and one fallen out reading “Mavors brandishes his spear”		Falerii
Statue of Mars sweats		Rome
Sky on fire		Capua

Moon fell down	Capua
Goats got woolly fleeces	
Hen turned into a cock	
Cock turned into a hen	

Note: Rasmussen also counts the *omina* towards Flaminius as omens, but they are not mentioned in the list with the others. They don't either seem to have been related and treated as *prodigia*. They are therefore not likely to have been taken as *prodigia* (Rasmussen 2003: 63).

216	Liv.22.36.7-9	
Rain of stones on the Aventine		Roma
Rain of stones		Aricia
Statues sweated blood		in Sabinis
Blood flowed from a hot spring several times		
Several persons were killed by lightning on the Via Fornicate		

Note: MacBain's reference to Liv.per.22 as a source is not of much help (MacBain 1982: 88). Livy 22.57.2-6 relates a story of the vestal virgins Opimia and Floronia's breach of their vow of chastity. This is taken as a prodigy by Rasmussen (Rasmussen 2003: 64), but is not counted here. The procedure with consultation of the sibylline books resembles that of prodigies. That in itself is not an argument for it being a prodigy. The books could be used in any unusual situation. The occurrence also occurs outside the primary list of prodigies, which also suggests that it was not in that original list.

215	Liv.23.31.15	
The sea appeared as if on fire		
A cow gives birth to a foal		Sinuessa
Statue of Juno Sospita sweated blood		Lanuvium
Rain of stones around the temple of Juno Sospita		Lanuvium

214	Liv.24.10.6-24.11.1	
Ravens built nests in the temple of Juno Sospita		Lanuvium
Palm tree bursts into flames		Apulia
Blood in the sea at the mouth of the river Minucius		Mantua
Rain of chalk		Cales
Rain of blood in the Forum Boarium		Roma
Subterranean springs flow with a strong current in the Vicus Insteius		Roma
<i>Atrium Publicum</i> struck by lightning on the Capitol		Roma
Temple struck by lightning on the Campus Volcanus		
Temple of Vacuna struck by lightning		in Sabinis

Public road struck by lightning*	in Sabinis
Walls and a gate struck by lightning*	Gabii
The spears of Mars moved by themselves	Praeneste
Ox spoke	Sicilia
A child shouts <i>Io triumphe</i> from the womb of its mother	Marrucini
Woman turned into a man	Spoletum
Alter and people in white robes seen in the sky	Hadria
Swarm of bees seen in the Forum	Roma
Vision of legions seen on the Janiculum	Roma

Note: *Rasmussen counts these as one

213 Liv.24.44.7-9

Walls and gates struck by lightning	Caieta*
Temple of Jupiter struck by lightning	Aricia
Ships that did not exist were seen**	Tarracina
Sound of clashing arms in temple of Jupiter Vicilinus**	Compsa
River ran with blood**	Amiternum

Note: *there is a Lacuna in the manuscript. Caieta was proposed by Luterbacher. ** These are described as unreal (*Et alia ludibria oculorum auriumque credita pro veris*). It is difficult to see whether this is an explicit evaluation of Livy, a rejection of them as prodigies or as carrying no evaluation but merely describing them as illusions. It is not uncommon for Livy to speak of prodigies in a derogatory way so the first option is not improbable. The second possibility has never been proposed by any commentators, and probably with good reason. If they were prodigies not accepted it is difficult to explain why similar types of prodigies had been accepted earlier with the exception of the first, and why prodigies from the same areas were accepted on other occasions. We would also expect a different wording such as *non suscepta* instead of *non credita*. The last possibility is also quite probable. I have therefore included them as normal prodigies.

212 Liv.25.7.7-9

Storms*	
Rain of stones for two days	Mons
Albanus	
Temples struck by lightning	Capitol
Two guards killed by lightning	Suessula
Walls and towers struck by lightning	Cumae
Stone seemed to fly	Reate
Sun seemed bloodier and redder than usual	

Note: *this is possibly not a separate prodigy, but a description of the following (sic. Rasmussen 2003: 66).

211	Liv.26.23.4-6	
Statue of Victory at the top of the temple of Concordia struck by lightning		Roma
Walls and gates struck by lightning		Anagnia
Walls and gates struck by lightning		Fregalla
Stems of blood flowed for a whole day on the Forum Subertanum		Roma
Rain of stones		Eretium
A mule gives birth		Reate
210	Liv.27.4.11-15	
Lamb born with filled utters		Tusculum
Temple of Jupiter struck by lightning		Tusculum
Lightning struck the ground which kept burning		Anagnia
Birds abandoned their nests in the grove of Diana		Anagnia
Big snakes leapt from the water		Tarracina
Pig born with the face of a man		Tarracina
Four statues sweated blood in the grove of Feronia		Capena
209	Liv.27.4.11	
Statue of Jupiter struck by lightning		Mons
Albanus		
Grove struck by lightning*		Ostia
City wall struck by lightning		Capua
Temple of Fortune struck by lightning		Capua
Wall and gate struck by lightning		Sinuessa
Waters flowed with blood		Alba
A figure falls from the head in to the hand of statue of Fors Fortuna Roma		
Ox spoke		Privernum
Vulture flies in to a shop in the forum		Privernum
Hermaphrodite born		Sinuessa
Rain of milk		
Baby born with elephant head		

Note: * Loeb's edition and Rasmussen (Rasmussen 2003: 67) read basin (*lacus*) instead of grove (*lucus*). The manuscripts differ and three different possibilities appear *lacus*, *locus* and *lucus*. Given that we have no other prodigies involving *lacus* or *locus* (without qualification such as *pulicus*) that are struck by lightning, it seems most probable that we should read *lucus*, since lightning strikes in a grove (*lucus*) is a common prodigy as in Liv.27.37.1-15

208	Liv.27.23.1-4	
Temple of Fortuna struck by lightning		Capua
Temple of Mars struck by lightning		Capua
Graves were struck by lightning		Capua
Mice nibble at gold in the temple of Jupiter		Cumae
Swarm of bees in the forum		Casinum
Wall and gate struck by lightning*		Ostia
Vulture flew in to the temple of Jupiter		Caere
Blood flows in the sea		Volsinii

Note: Rasmussen counts this as two (Rasmussen 2003: 68)

207	Liv.27.37.1-15	
Rain of stones		Vei
Temple of Jupiter struck by lightning		Menturnae
Grove of Marica struck by lightning		Menturnae
Walls struck by lightning		Atella
Gate struck by lightning		Atella
Blood flowed in the gate		Menturnae
Wolf walk through the gate and mangles a guard		Capua
Rain of stones at the <i>armilustrium</i>		Roma
Hermaphrodite as big as a four year old was born		Frusinone

Note: There is also the incidence of lightning striking the temple of Juno Regina during an expiation. This is counted as a prodigy by Rasmussen (Rasmussen 2003: 68), but seems more to be an omen that something was wrong with the expiation. Therefore it is not counted here.

206	Liv.28.22.1-7, Dio.17.57-66	
Temple of Jupiter struck by lightning		Tarracina
Temple of Mater Matuta struck by lightning		Satricum
Two snakes crawled through the door to the temple of Jupiter		Satricum
Ears of grain appeared to be bloody		Antium
Pig with two heads was born		Caere
Androgynous lamb born		Caere
Two suns seen seen		Alba
Light appeared during the night		Fregellae
Ox spoke		Ager Romanus
Alter of Neptune sweated blood		Roma

Temple of Ceres struck by lightning	Roma
Temple of Salus struck by lightning	Roma
Temple of Quirinus struck by lightning	Roma

Note: That the fire in the temple of Vesta went out is taken as a prodigy by Rasmussen (Rasmussen 2003: 71), but it seems like a case of ritual neglect, which is different.

205 Liv.29.104-8
Frequent rain of stones

Note: The Mater Idaea is imported to Rome from Pessinus on account of a sibylline verse. It might have been done in response to a prodigy, but we do not know of any particular prodigy to which it was connected. Rasmussen has collapsed 2005 and 2004 into one, so she has 8 prodigies for this year.

204 Liv.29.14.	
Two suns seen	
Daylight in the middle of the night	
A meteor was seen move from the east to the west	
Gate is struck by lightning	Tarracina
Gate and wall struck by lightning*	Anagnia
Noise and a rumble was heard in the temple of Juno Sospita	Lanuvium

Note: Rasmussen counts this as two.

203 Liv.30.2.9-13	
Ravens ate from the gold on the Capitol	Roma
Mice nibble on a golden wreath	Antium
Capua covered by a swarm of locusts	Capua
Five-footed foal was born	Reate
Fire in the sky and then a meteor was seen	Anagnia
The sun expanded	Frusinone
The earth collapses into a cavity	Arpinum

Note: One of the consuls didn't find a head on the liver in his sacrifice. Rasmussen sees this as a prodigy (Rasmussen 2003: 72). This is a bad omen toward the consul not a prodigy toward the state.

202 Liv.30.38.8-10	
The disk of the sun diminishes	Cumae

The earth collapses into pits	Veliternum
The forum and surrounding shops struck by lightning	Aricia
Gates and wall struck by lightning*	Frusinone
Rain of stones	Palatin
Rain of stones*	Cumae

* Rasmussen counts this as two (Rasmussen 2003: 72)

201 Plin.*Nat.* 18.166

Grain grew on trees

200 Liv.31.12.5-10

The sky was on fire
 Sun was red in a cloudless sky
 Great noise heard at the temple of Juno Sospita in the night
 Birth of a hermaphrodite
 Sixteen year old hermaphrodite found
 Lamb with a pig's head was born
 Pig with a mans head was found
 Foal with five feet born

Lucania
 Privernum
 Lanuvium
 Sabini

 Frusinone
 Sinuessa
 Lucania

199 Liv.31.1.10-14

2 *portae* and *muri* struck by lightning*
 Temple of Jupiter struck by lightning
 Temple of Jupiter struck by lightning
 Temple of Apollo and Sancus struck by lightning
 Hair appeared in the temple of Hercules
 Foal born with five legs
 Three hens with three feet born
 Laurel leaves sprang forth from a ship (*navis longa*)

Suessa
 Formiae
 Ostia
 Velitrae
 Velitrae
 Bruttium
 Bruttium
 Macedonia

* Rasmussen counts this as three (Rasmussen 2003: 73)

198 Liv.32.9.2-4

Via Publica struck by lightning
 Forum struck by lightning
 Temple of Jupiter struck by lightning
 Temple of Hercules struck by lightning
 Walls and towers (*turres*) struck by lightning
 Temple of Alba stuck by lightning
 Sky was on fire
 The earth collapsed

Veii
 Lanuvium
 Lanuvium
 Ardea
 Capua
 Capua
 Arretium
 Velitrae

Sheep with two heads born
Pig with head of a man born

Suessa
Suessa

197 Liv.32.29.1-2
Temple of Volcanus struck by lightning
Temple of Summanus struck by lightning
Walls and gates struck by lightning*
Sky lit up in the night
Two headed lamb with five legs born
Two wolves entered the city
Wolf seen on the Capitol

Roma
Roma
Fregellae
Frusino
Aefula
Formiae
Roma

* Rasmussen counts this as two (Rasmussen 2003: 74)

196 Liv.33.26.7-9
P.Vilius a Roman equester was struck by lightning. Horse died
Temple of Ferona struck by lightning
Two spears burst into fire in the temple of Moneta
Wolf entered the forum

Capena
Roma

Note: See (Levene 1993: 82-83) on why the year 195 is missing in Livy

194 Liv.34.45.6-8
Drops of blood were seen on the Capitol and in the Comitium
Rain of soil
Head of Volcan burnt
Milk flows in the river Nar
Boys of respectable parents born without eyes and mouth
Boy born without hands and feet
Rain of stones

Roma
Roma
Roma
Arimini
Picenum
Hadria

193 Liv.34.55.1-5
Numerous earthquakes

Liv.35.9.3-5
Tiber flooded. Buildings collapsed*
Lighning struck the Porta Caelimontana. Walls struck by lightning*
Rain of stones
Rain of stones
Rain of stones
Swarm of bees in the forum and in the temple of Mars

Roma
Rome
Aricia
Lanuvium
Roma
Capua

* Rasmussen counts this as two (Rasmussen 2003: 75)

192 Liv.35.21.2-5, V.Max.1.6.5
She goat gave birth to six kids at once Picenum
Boy born with one hand Arretium
Rain of soil Amiternum
Gates and walls struck by lightning Formiae
One of the consul's oxen said "*Roma cave tibi*" (Rome beware)

191 Liv.36.37.2-6
Two cows crawled up the stairs to the roof of a building Roma
Rain of stones Amiternum
Rain of stones Terracina
Temple of Jupiter struck by lightning Menturnae
Shops around the forum struck by lightning Menturnae
Two ships burnt after being struck by lightning Volturnus

190 Liv.37.3.1-6, Obs.1
Temple of Juno Lucina struck by lightning Roma
Gates and walls struck by lightning Puteoli
Thunderstorm from a cloudless sky Nursea
Two free men killed Nursea
Rain of soil Tusculum
Mules born Reate

188 Liv.38.36.4, Obs.2
Darkness during the day
Rain of stones Roma

187 Liv.38.44.7
Plague

Note: It is doubtful whether the plague is a prodigy (cf. Levene 1993: 90)

186 Liv.39.22.3-5, Obs.3
Rain of stones Picenum
Fire in the sky
Temple of Ops struck by lightning* Roma

12 year old hermaphrodite discovered Umbria

*Obs.3 has temple of Jupiter instead

183 Liv.39.46.5, Obs.4
Rain of blood for two days (Area Vulcani) Roma

Liv.39.56.6, Obs.4, Oros.4.20.30
Rain of blood for two days (Area Concordia) Roma
Island appeared Sicilia

Note: the rain of blood in Liv.39.56.6 is not counted as a separate prodigy because it must be the same as the one in Liv.39.46.5: the Area Vulcani and Area Concordia are the same (Platner & Ashby 1929: 248f). Furthermore the parallel passage in Obsequens has only one rain of blood for two days.

182 Liv.40.2.1-4,
Storm Roma
Mule born with three legs Reate
Temple of Apollo struck by lightning Formiae

181 Liv.40.19. 1-5, Obs.6
Rain of blood (Area Vulcani) Roma
The lances had moved by themselves
The statue of Juno Sospita cried Lanuvium
Plague

Note: It is doubtful whether the plague is a prodigy, but there is no compelling reason to exclude it.

Obs.6.
6 months of drought

180 Liv.40.37.1-3
The praetor and consul died/plague Roma

Note: It is a very atypical prodigy. It seems more like a case where a ritual fault has been committed. This is supported by the fact that the pontifex maximus investigates the pontifical records to find the right *piacula*. This form of ritual is usually performed as a response to a ritual fault. The deaths are however explicitly described as being taken as a prodigy: *Postremo prodigii loco ea clades haberi coepta est* (Liv.40.37.1) “Finally the disaster came

to be regarded as a portent”. It has therefore been included anyhow. Rasmussen counts the plague mentioned in the previous paragraph as the prodigy (Rasmussen 2003: 79). That is also a possibility. It hinges on whether the word *clades* refers to the plague or the death of the magistrates. The fact that *clades* is frequently used in Latin of plagues speaks to the former interpretation. Since plagues had earlier been expiated in the same way as here (with a *supplicatio* ritual), it would appear a reasonable conjecture.

179	Liv.40.45.3-5, Obs.7	
Statues overthrown by storm (Capitol)		Roma
Temple of Jupiter struck by lightning		Tarracina
Temple of Alba struck by lightning		Capua
Gate struck by lightning		Roma
Mule born with three legs		Reate

Liv.40.59.6-8, Obs.7
Different problems with the lectisternium ritual

Note: Rasmussen counts this as a prodigy (Rasmussen 2003:80). It is however very atypical, since it is a ritual fault. It is not either described as a prodigy, but as *propter prodigia* – close to a prodigy. It is therefore not included.

178	Liv.Per.41., Obs.7	
Temple of Venus burnt to the ground		Roma
Flame dies in the temple of Vesta		Roma

Note: Rasmussen counts these as prodigies. There is a Lacuna in Livy in book 41, where this list would have been. The first one is however also found in Livy Liv.Per.41. It seems a normal accident and is never described as a prodigy. It could be, but since it is not stated so explicitly and it is not a typical prodigy, there is no reason to assume so. That the flame dies in the temple of Vesta, is a ritual fault dealt with accordingly by the pontifex flogging the responsible vestal virgin. These two have therefore not been included as prodigies.

177	Liv.41.9.4-8	
Stone fell from the sky into the grove of Mars		Crustumium
Boys is born with body without limbs (in <i>ager romanus</i>)		
Four legged snake found (in <i>ager romanus</i>)		
Temples (<i>aedificia</i>) in the Forum struck by lightning		Capua
Two ships struck by lightning		Puteoli
Wolf seen in the city		Roma

Liv.41.13.1-3
A vulture (*avis sanqualis*) lets a sacred stone drop from its beak. Crustumium

Cows were talking	Campania
Bronze cow was mounted by a bull	Syracuse

Note: See Levene about the existence of two prodigy lists in 177 (Levene 1993: 105-107), The list for 178 is missing because of a lacuna. We do know that it existed since it is known through Iulius Obsequens (obs. 8) (cf. Levene 1993: 104)

176	Liv.41.16.3-6	
Fire seen in the sky		Tusculum
Temple of Apollo struck by lightning		Gabii
Several private temples were struck by lightning		Gabii
Walls and gate struck by lightning		Graviscae

Note: This year the consuls die. Rasmussen counts it as a prodigy (Rasmussen 2003: 81), but it is not described as such. It has therefore not been included here.

	Obs.9	
Liver disappeared from sacrificial animal		Roma
Consul Cornelius died		Cumae

Note: These two stories can be read in Liv.41.14 and 41.16. They are not described as prodigies here. The inclusion by Obsequens shows that he did not have a rigid distinction between omens and prodigies. These two are therefore not included in the analysis on prodigies.

174	Liv.41.21.5-13, Obs.10	
Plague		
Boy with two heads born		Veii
Boy with one hand born		Sinuessa
Girl with teeth born		Ariminum
Rainbow seen above the temple of Saturn		Roma
Three suns seen		Roma
Fire in the sky at night		Roma
Strange snake in the city		Caere
An ox spoke		Capua

Note: MacBain thinks that the prodigy about three suns is the same as can be seen in Pliny (2.99) (MacBain 1982: 93). Obs.10 has a plague for 175, but it is evident that Obsequens got the years wrong. It must be the first one on the list in Livy. Rasmussen concurs (Rasmussen 2003: 81)

	Plin.Nat.2.99	
Bow around the sun		

Note: I am following MacBain in dating it this year (MacBain 1982: 93)

Liv.41.28.2
Earthquake Sabinii

Note: Although it may be doubtful whether it is to be counted as a prodigy since it is removed from the primary list, it is described as a *prodigium* with the technical term *nuntiatus*.

173 Liv.42.2.3-7
Big fleet seen in the sky Lanuvium
Black wool came from the ground Privernum
Rain of stones Veii
Swarm of locust Pomptinum
Fish came forth from the ground Agrum
gallicum

172 Liv.42.20
Columna Rostrata struck by lightning Roma
Rain of blood for 3 days Saturnia
Donkey born with three feet Calatia
Thief and 5 cows struck by lightning
Rain of soil Antium

171 Plin.Nat.7.36, Gel. 9.4.15
Girl became boy

169 Liv.43.13.3-8
Fire in the sky Anagnia
Cow spoke Anagnia
Sky was on fire* Menturnae
Rain of stones Reate
Apollo cried in 3 days Cumae
Snake in the temple of Fortune Roma
Palm tree grew grows in the temple of Fortuna Primigenia Roma
Rain of blood by the temple of Fortuna Primigenia Roma

*This prodigy may be the same as the one in Sen.*Q.Nat.*1.1.2, which Rasmussen has also included (Rasmussen 2003: 83). But this prodigy should be dated in 168, as it occurred during the Paulus' battle with Perseus in the Third Macedon War.

Liv. 44.18.6-7

Rain of stones

Rain of stones

Veii

Note: These may belong in 168 (Cf. Levene 1993: 168).

Plin.*Nat.*17.244

Palm tree grew in the temple of Jupiter on the Capitol

Roma

Note: Rasmussen includes this prodigy here (Rasmussen 2003:83f). It is not entirely clear though, why it should be dated to the year 169. The passage in Pliny goes: *nec non et Romae in Capitolio in ara Iovis bello Persei enata palma victoriam triumphosque portendit* (Plin.*Nat.*17.244). It does mention that the prodigy occurred during the war against Perseus. This war however started in 171 and ended in 168. She does list a source Festus 285, but as it has not been possible to find any reference to the prodigies in that source. It is therefore not quite clear to me why it should be dated to 169. I have therefore chosen not to include it.

167 Liv.45.16.5-6, Obs.11

Temple of the Penates struck by lightning

2 gates and wall struck by lightning

Rain of soil

Fire in the sky

Blood was dripping from the fireplace of M.Valerius

Roma

Minervium

Anagnia

Lanuvium

Calatia

Note: Obsequens probably collapsed the first and second prodigy to one. He writes that sacred and profane areas were struck by lightning.

166 Obs.12

Rain of soil

Rain of blood

Wool from trees

Three women died after sacrifice in the temple of Minerva

Water flowed from statue in the grove of Libitina

Weasel from the temple of Jupiter dropped in a group of senators

Temple of Salus struck by lightning

Blood flowed on the ground on the Quirinal

Fire on the sky at night

Much destroyed by lightning

Sun shone during the night

Campania

Praeneste

Veii

Terracina

Roma

Roma

Lanuvium

Cassinum

Cassinum

Boy with four arms and legs born

Teanum Sidicinum

Note: in the following we cannot check with Livy. Since we know that Obsequens included omens and that he was not very accurate (based on Obs.9 and 11 see notes above), I have excluded any prodigy from Obsequens record that can with reasonable certainty be identified as something else, such as a ritual fault or an omen.

165 Obs.13

Plague and famine

Doors at the temple temple of the Penates moved by itself

Roma

Wolf seen on the Esquiline and Quirinal

Roma

163 Obs.14

Sun in the middle of the night

Capua

A group of sheep killed by lightning
stellatus

Ager

Triplets born

Terracina

Two suns

Formiae

Fire in the sky

Formiae

Man burnt by the rays of a mirror

Antium

Rain of milk

Gabii

Lightning on the Palatine

Roma

Swann flew into the templa of Victoria

Girl born without hands

Privernum

Trumpet played in the sky

Cephallenia

Rain of soil

Cephallenia

Roofs and fields struck by lightning*

Sun in the night

Pisaurum

Pig with head and feet of a man born

Caere

Boy with four feet and hands born

Caere

Flame from the mouth did not harm cow

Aesi

* Rasmussen counts this as two prodigies (Rasmussen 2003: 86)

162 Obs.15

Fire in the sky

Anagnia

Many lightning strikes

Talking cow

Frusino

Mule with three legs born

Reate

156

Storm destroys sacred places on the Capitol
 Bull broke down on its way to sacrifice
 The roof of the pontifex maximus was struck by lightning

Roma

Note: Rasmussen counts these as four prodigies (Rasmussen 2003: 87). I have not counted the last two as they are not likely to be prodigies.

154

Obs.17

No head (*caput*) on the liver on most sacrificial animals
 Consul died
 Weapon seen in the sky
 More lightning strikes

Note: Rasmussen counts the first two as one prodigy (Rasmussen 2003: 87), but they are excluded here since the missing *caput* is an impetrative sign (see *infra* chapter 9 under public extispicy) and since earlier examples of the death of a consul in Livy were not identified as prodigies, but as results of *vitium* (see comments above to the years 203, 180 and 176).

Plin.*Nat.*17.244

Palm tree grew by the altar of Jupiter

Note: I am following MacBain, who dates it in 154 (MacBain 1982: 95)

152

Obs.152

Storm overthrew statue at the temple of Jupiter
 Rain of stones
 People in togas were seen by people from afar, but not by those close by

Aricia
Roma**148**

Obs.19

The Regia and two laurel leaves were damaged by fire

Note: Rasmussen has for some reason not counted these (Rasmussen 2003: 88)

147

Obs.20

Boy with three legs and one hand born
 Lightning strikes

Amiternum
Roma

Blood flowed forth	Caere
Sky and earth on fire*	Caere
Two circles around the sun	Lanuvium
Star burned for 32 days	

*Rasmussen counts these as two prodigies (Rasmussen 2003: 88)

143	Obs.21	
Boy with 3 legs born		Amiternum
Rivers and earth flowed with blood		Caura

Fron.*Aq.*7

Note: MacBain thinks this source indicates a prodigy. It stems from the fact that it mentions the decemviri inspecting the books for other reasons (*aliis ex causis* - perhaps the boy with three legs mentioned by Obsequens). Here they discovered a religious fault in how the Aqua Marcia aqueduct was constructed.

142	Obs.22, Oros.5.4.8	
Famine and plague*		
Hermaphrodite		Luna

* Rasmussen counts these as two prodigies (Rasmussen 2003: 88)

140		
Statues (<i>signa</i>) fell from the sky		Praeneste
Statues (<i>signa</i>) fell from the sky		Cephalenia
Fire from Etna		Aetna

137	Obs.24, Oros.5.4.19	
Chickens for the auspices flew into Laurenina's wood		Lanuvium
Fire in the sky		Praeneste
Thunder from a cloudless sky		Praeneste
Praetor died in a fire when his ship was struck by lightning		Terracina
Flooding		Lacus
Fucinus		
Blood flowed in the Graecostasis*		Roma
Blood flowed in the Comitium*		Roma
Foal with five feet born on the Esquiline		Roma
Many lightning strikes		
Hostilius Mancius heard a voice saying " <i>Mane, Mancine</i> "**		Herculis
Snake found on a ship but fled out of the hands**		Herculis

* Since the Graecostasis was right beside the comitium (Plattner & Ashby 1929: 248f), these two has been taken as one.

** Rasmussen counts these as two prodigies. I have not counted them since they are very typical of omens (see chapter 10). They were probably omens in a story about the on of the consuls', Hostilius Mancius', defeat at the hands of the Numantines, which happened this year.

136 Obs.25, Oros.5.6.1

Regia completely destroyed without any signs of human cause	Roma
Boy born from slave with 4 feet, hands, eyes and mouths and 2 sets of genitals	
Blood in hot springs	Puteoli
Many lightning strikes	

135 Obs.26, Oros.5.6.2

Eruption from Etna	Aetna
Boy with closed bottom born	Roma
Grain on the trees	Bononia
Voice of an owl heard at the Capitol	Roma

134 Obs.27

Sun in the middle of the night	Amiternum
Cow spoke	
Rain of blood	
Tunic of a slave burns leaving no signs of fire	Anagnia
Moaning as a man from a bird at night at the Capitol	Roma
Shields struck by lightning in the temple of Juno Regina	Roma

133 Obs.27a

Tiberius Gracchus died after witnessing <i>tristia omina</i> *	
Milk was flowing in to the lake from the rivers	Lacus
Romanus	
4 <i>iugera</i> of land collapsed and lake emerged	Luna
Rain of soil	Ardea
Wolf attacks guard	Minturnis
Unknown owl and other birds seen	Roma
Voice of children heard from the temple of Juno Regina	Roma
Shields dirty with fresh blood	Roma
Girl with four legs born	
Hermaphrodite born	Ferentinum

* Rasmussen counts this one, although it is explicitly called an *omen* (Rasmussen 2003: 91). It has not been included here.

130	Obs.28, Agust.C.D.3.11	
Mule with five feet born		Reate
Rain of milk in the Graecostasis		Roma
Dog and wolf fighting struck by lightning		Ostia
Flock of sheep killed by lightning		Apulia
Praetor killed by lightning		
Ship struck by lightning from a cloudless sky and everyone died*		Terracina
P. Crassus killed in battle against aristonium		

* Rasmussen counts this one as two prodigies (Rasmussen 2003: 91)

129	Obs.28a	
Two black snakes seen in the <i>cella</i> of the temple of Minerva		

Cic.N.D.2.14-15

Double sun

Note: Cicero states that the death of P. Africanus follows the prodigy. This death is however interpreted as a prodigy in itself by MacBain and Rasmussen (MacBain 1982: 96; Rasmussen 2003: 92).

126	Obs.29, Plin,Nat.2.203., Oros.5.10.11	
Storm destroys temples on the Capitol		Roma
Many lightning strikes		Roma
Etna eruption		Aetna
Storm*		Liparae
Seamen eating dead fish fell ill *		Liparae

* Rasmussen counts these as 3 (Rasmussen 2003: 92). It is very doubtful whether they are prodigies. They seem rather to be a bizarre story that has caught the attention of Obsequens according to the same pattern we saw above. The story is also known through Plin,Nat.2.203. Here it is a strange story and not a prodigy. Strabo also seems to know about the strange conditions around the Liparian islands (Strabo.6.2.11). These two have therefore been excluded.

125	Obs.30	
Grain appeared on threes		
Rain of oil and milk		Veii

An owl was seen on the Capitol	Roma
Rain of stones for three days	Arpis
Swarm of locust from Africa brought plague*	

* Rasmussen counts this as 2 prodigies. It is most likely not a prodigy. MacBain thinks that Phleg.*Mirab.*10 is an expiation which took place in response to this, but the source is very fragmentary and difficult to base anything certain on. The story about the swarm of locust is also found in Augustine (*Aug.C.D.*3.31). As in the previous note on the year 126 I think this is a bizarre story that has attracted the attention of Obsequens. It has therefore not been included in the analysis.

124	Obs.31	
Rain of milk in the Graecostasis		Roma
A flock a dog and three shepherds killed by lightning		Croton
Calf born with two heads		Satura

122	Obs.32	
Hermaphrodite born in the Forum Vessanum*		
Three suns and three moons seen		Gallia
Calf with two heads born		
Owl seen on the Capitol		Roma
Catina destroyed by fire from Etna		Catina

* The location of this place is completely unknown. It is only mentioned in this passage in Obsequens. A city called Vessa is known, but its location is likewise not identified.

121	Obs.33	
Flock of wolves destroyed stone put up by C.Gracchus		

Note: Rasmussen counts this one as a prodigy (Rasmussen 2003:93). This story is tied to the death of Caius Gracchus and thus an omen story. It is therefore not counted here.

*Plin.Nat.*2.98

Bow around the sun

119	Obs.34	
8 year old hermaphrodite found on Ager Romanus		

118	Obs.35	
Head (caput) missing from sacrificial victim*		

Rain of milk
Earthquake with roar
Swarm of bees on the Forum Roma

* Counted by Rasmussen (Rasmussen 2003: 94). It is not counted here for reasons stated in a note under the year 154.

Plin.*Nat.*2.99
Three suns at the same time

117 Obs.36
Lightning strikes Roma
Rain of milk Praeneste
The lances of Mars moved by themselves Roma
7 *iugera* of land collapsed Privernum
Hermaphrodite at the age of 10 found

Cic.*Div.*1.97
Earthquakes Apulia

115 Plin.*Nat.*2.144
Temple of Juno struck by lightning

114 Obs.37
Daughter of a Roman knight and her horse killed by lightning

Plin.*Nat.*2.147
Rain of milk
Rain of Blood

Plin.*Nat.*2.98
Bow around the sun

113 Obs.38
Light seen in the middle of the night Mons
Albanus
Temple and statue struck by lightning*
Alter of Salus destroyed
Earth opened up Lucania
Earth opened up Privernum
Sky on fire Gallia

* Rasmussen counts as two (Rasmussen 2003: 95)

111 Obs.39

Fire in the city

Roma

Rain of milk

108 Obs.40

An *avis incenidaria* and owl seen*

Human eaten by human in quarry

Flooding of the Po and Arentinus rivers*

Rain of milk twice*

Twin birth; girl survived but boy had an open hole in his stomach, he died

Nursia

* Rasmussen counts as two (Rasmussen 2003: 95)

106 Obs.41

Boy born of slave said “ave”

Amiternum

Rain of milk*

Perusia

Rain of milk*

Roma

Four fingers cut off by lightning

Atellis

Silver flowed after lightning strike

Atellis

Roman woman struck by lightning, but didn't die

Trebulanum

Noise from the sky

Spears (*pila*) fell from the sky

Rain of blood

Fire in the sky

Roma

Flame in the temple of the *lares*

Roma

* Rasmussen counts as one (Rasmussen 2003: 96)

105 Obs.42

Snakes appeared at altar when flutes were played, but disappeared afterwards

Trebula

Mutusca

The statue of Mars was upside down

Trebula

Mutusca

104 Obs.43

Owl seen outside the city

Roma

Cow was talking

Statue originally veiled was unveiled	Trebula
Mutusca	
An elm tree rose by itself*	Nuceria
Rain of milk	Lucania
Rain of blood	Luna
Dog was talking	Ariminum
Weapon seen fighting in the sky	
Moon and stars visible during the day	
Wolf seen in the city	
Vultures killed by lightning	
Solar eclipse	
Swarm of bees in front of the temple of Salus	Roma
Rain of milk in the Comitium	Roma
Three suns seen	Picenum
Flames from the ground to the sky	Volsini
To lambs born with horse feet and one with the head of a monkey	Lucania
Milk came from the ground	Tarquinius

* the sentence is difficult to decipher. Loeb's translation has restored it "(.) an elm, overturned by the wind, straightened upon its root of its own accord and regained its strength". The story is also found in Pliny 16.132, where it is added that it was in a grove of Juno.

102	Obs.44	
Rain of stones		Etruria
The lances of Mars moved in the Regia		Roma
Rain of blood		Anio
Swarm of bees in temple in the Forum Boarium		Roma
Light was burning in the night in military camp (<i>castris</i>)		Gallia
Boy engulfed in flames unharmed		Aricia
Temple of Jupiter struck by lightning		

101	Obs.44a	
Shield moved by themselves		
She goat with burning horns led through city and released at the Porta Nigra		Roma
Rain of clay at the Aventine		Roma

Note: I have not included the story about the slave Q. Servilius Caepionis, who castrated himself for the Idaean Mother, Cybele. It does not seem to be a prodigy.

100	Obs.45, Plin. <i>Nat.</i> 2.100	
Fire in the sky		Tarquinius

Sun formed a disc like a shield at sun set	
Earthquake cause some buildings to collapse and others to remain standing	Picenum
Noise from arms heard from below	
Gold <i>quadriga</i> on the forum sweated on its feet	Roma

Note: The first prodigy is also found in Pliny (Plin.*Nat.*2.100). MacBain also places the prodigy in Plin.*Nat.*3.123 this year (MacBain 1982: 99). It is, however, not clear what motivated this dating, so it has not been followed.

99	Obs.46	
Owl seen in the city		Roma
Much has been destroyed by storms		
Many lightning strikes		
Drops of blood in the temple of Juno Sospita		
Earthquake destroys temples		Lanuvium
Noise from below heard		Nursia

Note: Rasmussen also counts as a prodigy the story of two crows, who fought in the air during a meeting (*contio*) convened by Sex. Titius (Rasmussen 2003: 99). It does speak for the identification of it as such that it is interpreted by the *haruspices*, but on the other hand, the *haruspices* could interpret anything so it cannot be used as proof of anything. It seems to me more likely that it is an omen.

	Gel.4.6.1-2	
The lances of Mars moved by themselves in the Regia		Roma

98	Obs.47	
Owl seen above the statue of the gods during sacrifice on the Capitol		Roma
Many lightning strikes		
The lances of Mars moved by themselves in the Regia*		Roma
Thunder from a cloudless sky		
No head (<i>caput</i>) on the liver during sacrifice to Apollo and a snake was found**		
Fire between soldiers' spears in the circus		
Sacrificial bull broke down**		
Rain of chalk in the theatre		
Hermaphrodite		

* I believe this prodigy is the same as the one Aulus Gellius mentions (Gel.4.6.1-2). He, however, has it in 99. Rasmussen follows this, but also has it in 98 (Rasmussen 2003: 100). Gellius has it from an official decree (*senatus consultum*). Consequently his testimony takes priority and the prodigy is most likely to be dated in 99. Since it is in the middle of the list, it opens up to the possibility that the whole list is from that year.

** these are not counted as prodigies for reasons stated under the year 166 and 154

97	Obs.48	
Hermaphrodite found		
Noise from the ground		Pisaurum
Statue of Jupiter turned by itself		Nursia
Masonry falls down from the city walls without an earthquake		
96	Obs.49	
Wolf in the city		
Owl killed on the Capitol		Roma
Many lightning strikes		
Goldstatue of Jupiter fell down		
Blood flowed out of the ground		Faesulis
Grain grew from the nose of a woman, and she vomited kernels of spelt		Arretium
95	Obs.50	
Rain of milk		
Many animals killed by lightning		Caere
Ground collapsed		
Vultures tearing a dead dog were killed by other vultures		Venafrum
Lamb with two heads born		
Boy with three hands and feet		Ateste
Lances of Mars moved by themselves in the Regia		Roma
Hermaphrodite found		Urbinum
94	Obs.51	
Rain of stones		Volscium
New moon disappeared		Volsinii
Girl with two heads and four hands born		
Avis incendiaria seen and died		
Rain of stones		Vestinis
Fire in the sky		
Blood flowed from the ground		
Dogs behaved strangely		
Large crowd of pale people seen during the day at cemetery		Faesula
93	Obs.52	
Many things struck by lightning		Roma
Slave gave birth to a boy with only one hand		
The temple of Neptune opened during the night		

Two calves were found in the entrails of a Bull calf	
Statue of Mercury was sweating	Arretium
A flock was surrounded by flames but unharmed	Lucania
Torrent of blood flowed	Carseoli
Wolves in the city	
Wool was flying around	Praeneste
Mules were foaling	Apulia
Falcon captured in the temple of Apollo	
Head (<i>caput</i>) of the liver missing from consul's second sacrifice*	
Food for Novendiale ceremony eaten by dog**	
Strange fire in the sky	Volsinii

* Is not taken as a prodigy. See above under the year 154

** Is not taken as a prodigy but a ritual fault. See above under the year 166

92	Obs.54	
Owl in the temple of Fortuna Equestris is captured and killed		Roma
Boy born of slave without opening on the genitals		Faesulae
Woman with two sets of genitals found		
Fire in the sky		
Cow spoke		
Swarm of bees settled on the top of a private house		
Stream of blood		
Rain of milk		Volterra
Two hermaphrodites found		Roma
Chicken with three legs found		Arretium
Many lightning strikes		

91	Obs.54, Cic. <i>Div.</i> 1.98-99	
Ball of fire at sun rise		
Bread with blood found		Arretium
Rain of stones and sherds for seven days		Vestinis
Flame from the ground to the sky		Aenaria
Parts of the city and the wall destroyed		Regium
Ball of fire fell to the ground then towards the east where it grew		Spoletium
Statue of Apollo sweated		Cumae
Temple of pietas struck by lightning		
People died at the <i>ludi romani</i>		Asculum

	Plin. <i>Nat.</i> 2.199	
Earthquake		Ager
Mutinensis		

Note: Although Pliny states that he has it from books on the Etruscan discipline, the format with date, by the two consuls, and place fits the Roman prodigies. It may have come to Pliny in a collection of responses by the *haruspices* as we also know from *Cic.Har.* This fits well with the political commentaries in the interpretation of the prodigy. It is probably from the work by C. Epidius mentioned in *Plin.Nat.* 17.243, or a work on Etruscan divination by Umbricius Melior mentioned in *Plin.Nat.* 10.19.

Plin.*Nat.* 8.221, Cic.*Div.* 1.99
Mice had gnawed the shields of Mars Lanuvium

90 Obs.55
Dream of Caecilia Metella about Juno Sospita
Head was missing from consul's sacrifice

Note: Rasmussen counts here four prodigies (Rasmussen 2003: 104). I have taken the first as one prodigy and excluded the other because of reasons stated above under the year 154.

Plin. *Nat.* 2.238
It looked as if the sea was on fire

Note: It resembles the prodigy mentioned in the year 126, also noted by Pliny (*Plin. Nat.* 2.203). The date stems from the mention that it occurred the year of the start of the social war. MacBain also dates the omen from *Plin. Nat.* 2.98 to this year (MacBain 1982: 101). It is, however, unclear what prompted this dating.

88 Obs.56
Poppedius Silo held triumph in captured city
Omens to Mithridates

Note: Rasmussen counts these (Rasmussen 2003:105). They are however clearly omens and are therefore not included here (see under the year 166)

87 Obs.56a, Plin. *Nat.* 2.92
Sky fell down in the camp of Pompeius Roma
Pompeius (the consul of the prior year) killed Roma

Note: The last one is not taken as a prodigy. MacBain thinks that there are some prodigies in *Livy.Per.* 79 (MacBain 1982: 101). I have, however, not been able to identify such in that passage. Neither has Rasmussen (Rasmussen 2003: 105).

Cic.*N.D.* 2.14.

Fire in the sky

Note: While this prodigy is included by MacBain (MacBain 1982:101), it is, for unknown reasons, left out in Rasmussen (Rasmussen 2003: 105).

86 Obs.56b

One of Sulla's soldiers was struck by lightning
Statue of Minerva was left unharmed in the ruins in Piræus

Note: Rasmussen counts these as prodigies (Rasmussen 2003: 105). They are however clearly omen stories.

84 App.*B.Civ.*1.83

Note: MacBain here finds a prodigy (MacBain 1982: 101). It does however appear more likely that it is another sort of oblativ sign regarding the action currently undertaken.

83 Obs.57, Plin.*Nat.*7.34

Sound of battle. Closer inspection revealed footprints
Matron gave birth to snake
The Capitol burned down

Clusium
Roma

Note: Rasmussen counts these as five prodigies (Rasmussen 2003: 106).

77 Obs.58

D. Laelius wife finds two snakes in her bed
D. Laelius saw a falcon above his head

Note: these are omenstories and therefore not included.

76 Obs.59

Earthquake results in collapse of sacred buildings.
Stone from the forum exploded
Bridges collapsed
Banks of river fell into the river
Noise from below
Stone rolled to the edge of a cliff

Reate
Reate

Note: Except the noise from below all are consequences of the earthquake and counted as one.

Plin.*Nat.*2.100

A spark from a star fell to the ground and other strange things in the sky

75 Obs.60

Events about the army of Sertorius

Note: These are omen stories and not take as prodigies.

65 Dio 37.9.1-2

Statues overturned and melted by lightning on the Capitol

Roma

63 Obs.61, Cic. Div.1.19-20, Cic.Cat.3.19-20, Dio.37.25.1-2, Plin.*Nat.*2.137

Many lightning strikes**

Person struck by lightning from a clear sky**

Pompeii

Something burning in the sky

City destroyed by earthquake

Spoletum

Bronzetablets struck by lightning became liquid*

* Dio Cassius has this in 65 (Dio.37.9.1-2, 37.25.1-2). It is included under that year since Dio. Is closer in time, more credible and thorough than Obsequens.

** Dio has one prodigy: many lightning strikes from a clear sky (Dio.37.25). He may have mixed these two. This is supported by a passage in Pliny. Pliny has the prodigy about the person struck by lightning in Pompeii in Plin.*Nat.*2.137 as one. These prodigies are therefore taken as separate.

Dio.37.25.1-2

Auspices fail

Ghosts seen

Note: The first seems to be a ritual fault and is therefore not counted.

62 Obs.61a

Laurel-wreathed fasces were lost to the Dardani

Note: Rasmussen counts this as a prodigy (Rasmussen 2003: 107). I have taken it as an omen, since it is a typical omen story.

60 Obs.62

Light appeared during the night

Tornado ripped of roofs
Bridge collapses and people fall into the Tiber
Plants ripped up with their roots

56 Dio.39.15-16
Statue of Jupiter struck by lightning

Dio.39.20, Cic.*Har*, *passim*
Model of the temple of Juno facing east was turned to face north Mons Albanus
Fire in the sky from south to north
Wolf in the city
Earthquake
Citizens killed by lightning
Noise from below*

*This is probably the prodigy which Cicero's *De haruspicum responso* is about.

54 Obs.64
Note: these are omen stories about Crassus on his war in the east

Dio.39.60.4-6
Note: We hear that the sibylline books were consulted because Pompei refused to step down from his office. It is however not clear that it is taken as an omen.

53 Obs.63, Dio 40.17.1
Wolves seen in the city
Howling of dogs during the night
Statue of Mars was sweating
Thunderbolt flew through the city overturning statues and killing people
Great civil disturbance because of Pompei's dictatorship Roma

Note: the last one is not taken as a prodigy. First of all it comes after the list of prodigies, and in the parallel passage in Dio we do not find it presented as a prodigy.

Plin.*Nat*.2.147
Rain of iron Lucania

Note: It is not counted as it seems to be an omen to Crassus

52 Dio.40.47.1-2

Market fell on the first of January*
 Owl seen and caught
 Statue sweated for three days
 Fire from south to east
 Many different kinds of rain

* The market day, *nundinae*, is calculated on the basis of an eight day cycle which were not fixed to the regular dates of the calendar (Michels: 1978:27). It is probably the day after the Kalends of January (1 January). Such days were called *dies postriduani* and were considered *dies atri*, that is “black” days (Michels: 1978:65). Either way, a black day to start off the year must have sounded gloomy to the Romans.

50 Obs.65
 Mules were foaling
 Fire destroyed a big part of the city

Note: Rasmussen counts the last one as a prodigy (Rasmussen 2003: 109). It is however described as like a prodigy (*prodigii loco habitum*) and therefore not included.

Plin.Nat.2.147

Rain of wool	C. Carissanum
Rain of boiled bricks	

Note: They are taken to portend the death of Milo. Therefore it could be that they were instead omens. They are however described as treated as prodigies, that is, related to the senate (*relatum*) and written down.

48 Obs.65a
 Note: This is an omen story about Pompei, where several omens are mentioned as going against Pompei. Rasmussen counts them as prodigies (Rasmussen 2003: 110). They have not been included here.

Plin.Nat.2.92

Fire in the sky in the west.

Dio.42.26.1-2

Bees in the temple of Hercules on the Capitol	Roma
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47 Dio.42.26.1-2

Earthquake	
Lightning strikes, among other things the temple of Fortuna Publica	Roma

Doors to the temple of Fortuna opened by themselves
Blood flowed from a bakery to another temple of Fortuna
Child born with left hand attached to his head

46 Obs.66
10 legions of Pompei's son's flew into the sky

Note: This is not mentioned in the parallel passage in Dio (Dio.43.2). It is therefore taken as an omen story.

 Dio.43.2.1
Wolves in the city
Pig born resembling an elephant

44 Obs.67
Caesar did not find a heart in the entrails of his sacrificial victim
His wife had a bad dream
The doors to his room opened by themselves

Note: these are all omens to Caesar.

 Obs.68, Plin.*Nat.*2.98., Dio.45.17.2-8
Signs about Augustus as heir to Caesar*
Fire in the sky
Earthquake
Many lightning strikes
Statue fell because of tornado
Tablets fell from the temple of Fides
Door destroyed in the temple of Ops
Trees uprooted
For seven days a star shone brightly
Fire in the sky towards the west
Three suns
Letters in Anthony's and Dollabella's names fell out in the temple of Castor*
Howling of wolves in front of Lepidus' house *
School of fish stranded on land Ostia
Po flooded, when retracted snakes left Po

* These are not taken as prodigies, but as omens or a later interpellations caused by Augustan propaganda. They can also be found in Plin.*Nat.*2.98.

Note: The text is one great mixture of omens and prodigies. In general it is difficult to separate the prodigies from the omens, especially since the later Augustan history writing, on which we are entirely dependent, has plenty of reason to twist the exposition towards giving

signs that Augustus would be the heir to Cesar and restore the Roman state. Those selected are all confirmed in the list in Dio. This list is followed by descriptions how they are treated. Their treatment is typical for prodigies. Rasmussen counts them all indiscriminately (Rasmussen 2003: 111)

Dio.45.17.2-8

Lightning struck the temple of Jupiter on the Capitol
Sacrificial bull jumped up after sacrifice
Plague

Roma

Appendix 6

Examples of counterintuitive, bizarre and common prodigies between 218 and 44 BCE

Counter intuitive prodigies

- Coast was burning (in 217, Liv.22.1)
- Lamb born with filled utters (in 210, Liv.27.4)
- Rain with milk (in 209, Liv.27.11)
- Ground was suddenly opened (in 203, Liv.30.2)
- The statue of Juno Sospita cried (in 181, Liv.40.19)
- Stone fell from the sky in to the grove of Mars (in 177, Liv.41.9)
- Fish came out of the ground (in 173, Liv.42.2)
- Boy with four arms and legs born (in 166, Obs.12)
- Hostilius Mancius heard a voice saying: ”*Mane, Mancine*”[Stay Mancius] (in 137, Obs. 24)
- The Alban Mount was burning in the middle of the night (in 113, Obs.38)
- A matron gave birth to a snake (in 83, Obs.57)
- Statues were sweating (in 53, Dio.40.17)

Bizarre prodigies

- Raven built its nest in the temple of Juno Sospita (in 214, Liv.24.10)
- Sounds of battle was heard in the temple of Jupiter (in 213, Liv.24.44)
- Four fingers cut of by lightning (in 206, Obs.41)
- Praetor and consul died in office (in 180, Liv.40.37)
- Snake was seen in the temple of Fortune (in 169, Liv.43.13)
- Weasel was thrown by a falcon into a group of senators (in 166, Obs.12)
- A human was eaten by another human in a quarry (in 108, Obs.40)
- Statue of Mars was standing on its head (in 105, Obs.42)
- Swarm of bees in front of the temple of Salus (in 104, Obs 43)
- An owl seen in the city (in 99, Obs.46)
- Wolf in the city (in 96, Obs.49)
- Food for a goddess was eaten by a dog (in 93, Obs.52)

Common

- Palm tree was burning (in 214, Liv.24.10)
- Storm (in 212, Liv.25.7)
- Birds flew from their nests in Diana’s grove (in 210, Liv.27.4)
- Flooding of the Tiber. Buildings collapsed (in 193, Liv.35.9)
- Statues tilted by storm (in 179, Liv.40.45)
- Three women died after a sacrifice in the temple of Minerva (in 166, Obs.12)
- Triplets born (in 163, Obs.14)

Alot was destroyed by a storm (in 99, Obs.46)
An owl killed (in 96, Obs.49)
Dogs were howling in the night (in 53, Obs.63)

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Ov.*Ars.* P. Ovidius Naso, *Ars Amatoria*
Ov.*Ep.* P. Ovidius Naso, *Epistulae*
Ov.*Fast.* P. Ovidius Naso, *Fasti*
Ov.*Met.* P. Ovidius Naso, *Metamorphoses*
Pac. M. Pacuvius
Pl.*As.* T. Maccius Plautus, *Asinaria*

²²⁰ Abbreviations are based on Oxford Classical Dictionary and Oxford Latin Dictionary. Unless otherwise stated the editions used are from Loeb's Classical Library.

Pl. <i>Aul.</i>	T. Maccius Plautus, <i>Aulularia</i>
Pl. <i>Cas.</i>	T. Maccius Plautus, <i>Casina</i>
Pl. <i>Cur.</i>	T. Maccius Plautus, <i>Curculio</i>
Pl. <i>Poen.</i>	T. Maccius Plautus, <i>Poenulus</i>
Pl. <i>Per.</i>	T. Maccius Plautus, <i>Persa</i>
Pl. <i>Ep.</i>	T. Maccius Plautus, <i>Epidicus</i>
Plin. <i>Nat.</i>	C. Plinius Secundus, <i>Naturalis Historia</i>
Plin. <i>Ep.</i>	C. Plinius Caecilius Secundus, <i>Epistulae ad Traianum</i>
Prop.	Sex. Propertius, <i>Elegiae</i>
Sen. <i>Oed.</i>	L. Anneus Seneca, <i>Oedipus</i>
Sen. <i>Q Nat.</i>	L. Anneus Seneca, <i>Quaestiones Naturales</i>
Serv. <i>A.</i>	Maurus Servius Honoratus, <i>In Vergilium Commentarius</i> (Leipzig: Teubner, 1881)
Serv. <i>Dan.</i>	<i>Scholia Danielis</i>
Stat. <i>Silv.</i>	P. Papinius Statius, <i>Silvae</i>
Suet. <i>Aug.</i>	C. Suetonius Tranquilius, <i>Augustus</i>
Suet. <i>Cal.</i>	C. Suetonius Tranquilius, <i>Caligula</i>
Suet. <i>Dom.</i>	C. Suetonius Tranquilius, <i>Domitian</i>
Suet. <i>Jul.</i>	C. Suetonius Tranquilius, <i>Iulius</i>
Suet. <i>Tib.</i>	C. Suetonius Tranquilius, <i>Tiberius</i>
Tac. <i>Hist.</i>	Cornelius Tacitus, <i>Historiae</i>
Tib.	Albius Tibullus, <i>Elegiae</i>
Ulp. <i>dig.</i>	Domitius Ulpianus (ed. E. Böking 1955)
V. <i>Max</i>	Valerius Maximus, <i>Facta et Dicta Memorabilia</i>
Var. <i>L.</i>	M. Terentius Varro, <i>De Lingua Latina</i>
Var. <i>R.</i>	M. Terentius Varro, <i>Res Rusticae</i>
Zonar.	Zonaras

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Amm. Marc.	Ammianus Marcelinus
App. <i>B Civ.</i>	Appianus, <i>Bella Civilia</i>
Dio Cass.	Cassius Dio Cocceianus, <i>Romaika</i>
Diod.Sic.	Diodorus Siculus
Dion.Hal. <i>Ant.Rom.</i>	Dionysius Hallicarnasensis, <i>Antiquitates Romanae</i>
Polyb.	Polybius
Phleg.	Phlegon <i>Mirabile</i>
Plut. <i>Aem.</i>	Plutarch, <i>Aemilius Paulus</i>
Plut. <i>Mar.</i>	Plutarch, <i>Marius</i>
Plut. <i>Quaest.Rom.</i>	Plutarch, <i>Quaestiones Romanae</i>
Plut. <i>Sull.</i>	Plutarch, <i>Sulla</i>
Sall. <i>Iug</i>	Sallustius, <i>Bellum Iugurthinum</i>
Sall. <i>Cat.</i>	Sallustius, <i>Bellum Catilinae</i>
Strabo.	Strabo

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Danish summary

Dansk resumé af ph.d.-afhandlingen *The Dissemination of Divination in Roman Republican Times - A Cognitive Approach*

Afhandlingen søger at besvare det grundlæggende spørgsmål: "Hvorfor var den romerske kultur gennemsyret af divination i mange hundrede år". For at besvare spørgsmålet argumenteres der for, at det er nødvendigt at udvikle en generel teoretisk model af fænomenet divination. Derfor falder afhandlingen i to næsten lige store dele: En teoretisk del, som består af kapitlerne 1-6, og en empirisk del, som består af kapitlerne 7-10.

Divination kommer fra det latinske ord *divinatio*. Kapitel 1 undersøger forhistorien og historien bag dette latinske ord. Ordet har en indoeuropæisk rod. Verbalformen synes oprindeligt at have betydet noget i retning af "at gøre noget klart". Det var dog ikke før Ciceros *De divinatione*, at ordet *divinatio* blev brugt som en generel term, der dækkede over alle forskellige divinationspraksisser. Ciceros værk har haft en gennemslagskraft så stor, at selv moderne leksika har brugt hans forståelse og opdeling af divination. Der argumenteres dog for, at det ikke har været til nogen stor hjælp for en moderne videnskabelig behandling af emnet, da Ciceros forståelse er præget af stoisk kosmologi, som ikke er i overensstemmelse med moderne videnskabelige antagelser om verden.

I kapitel 2 behandles moderne teorier om divination. Den moderne videnskabelig refleksion over emnet begyndte ved udgangen af det 19. århundrede. Divination var forsvundet fra sin centrale plads i europæisk kultur med romerrigets overgang til kristendommen. Derfor krævede forskernes opdagelse af, at tilsyneladende alle andre folkeslag brugte divination, en forklaring.

Oprindeligt blev divination forklaret på evolutionistisk basis som tilhørende et tidligere kulturtrin. To overordnede linier løber igennem forskningen: den britiske og den franske. Den britiske forklarer divination som en mangel i de primitives evne til at lave induktive generaliseringer. Dette reflekterer den britiske empirisme. Over for denne stod den franske rationalistiske tradition, som forklarede divination ud fra kollektive repræsentationer og klassifikation.

Efter første verdenskrig forsvandt evolutionistiske forklaringer, og funktionalisternes ideal om lange og grundige feltarbejder blev introduceret i divinationsforskningen med Edward Evans Evans-Pritchards arbejde om blandt andet divination hos det sydsudanesiske folk Azande. Evans-Pritchard kombinerede såvel den britiske som den franske tradition med det nye ideal om feltarbejde. Dette studie står centralt i stort set al efterfølgende forskning om emnet. Den efterfølgende forskning er på forskellig vis videreudviklinger af denne tidlige forskning i emnet.

Skønt rigt facetteret er der forskellige mangler ved den tidligere forskning. For det første findes der ingen grundig undersøgelse af den kognitive basis for divination. For det andet er der ingen forklaring på historiske dynamikker, og hvorfor divination spredes.

Kapitel 3 giver rammen for en teoretisk model for divination, som kan kompensere for disse svagheder. Udgangspunktet er en stipulativ definition af emnet: "Divination er opnåelsen af troværdig viden om forhold, som ikke er tilgængelige for almindelig menneskelig perception eller ræsonnement". Der argumenteres for, at divination altid opfattes som en kommunikativ interaktion med en modintuitiv agent, der har adgang til en viden, som ellers er skjult for almindelig menneskelig perception.

Der er to måder, dette kan opfattes på: enten som et svar på et stillet spørgsmål eller som en uopfordret henvendelse. Dette udgør grundlaget for de to primære former for divination: impetrativ og oblativ divination. Impetrativ divination er den rituelle form, hvor man stiller et spørgsmål og får et svar. Oblativ divination svarer til varsler, hvor man får et tegn og efterfølgende finder ud af, hvad det betyder.

Divination består derudover af tre hovedelementer: motivation, tegnproduktion og fortolkning. Den væsentligste forskel mellem impetrativ og oblativ divination findes i tegnproduktionen. I impetrativ divination produceres tegnet ved en teknik, hvorimod tegnet i oblativ divination skal identificeres i den daglige strøm af begivenheder.

Kapitel 4 undersøger de forskellige elementer i impetrativ divination. Det første element er motivation. En del forskning i social- og kognitionspsykologien peger på, at mennesker generelt har en forestilling om det almindelige liv, en idealiseret livsmodel. Denne definerer de ønskelige elementer i et liv.

Motivationen for divination kommer fra en opfattelse af en aktuel eller potentiel diskrepans mellem den idealiserede livsmodel og det levede liv. Dette kan beskrives som aktuel eller potentiel succes eller ulykke. Det vises ved eksempler fra fire forskellige kulturer, at præcist dette er, hvad der motiverer folk til at bruge divination.

Tegnproduktionen foretages af en operator, som benytter en teknik. I dette afsnit argumenteres der for, at teknikken skal være rituel for at virke. Den ritualiserede handling er karakteriseret ved en forskydning af intentionen (*displacement of intention*). Når handlingen efterfølgende evalueres, synes den intentionel, men på grund af ritualiseringen kan operatorens intention ikke opfattes som årsag til resultatet af handlingen. Der foregår derfor en reparationsproces (*repair*), i hvilken en anden intentionalitet indsættes (*replacement of intention*). Denne intentionalitet er en modintuitiv agent. På denne måde kommer den modintuitive intentionalitet til at blive opfattet som den egentlige producent af tegnet i divinationsritualet.

Fra tidligere kognitionspsykologisk forskning ved vi, at modintuitive agenter repræsenteres uden de epistemiske begrænsninger, som karakteriserer almindelige mennesker. De har ikke samme begrænsede adgang til virkeligheden, men derimod ubegrænset adgang til den.

Derved kan det tegn, der produceres i divination, komme til at blive repræsenteret som kommende fra en agent, som har ubegrænset adgang til virkeligheden og dermed også "(...) troværdig viden om forhold, som ikke er tilgængelig for almindelig

menneskelig perception eller ræsonnement”. Derved bliver divinationsritualet adgangen til den information, som er målet.

Et psykologisk eksperiment omtales. Det viste, at deltagerne skelnede meget kraftigt i vurderingen af troværdighed i et divinationsritual alt efter, om handlingen var ritualiseret eller ej. Hvis handlingen var ritualiseret, opfattedes den som bedre i stand til at give svar på spørgsmål om forhold, som ikke er tilgængelige for almindelig menneskelig perception. Dette støtter den foreslåede tese.

Et andet eksperiment viste yderligere, at vurderingen af troværdighed i divination også afhang af den ontologiske kategori, som bliver brugt i teknikken. Teknikker, som bruger mennesker, opfattes som mere troværdige end teknikker, der bruger dyr til at producere tegnet. Disse bliver til gengæld opfattet som mere troværdige end dem, der bruger objekter.

Fortolkningsdelen består ligeledes af to komponenter: tegnet og en fortolker. Fortolkningen starter fra identifikationen af tegnet som hidrørende fra en modintuitiv agent. Den populære teori i den kognitive religionsvidenskab om en hyperaktiv agensopdagelsesmekanisme (*Hyperactive Agency Detection Device*) undersøges som mulig forklaringsmodel.

Det findes dog, at denne forklaring ikke er tilstrækkelig. I stedet foreslås en hyperaktiv intentionalitetsopdagelsesmekanisme (*Hyperactive Intentionality Detection Device*). Denne synes at være en bedre forklaringsmodel. Fortolkningen går fra at identificere en modintuitiv agents intention som ophav til tegnet til at identificere intentionen som kommunikativ. Denne identifikation hjælpes på vej af, at tegnet er foranlediget af et spørgsmål. Der argumenteres for, at den konkrete fortolkning følger principperne fra Dan Sperbers og Deirdre Wilsons kommunikationsteori, som kaldes relevansteorien (*relevance theory*).

Skønt divination i det store hele kan opfattes som kommunikation, er der dog stadig væsentlige forskelle på divinatorisk og almindelig kommunikation. I divination er relationen mellem tegn og betydning mere løs eller mindre kodet. Et divinatorisk tegn kan betyde mere end et almindeligt lingvistisk tegn. Divination er også begrænset på en anden måde. Hvor almindeligt sprog kan bruges til at udtrykke næsten hvad som

helst, så kan divination ofte kun bruges til nogle få ting: Divination er derfor begrænset i anvendelighed med hensyn til både type og indhold af svaret.

En vigtig del af fortolkningsprocessen er også, hvor troværdig fortolkningen er. En gennemgang af socialpsykologiske og kognitive studier viste, at en af de vigtigste faktorer for tilskrivning af troværdighed generelt er en persons prestige. Det konkluderes derfor, at en vigtig faktor for tilskrivning af troværdighed er fortolkerens prestige. Jo højere prestige fortolkeren har, jo mere troværdigt opfattes svaret. Denne form for prestige kaldes direkte prestige.

Men siden divination aktiverer antagelsen af en modintuitiv agent som den ultimative kilde til tegnet, blev det undersøgt, om prestigeeffekten også gjaldt for denne type agenter. Et psykologisk eksperiment viste, at det var tilfældet. Hvis tegnet i divinationspraksissen opfattedes som hidrørende fra en meget prestigøs modintuitiv agent, ansås det for mere troværdigt, end hvis det hidrørte fra en mindre prestigøs modintuitiv agent.

Kapitel 5 omhandler oblativ divination. Den vigtigste forskel fra impetrativ divination findes som nævnt i tegnproduktionen. Oblativ divination har brug for en bemærkelsesværdig begivenhed som tegn, da der ikke er noget forudgående spørgsmål.

Der identificeres tre måder, en begivenhed kan blive bemærkelsesværdig på. Den første måde er ved, at begivenheden har en speciel relation til en persons personlige bekymringer. Den anden er ved, at begivenheden kommer fra et katalog af anerkendte varsler. Den tredje måde foreligger, når begivenheden i sig selv er så bemærkelsesværdig, at den kalder på ekstra fortolkning. Disse tre primære måder eftervises med eksempler fra mange forskellige kulturer.

Men en bemærkelsesværdig begivenhed er ikke nok i sig selv. Der argumenteres også for vigtigheden af en kulturel model, som specificerer, at det er muligt at modtage tegn fra modintuitive agenter. Denne model findes i form af kulturelt udbredte narrativer og fungerer som en konstant påmindelse om muligheden for at finde et varsel.

I kapitel 6 sammenlignes observationerne fra de foregående kapitler. Her argumenteres der for, at en epidemiologisk tilgang kan forklare, hvordan vi kommer fra det individuelt kognitive til det kulturelt udbredte.

Den kulturelle epidemiologi, hvilken betegnelse oprindeligt blev foreslået af Dan Sperber, bruges som ramme for at samle kognitive, økologiske og sociale faktorer i en sammenhængende model for udbredelsen af divination generelt. Dette sætter os i stand til at integrere flere forskellige faktorer i en mere fleksibel forklaring. Dette munder ud i et antal empiriske faktorer, som vil blive undersøgt i den empiriske analyse.

Kapitel 7 er en gennemgang af forskningshistorien om divination i den romerske republik. Der argumenteres for, at fire primære teser har været brugt til at forklare romersk divination.

Den historiske tese forklarer divination som et produkt af historiske tilfældigheder. Der argumenteres for, at dette end ikke kan kvalificeres som en forklaring.

Den formalistiske tese ser romersk divination som blot og bar formaliteter, som kunne udelades efter forgodtbefindende. En grundig læsning af kilderne synes derimod at indikere, at det modsatte er tilfældet: Romerne tog divination meget seriøst. Frygttesen forklarer romersk divination som produkt af frygt i befolkningen. En systematisk undersøgelse af konsekvenserne af denne tese kan dog ikke støtte denne tese.

Den fjerde og sidste tese, den funktionalistiske tese, forklarer eksistensen af divination ud fra dennes funktion. Problemet med denne tese er, at det er svært at se, hvordan man kan teste den. I en enkelt situation er det muligt, men her viser den funktionalistiske tese sig ikke at holde. Det konkluderes derfor, at tidligere forsøg på at forklare udbredelsen af romersk divination ikke har været succesfulde.

Kapitel 8 gennemgår de vigtigste kilder til romersk divination.

Kapitel 9 rummer den empiriske analyse af den impetrative divination i den romerske republik. Samtlige kendte divinationspraksisser undersøges med henblik på de faktorer, som den teoretiske model fandt var af relevans i kapitel 6.

Analysen viser, at alle divinationspraksisser var motiveret af aktuel eller potentiel ulykke eller mangel på succes. Endvidere gjorde alle praksiser brug af ritualiseret handling i den divinatoriske teknik.

De tilfælde, der betragtes som manipulation, er alle eksempler på, at en ritualisering af handlingen mangler. Derimod er der ikke noget tegn på, at praksisser, der gør brug af mennesker som producenter af tegn, skulle være mere troværdige. I romersk republikansk tid findes slet ikke sådanne, men kun teknikker, som gør brug af dyr og objekter. Dette går imod, hvad vi fandt i kapitel 4.

Der er også en høj korrelation mellem troværdigheden af en teknik og den direkte prestige. Den indirekte prestige varierer omkring den direkte. Der er også forskellige anvendelsesrestriktioner for de forskellige praksisser. Disse var medbestemmende for, om en teknik blev benyttet ofte. Alle praksisser blev opfattet som kommunikation fra en eller flere modintuitive agenter.

Alle forudsigelser, undtagen en enkelt, fra den teoretiske model synes derfor at holde. Samtidig kan den teoretiske model hjælpe os til at forstå de historiske dynamikker bag udbredelsen af divination.

Til sidst argumenteres der for, at fire simple ligninger kan beskrive relationen mellem de forskellige faktorer og udbredelsen af divination.

For det første er troværdigheden af en praksis afhængig af ritualisering af handlingen i den divinatoriske teknik. Dette er den vigtigste faktor.

Herefter følger den direkte prestige. Den indirekte prestige er mindre vigtig, men dens effekt kan også ses. Sandsynligheden for, at en divinationspraksis bliver benyttet, afhænger dels af troværdigheden, dels af brugbarheden i en kontekst gange det antal gange, konteksten opstår.

Hvis en divinationspraksis' brugbarhed passer godt til en kontekst, og denne ofte opstår, er sandsynligheden for, at praksissen ofte vil blive benyttet, stor.

Den sidste ligning udtrykker, at sandsynligheden for, at en divinationspraksis vil overleve, afhænger af dens troværdighed samt dens udbredelse. En lidet troværdig divinationspraksis kan overleve, hvis den er vidt udbredt, og en lidet udbredt praksis kan eksistere, hvis den er meget troværdig. Men hvis praksissen kun er lidt udbredt og lidt troværdig, er sandsynligheden for, at den overlever, lille. Dette passer med de divinationspraksisser, vi ved forsvandt i republikansk tid. Disse fire ligninger synes at kunne forklare udbredelsen af divination i den romerske republik.

Kapitel 10 behandler oblativ divination. Her vises det, hvordan varsler generelt opfattes på baggrund af en kulturel model. Denne specificerer varslet som et tegn fra guderne om fremtidig succes eller ulykke. Alle varselsord på latin implicerer denne model, selvom de har forskellige nuancer. En analyse af frekvensen af disse varselsord på latin viser, at denne kulturelle model ofte blev kommunikeret og derfor må have været udbredt i den romerske kultur.

I den teoretiske del fandt vi, at en begivenhed på en eller anden måde skulle være bemærkelsesværdig for at blive antaget som varsel. I det romerske materiale finder vi alle tre mulige måder en begivenhed kan blive bemærkelsesværdig på. En begivenhed, som bliver et varsel i kraft af sin relation til iagttagers personlige bekymringer, er ofte udtrykt ved det latinske ord *omen*. Nogle *omina* tilhørte også den anden type, som var varsler på grund af, at de tilhørte et katalog af på forhånd kendte varsler.

Den tredje type, som er karakteriseret ved at være opmærksomhedskrævende i sig selv, ses i de romerske *prodigia*. Da de romerske kilder om denne type er specielt fyldige, undersøges de yderligere. Det viser sig, at den teoretiske model også kan forklare andre væsentlige karakteristika ved disse, såsom hvorfor visse accepteres, mens andre ikke gør. Generelt har varsler også den samme direkte prestigeeffekt som impetrativ divination.

Kapitel 11 er en konklusion, som argumenterer for, at det er muligt og endda nyttigt at bruge kognitive teorier til at udforske historiske problemer. Både kognitivt og

historisk interesserede kan lære noget af dette. Det antydes også, at den forslåede teoretiske model kan forklare, hvorfor divination til sidst forsvinder fra den romerske kultur.