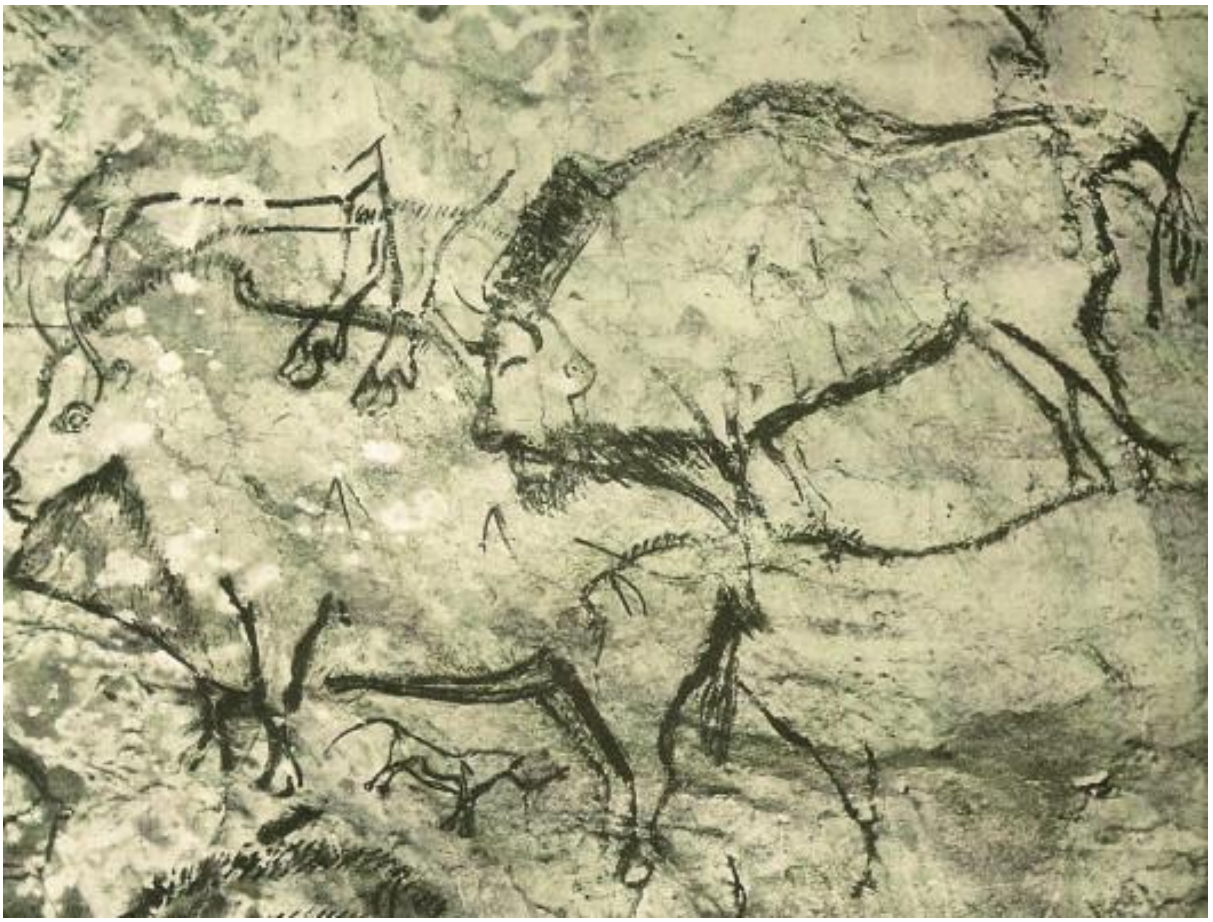
A magical interpretation: Discussing the viability of studying archaeology through a magical perspective

Heijstek, Joost

A magical interpretation

Discussing the viability of studying archaeology through a magical perspective

Joost Heijstek



Frontpage image: Niaux cave painting from the Salon Noir. This painting was interpreted as sympathetic magic during the first half of the 20th century. (Alpert, 2012, p. 692)

Title: A magical interpretation

Subtitle: Discussing the viability of studying archaeology through a magical perspective

Author: Joost Heijstek, s2648083

Course: Graduation Project Applied Archaeology, 1084VTMAY

Supervisor: Dr. A. Verpoorte

Institution: Leiden University, Faculty of Archaeology

Location: Gouda

Date: 15/12/2023

Version: Final

Table of Contents

Figures

1. Introduction

1.1 A History of 'Magic'

Magic has been a much-debated topic over the centuries. In the late 19th century, we saw much discourse around magic. Tylor wrote his book on *Primitive Culture* (1871), in which he identified magic as an early belief system based on a mistaken association of ideas. Frazer developed these ideas in his first publication of *The Golden Bough* (1890). Anthropologists such as Durkheim also studied magic, religion, and science and made his famous distinction between the sacred and the profane in his *Elementary forms of religious life* in 1912. Many of these interpretations are represented in other disciplines, such as archaeology, art history, and religion. Practical anthropology was on the rise as well, and anthropologists such as Malinowski (1935/1965; 1948/1954), Radcliffe-Brown (1952), and Evans-Pritchard (1976) were renowned for their ethnographic studies in the first decades of the 20th century. These anthropologists developed many theories around magic, religion and science in 'primitive' cultures. Archaeologists such as Breuil and Reinach incorporated these early ideas around magic in their interpretations of Palaeolithic art.

From the 1960s, we see that these theories around magic in palaeolithic art were replaced by structuralism (Moro Abadía & González Morales, 2013, p. 280). Critiques of early theories and developments in social sciences and humanities result in a severe reduction in magical interpretation in archaeology and science. However, in 1987, we saw one publication by archaeologist Ralph Merrifield on *the archaeology of ritual and magic.* The following two decades saw a noticeable increase in archaeologists working with magic (Collins, 2007; Dickie, 2001; Faraone, 1991; Faraone & Obbink, 1991; Graf, 1997; Ogden, 2002). While these works mostly focussed on a single area, the Mediterranean, the 2010s saw the introduction of several works with the materiality of magic being the primary focus and had a much larger geographical focus (Boschung & Bremmer, 2015; Houlbrook & Armitage, 2015; Willburn, 2012).

Magic has always been studied in its relationship to science and religion. Many scholars have debated these categories over the 19th and 20th centuries. One of the main questions within this framework was whether these three categories can be correctly applied as

analytical categories in comparative studies (Tambiah, 1990, p. 1). Magic is inextricably linked with religion and science. It is often compared to science as either a link in an evolutionary chain (Frazer, 1922/1993; Tylor, 1871) or a comparative study to which magic is valid. Many anthropologists and scientists debate this distinction and comparison in the 20th century.

Some of the first to make this distinction and use these categories to study and analyse magic were Sir Edward Tylor in his *Primitive Cultures (1871)* and Sir James Frazer in his *The Golden Bough (1922/1993)*. Frazer saw the relationship between magic, science and religion as evolutionary. Magic came first and was replaced by religion, and while he does not implicitly say it, science will eventually fully replace religion. According to Frazer and Tylor, magic is based on the "mistaken association of ideas" and is, therefore, a false science. Bronsilaw Malinowski already presented a different opinion on the subject matter in *Magic, Science and Religion* (1925), where he sees magic as a form of expression or art, not as a pseudo-science. Certain kinds of behaviour are perfectly reasonable because they are based on psychological or organic needs (Tambiah, 1990, pp. 65-67; Malinowski, 1925, pp. 79-81). The contributions to the field of magic of these writers, their contemporaries and later colleagues will be further discussed in this thesis.

Magic derives from the Greek *mageia,* which referred, in Early Greece, to the ceremonies and rituals performed by *magos*. Magos, or magicians, were imported from the Persian fire priests called *makus* in Greece. The Greeks had many terms to describe magic, such as different words for different practitioners (think seers, sorcerers and shamans) and words for spells, drugs and poisons. From 5th century Greece, *magoi* was often seen as a derogatory and insulting name. Naming someone a *magoi* was to say that they engaged in nefarious practices on the fringes of society and were opposed to the gods (Collins, 2008, pp. 54–55; Davies, 2012, pp. 2-5).

The definition of magic changed and broadened during the Roman period when it was no longer seen as just the practice of a mysterious sect or cult.Roman authorities used activities such as gestures of making the cross and nightly meanings to accuse early Christians of magic. In return the early Chruch Fathers created a vocabulary where Roman practices were portrayed as magic. Later on in the Roman period, the Christian Church tried

to distance itself from magic and magical practices during the Roman period, resulting in a division between magic and religion. Over time, the concept of magic evolved and was refined by theologians, anthropologists, philosophers, and scientists. Magic has always been a way for various religions to besmirch and discourage each other. Judaism, Christianity, and Islam, used this tool. Religion often used this to alienate or defame various sects (Davies, 2012, pp. 5-8).

Magic is connected with religion's development, change and progression through the ages. What we understand as magical practices or what looks like magical practices can just as easily have been seen by various religious organisations as valid religious practices (Davies, 2012, p.13). Indeed, the change in ideology by Christianity in the early stages of converting the 'pagans' did not include the complete denouncement of pagan Gods. Instead, they were often put squarely against the Christian God. Many Christian martyrs had died for refusing to sacrifice to these pagan gods, and by altogether denouncing these pagan gods, their sacrifice would have been seen as meaningless or even suicidal (Merrifield, 1987, ch4).

1.2 Research questions

This thesis aims to identify why magic disappeared in the 20th century and why it returned at the end of the 20th century and the start of the 21st century. The main goal of this thesis is to determine if magic can be used as an interpretative theme for old and new archaeological research. The study of magic has undergone many changes over its lifespan, as seen in the last sub-chapter. In science, theories change over time; some get rejected, some get further developed, and some do not get researched in the first place. The first research question applies to these changes in scientific theories.

1. Why do theories change over time, and what factors influence the logic of scientific inquiry?

However, we must apply the answers to these questions to the history of magic. Is magic a viable research strategy for science in general and archaeology specifically? Literary research into the history of magic and its changes is therefore required. Two main questions pertain to this research.

2. Why did magic fall out of fashion in academic discourse in the 20th century?
3. Why has magic made a resurgence in academic discourse in the last decades?

Reinterpreting the answers to these questions through the theoretical framework from the first question will answer why the perception of magic changed and how the theory around it influenced whether magic was researched or left to the wayside. The final task remains to evaluate whether these answers for the return of magic and its evaluation through the theoretical framework satisfy the requirement as an interpretive theme for archaeological research.

1.3 Research strategy

This research will consist of three main parts. The first part will be to create a theoretical framework for the changing of theories in science. This framework will be constructed by researching some of the most influential science philosophers, such as Karl Popper and Thomas Kuhn, and some later work by Stanley Jeyaraja Tambiah. The second part will be literary research divided into three sections regarding the history of magic. This first section will focus on the early discourse of magic from the late 19th and early 20th centuries. The second section will focus on critiques of these earlier theories and the disappearance of magic. The third section will focus on the return of magic. The third part of this research will reevaluate the reasons for the disappearance and return of magic through the theoretical framework set up in the first part. This part will also evaluate figurines as a case study for a magical interpretation of an archaeological finds group.

1.4 Reading guide

Chapter 2 will create a theoretical framework for interpreting magic as a scientific theory. This chapter will open with the evolution of science before the 20th century, with empiricism as the established epistemology of science. After this introduction, the chapter will introduce several important 20th-century philosophers and their views on the evolution of science. Theories by Karl Popper, Thomas Kuhn and Stanley Jeyaraja Tambiah will lead this evaluation.

Chapter 3 will discuss early discourse on the concept of magic. This chapter will discuss Sir Edward Tylor’s theories on ‘primitive’ cultures and Sir James Frazer’s theories on sympathetic magic. The chapter will continue discussing Durkheim's ideas about society and magic as an individualistic and futile practice. Following this, the ideas of practical

functionalists, such as Malinowski's emotional approach to magic and Radcliffe-Brown's following much of Durkheim's social-structural approach, will be discussed. This early discourse around magic will be further evaluated through the changes and use of these theories in Palaeolithic art studies.

Chapter 4 will discuss critiques of some of the early discourses around magic. Tylor's and Frazer's ideas were especially highly criticised. Famous 20th-century philosopher Ludwig Wittgenstein covered much of Frazer's work. These critiques will again be evaluated to changes seen in Palaeolithic art. The marginalisation of magic and similar terms will also be discussed here as a reason for the disappearance of magic.

Chapter 5 will focus on the return of magic to academic discourse. This chapter will focus on three main changes. First, the material-cultural turn in the late 20th century. Second is a change in thinking about magic that was developed from the early ideas of Lévy-Bruhl and developed By Tambiah and Greenwood. The increased importance of object agency also plays a big role in this chapter. The third factor is the recognition of the marginalisation of terms like magic, folklore and the supernatural and the response to this.

Chapter 6 will seek to reevaluate the answers to the disappearance and return of magic through the theoretical framework in Chapter 2. The second part of this chapter will discuss the materiality of magical objects and figurines to provide an alternative, magical way of interpreting archaeological findings.

Finally, Chapter 7 will provide a conclusion to this thesis. It will briefly summarise the findings for the three research questions and provide a final answer if magic can be used as an interpretative theme in archaeological research. Furthermore, this chapter will provide further research directions based on the thesis findings.

Chapter 2. Theoretical framework

This chapter will establish a framework on which the central questions of the thesis can be answered. This framework will provide a basis for answering how and why magic has disappeared and later returned to academic discourse. We will look at how the epistemology of science has changed throughout history and what problems it has faced. The main discussion of this chapter will be the philosophy of science and how it has changed from the 17th century to today. Several theories surrounding science, some of the problems ingrained in it and some of the developments by some of the great philosophical thinkers of the last centuries, like Karl Popper and Thomas Kuhn, will be discussed.

2.1 The evolution of science

From the late 17th to the late 18th century, philosophers of science tried to establish the foundation of knowledge. The established epistemology of science during this time was empiricism, the theory that all knowledge is based on sensory experience, and was further developed by John Locke, George Berkeley and David Hume. They further sought to strengthen and justify the discoveries of their time by protecting them from scepticism, the theory that certain knowledge is impossible (Rosenberg & McIntyre, 2020, p. 170).

John Locke argued in *An Essay Concerning Human Understanding* (2008/1690) that there were no ideas that originated in the mind but instead that everything ultimately originates from sensory experience – empiricism. For Locke, empiricism consists of 'ideas of sensation', which follow from sense-perception and 'ideas of reflection', which follow from introspection or paying attention to the operations of our minds (Dicker, 2019, pp. 31-32).

Locke should have realised that his views on empiricism gave rise to scepticism as it sheds doubt on things we cannot directly observe. George Berkeley was a philosopher after Locke, who addressed this. For Berkely, realism was false. Berkeley instead argued for instrumentalism and made a great effort to construct a framework of 17th and 18th-century science that could be used to interpret the science of this age. In his opinion, this saved science from scepticism (Rosenberg & McIntyre, 2020, p. 171).

David Hume took on the task of showing how scientific knowledge followed the theory of empiricism in *A Treatise of Human Nature* (1739) and *An Enquiry Concerning Human Understanding* (1748). His research led him to one of the first big problems for the

philosophy of science: the problem of induction. Hume's inquiry was to what extent we can rely on inductive reasoning to give us conclusions beyond our past experiences (Henderson, 2018/2022, p. 986).

2.1.1 The problem of induction & other problems of science

David Hume first brought up this problem of induction in his work in the 18th century. It is introduced as part of his analysis of cause and effect. What has happened in the past has no bearing on what will happen. Inductive reasoning tries to predict what will happen in the future or unknown scenarios. Hume argued that we cannot justify causation by deductive means but by inductive means. He wished to know the reasoning behind this statement (Goodman, 1983, p. 59; Henderson, 2018/2022, ch. 1, par. 1-2).

Following Hume, there are two ways to justify a conclusion. The first is deductive or 'demonstrative', in which a conclusion cannot be perceived to be false. The second is induction or 'probable', in which the premises support the conclusion but do not guarantee it. If we want to justify the statement that inductive reasoning is viable in the future, we have to do this by a deductive or inductive argument. The problem with any deductive argument is that at least one of the premises for this argument can only be answered by induction, leading to circular reasoning, where inductive reasoning is used to justify induction. Since no theory can be proven by using the theory itself to justify it, a problem arises in the philosophy of science (Henderson, 2023, pp. 986-987; Henderson, 2018/2022, ch. 1; Rosenberg & McIntyre, 2020, pp. 171-172).

This argument has been seen as an argument for scepticism. It suggests that all conclusions following the accepted epistemology of science as empiricism owe their validity to induction, which cannot be proven as a theory and thus have no absolute scientific basis. Hume took a different conclusion from the problem of induction; he simply believed there was a solution to the problem of induction but that it just had not been found yet. The subsequent history of empiricism follows Hume in this regard, as one of the goals of empiricism is to validate empirical knowledge (Rosenberg & McIntyre, 2020, p. 172).

All theories that follow from scientific testing or empirical observations go beyond what is observed or tested. It claims that the derived theory is always true. It follows that science is fallible since even our best or most stable theories may turn out to be wrong; "it is the

hallmark of a scientist that … he is especially open to the provisional nature of his knowledge, and therefore the possibility of changing current theories" (Tambiah, 1990, p. 142). However, by experiment, we discover the fallibility of these theories or improve on them (Rosenberg & McIntyre, 2020, p. 191).

However, even testing theories is much more complicated than it sounds. Experience can only account for a finite amount of evidence, while hypotheses or theories want to be confirmed for an infinite amount of data; no hypothesis can be conclusively confirmed by empirical evidence. Even strict falsifiability is impossible since all hypotheses require 'auxiliary assumptions'. A falsifying test cannot tell us if the fault lies with the hypothesis or one or multiple auxiliary processes that lie underneath. These problems led to one of the ideas of Karl Popper (1959/1977), in which he states that scientists should only try to falsify hypotheses instead of piling up positive instances. However, even a simple notion, such as a positive instance of a hypothesis, is not as simple as it sounds, as was proven by Nelson Goodman in *Fact, Fiction, and Forecast* (1983, pp. 72-81) by introducing The Grue Paradox. This unsolved problem of confirmation is nowadays seen as the new riddle of induction. Scientific testing is not as easy as it sounds, and many unsolved philosophical problems still affect it (Rosenberg & McIntyre, 2020, pp. 191-195).

2.2 Popper and underdetermination

After looking at some of the earlier works and problems, we have established that science and scientific enquiry are more complex than they seem. We continue with some essential works on the philosophy of science in the twentieth century, namely Karl Popper in *Conjectures and Reflections* (1963/2002) and *The Logic of Scientific Discovery* (1959/2002), followed by Thomas Kuhn's *The Structure of Scientific Revolutions* (1962/1996).

Sir Karl Popper was one of the most influential philosophers of science in the 20th century. He believed that Hume's problem of induction should not stand in the way of scientists looking to understand the methods of science. One of the problems we saw in the last chapter is that positive instances do not necessarily increase the strength of a hypothesis. According to Popper, this is not a problem; Science is not and should not pile on positive instances as theories are never empirically verifiable but instead exclusively seek

negative evidence against the scientific hypothesis. P (Popper, 1959/2002, pp. 17-20; Rosenberg & McIntyre, 2020, p. 195).

Popper's argument, as we have seen in Chapter 2.1.1, is that we cannot thoroughly verify an argument since we have a finite amount of evidence. We can, however, falsify an argument by just one counterexample. This argument has its problems, as we have seen that falsification is just as tricky as verification. An infinite number of excuses can be thought of to prevent a theory from falsification. Following Popper's ideas, a theory that cannot receive counterexamples is unscientific: "It must be possible for an empirical scientific system to be refuted by experience" (Popper, 1959/2002, p. 18). Popper even goes as far as to say that scientists should continually advance 'risky' hypotheses to make it easier to find falsifying data, and empiricism is meant to find flaws in these hypotheses (Rosenberg & McIntyre, 2020, pp. 196-197).

A problem with Popper's claims is that it is a rigorous theory. Scientists should always seek falsification, but multiple examples from the history of economics or physics disprove this. There are instances where the right path is to discard a theory and create a new one, but there are also instances in which the right approach is to either develop the theory further or improve it. Theories replacing each other cannot happen under Popper's theories; in the best event, experiments can falsify one theory while leaving another unconfirmed (Rosenberg & McIntyre, 2020, pp. 198-199). To account for these anomalies, Popper introduced a new concept called corroboration. Corroboration considers the resilience of a theory to falsification, its simplicity and its testability. This term differs from verification as it only shows the degree to which a theory has survived testing but does not show the degree to which we believe a theory is valid (Cozic, 2018, pp. 58-59).

The previous problems of induction and the difficulties with verification and falsification make science extremely complex. One crucial term born out of these debates was the underdetermination of theory by observation. Underdetermination of scientific theory by evidence means that evidence alone cannot help a scientist verify or falsify a theory (Turnbull, 2017, p. 2). Depending on the research direction, scientists can arrive at different conclusions or determine different theories from the same evidence. An entire range of different options can be chosen for every wrong test. Different choices by different scientists can lead to vastly different theories even though they started and worked with the same

data (Rosenberg & McIntyre, 2020, pp. 200-203; Turnbull, 2017, p. 7). Underdetermination is not only a problem of philosophical science, but scientists themselves can recognise practical underdetermination, which should be discussed when it affects the work of contemporary scientists. Turnbull gives an example of scientists choosing their theory as 'simpler and more general' while accounting for the possibility of new evidence that might swing the theory toward one of the other established hypotheses (Turnbull, 2017, p.7).

2.3 Kuhn's paradigms and the history of science

We saw that observational data underdetermine theories. Kuhn approached science from a historian's perspective. Kuhn's view was that the history of science is one of change but not of progress; we are not closer to the truth than we were thousands of years ago. Through his historical studies, Kuhn reasoned that claims and theories about the nature of the world we might now discard as unscientific or myths were once the leading scientific theories and embraced by the most brilliant minds of their time. Condemning the science of age's past went directly against Kuhn's philosophies. He argued that we cannot condemn the best science of a period in the past as irrational superstition. Instead, suppose we accept it as good science that cannot be incorporated into its subsequent theory. In that case, we need to consider a different way of looking at science in the form of replacement instead of reduction (Rosenberg & McIntyre, 2020, p. 208).

Kuhn argued that periods of scientific change alternated with periods of 'normal science' or everyday science, which is taught and accepted. During this period, problems can be solved, but there is no aim for new theories or data and verification or falsification of theories is out of the question. For Kuhn, a period of normal science was followed by a crisis in which a problem arose that could not be solved within the current paradigm (Barberousse, 2018, pp. 232-232).

For Kuhn, the term 'theory' did not accurately or wholly describe the body of science during a 'normal science' period. He invented the term 'paradigm'. Kuhn's original introduction of paradigms was much debated, and he later clarified it in his essay *Second Thoughts on Paradigms* (1974). He reintroduces paradigm as a term close to the scientific community. A paradigm is what a scientific community shares but also what defines the

scientific community itself. Kuhn first divides paradigms into local and global use. The global paradigm Kuhn described as the idea of a scientific community itself, while the local paradigm uses an assembly of exemplars (Hacking, 2012, §V).

A paradigm consists of symbolic generalisations, models and exemplars. Symbolic generalisations are expressions that are used without question by the scientific community. Kuhn describes models as the preferred analogies of a group or, in extreme cases, an ontology. Exemplars are set problems and solutions. A scientist can see resemblances between problems and, from there, use methods that have effectively solved the problem before (Kuhn, 1974, pp. 2-10).

After a period of trying to incorporate such problems or ignore them, more of these unsolvable problems would inevitably arise. Following this, a scientific revolution would occur where a paradigm shift would occur, as this would be the only way to solve such a problem. What is essential in Kuhn's view is that the new paradigm would not provide better answers or a better framework but because it presents a new way of interpreting a new set of problems (Barberousse, 2018, p. 233).

One of Kuhn's main points is that scientific change is not cumulative but replaces old theories with new theories where the new theory is not 'better' or 'evolved' but different to solve new problems. Kuhn held that we cannot label science of the past as 'error' or 'superstition' as those theories were created by scientists who researched problems for the same reasons. If we accept that scientists of the past were not less scientific or less evolved than we are, then we must accept past knowledge as correct science, which is incompatible with today's theories. Following this, we have to dispense with the idea of cumulative progress (Kuhn, 1962/2012, ch. 1, par. 3-4).

Kuhn introduced the term incommensurability here. When one theory replaces another, it leaves behind a remainder. As we saw before, a scientific revolution completely dispenses with one paradigm in favour of another. Problems that the previous paradigm successively dealt with are inevitably left behind in favour of progress. Incommensurability entails that paradigms do not improve each other but force a complete change in worldview. Similar terms cannot be compared between different paradigms as the meanings are changed (Hacking, 2012, ch. Sructure, par. 2). Progress is found in science, like evolution, by

local adaptation. Science has no superiority over other disciplines and shares the same ways of progress (Rosenberg & McIntyre, 2020, pp. 213-217).

2.4 Tambiah's model

Tambiah proposes a scheme (Figure 1) in which the ideas of Karl Popper and Thomas Kuhn, among others, are visualised. The vertical axis of this scheme is the internal structure of science. This axis is theoretical and philosophical. It represents the rules of logic, research operations, and science methodology. The horizontal axis represents the scientific community. This axis can be seen as sociological, part of science's internal structure. The social, political and economic situations in which research is conducted heavily influence science. Furthermore, the scientific community to which a scientist belongs decides the rules of the scientific process. The community decides what evidence is relevant and what counts as proof for or proof against this evidence. They also decide what problems get researched and which do not, along with which researchers research which problems. The "logic and sociology of scientific inquiry" (Tambiah, 1990, p. 140) thus consists of two axes: the horizontal axis is theoretical and philosophical, while the vertical axis is sociological (Tambiah, 1990, pp. 140-142).

Paradigms used in science can be seen as 'sets of beliefs' among practitioners. Practitioners of these paradigms work within the confines of these paradigms, conducting experiments and trying to solve challenges from the 'belief' of the current paradigm. Paradigms usually include conventional strategies or methods to defend themselves. It is good to remember that science or scientific inquiry does not have an end; knowledge is seen as provisional, and if a 'better', more correct theory is offered, the old one will be displaced, ensuring the growth of science. Popper argued that this growth was ensured by continuous falsification, while Kuhn argued that it was ensured by paradigm shifts or intellectual revolutions (Tambiah, 1990, p. 142).

One of the unshakable characteristics of a scientist is that they regard their knowledge as provisional. This is a hallmark of science, where scientists and non-scientists alike are much more rigid and less open to change with social constructs or religious paradigms. Science tries to find a rational and detached perspective on issues. It differentiates from the totality of life; scientists with radically different social constructs and

religious or political views can still converse with each other on scientific issues in a way that is detached from these personal or national views (Tambiah, 1990, p. 143).

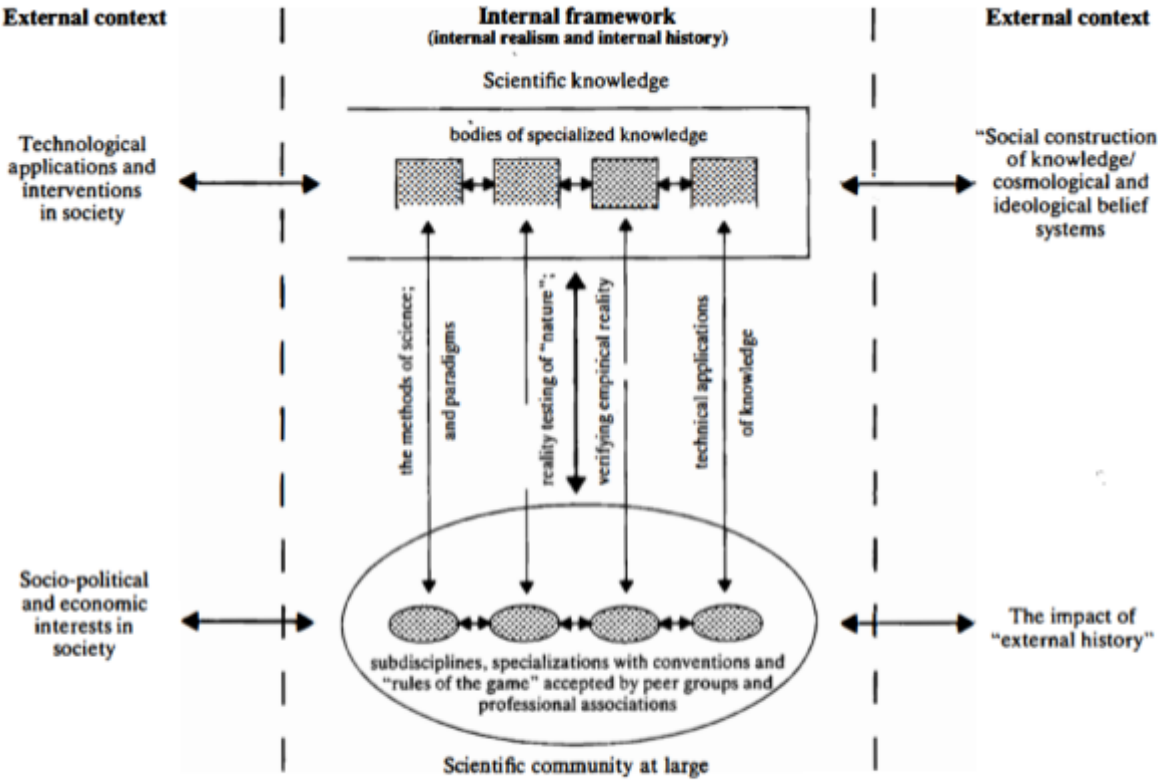


Figure 1. The logic and sociology of scientific inquiry. (Tambiah, 1990, p. 141).

2.5 Conclusion

In the past, the epistemology of science has always been empiricism. John Locke, George Berkeley and David Hume have all had their opinions and arguments regarding empiricism. Locke's ideas were plagued by scepticism, while Berkeley tried to fix this by setting up an entire methodology of science and turning to instrumentalism. Hume's research led him to the problem of induction. This problem asks how much we can rely on inductive reasoning to predict future experiences. This problem was later followed by more problems within the philosophy of science, such as difficulties with verifiability.

These difficulties led to the works of Karl Popper in the 20th century. Popper claimed that science should not look to pile on positive instances as a finite amount of data cannot thoroughly verify them. Scientists should only look to falsify hypotheses. Popper's ideas had their problems, as we have seen that falsification has difficulties similar to verification. There

are also instances where improving and developing theories is the best path forward. A result of these realisations was that evidence underdetermines theory and cannot help scientists verify or falsify theories.

Kuhn introduced history into the philosophy of science and introduced a new term for the theory of a body of science called a paradigm. Kuhn realised that current-day scientists are not more evolved than our predecessors of past ages. If we accept that they are similar to us, we also have to accept their science. It follows that science is not a matter of reduction into new theories but rather a process of replacement where paradigms. Paradigms are not continuous but incommensurable; they are incompatible and always leave behind a remainder. Progress is found in science, but it is always local adaptation, and science has no superiority over other disciplines.

Finally, Tambiah introduced another element to the logic of scientific inquiry: The sociological factor. The scientific community and its external factors, such as the social, political and economic situations, are a big part that decides what gets researched and how it gets done. These three frameworks will be used to evaluate the reasons for the disappearance and return of magic in Chapter 6.

3. Early discourse on magic

The introduction highlighted some of the developments that magic made from the concept of the term in Ancient Greece to recent times. It showed that the term magic has had negative connotations since its conception. These negative connotations have followed magic through the ages, with the Christian church and other religious institutions contributing to the alienation of magic. Some of these negative connotations can still be seen in early ideas about magic. This chapter will focus on early discourse from the late 19th and early 20th centuries regarding the history of magic. These changes will be introduced alongside the early discourse of prehistoric archaeology and Palaeolithic art, reflecting the early discourse around magic in its interpretations.

3.1 Early discourse

One of the earliest academic writers was Sir Edward Tylor (1832-1917), who worked on primitive culture. For magic, we refer to the second volume of *Primitive culture: Researches into the development of mythology, philosophy, religion, language, art and custom (1871).* Tylor's primary approach was the fallacious association of ideas concerning the connection a practitioner makes between the object and the person it is supposed to manipulate that practitioners rely on to make magic 'work' (Collins, 2008, p. 3).

One of Tylor's other main contributions to the field of magic was his work on animism. For Tylor, animism is the belief in souls or spirits. He saw this as a primitive and religious category error. His beliefs about animism are central to his discourse about human nature and religion in his works on primitive culture. Tylor considered religion on an evolutionary track that would disappear in the light of scientific discovery and objective facts. Animism was the essence of religion while also being the earliest religion itself. Tylor believed animism made the mistake of believing in souls and spirits while also mistakenly assuming a connection between humans and animals, plants and objects. Only Tylor's generations of scholars had evolved far enough to see and correct the mistakes these 'primitive' cultures made and made (Harvey, 2006, pp. 5-6).

There is often a distinction between 'primitive' and 'civilised' societies in the works of some of the earlier works at the end of the 19th and the start/middle of the 20th century. In these times, Europeans held that 'primitive' people were generally irrational, backward,

superstitious and intellectually inferior. Their Western societies had outgrown this 'primitive' thinking and evolved out of this previous stage of development (Greenwood, 2009, p. 98). Missionaries and colonial administrators were often the audience of these works, especially concerning Malinowski's fieldwork on the Trobrianders (1935/1965) and Evans-Pritchard's (1937/1976) on the Azande.

Sir James Frazer (1854-1941) embraced the fallacious association of ideas that Tylor introduced in his works. Furthermore, he advanced the approach that magic is a false science where practitioners assume a fallacious relationship between cause and effect (Collins, 2008, p. 3). Frazer also introduced a more apparent distinction between magic and religion. Frazer argued that religion evolved from a realisation of the failures of magic, and religion will be eventually replaced for much of the same reasons by science (Davies, 2012, pp. 16–17). In *The Golden Bough* (1922), Frazer outlined his ideas on Sympathetic Magic and its principles, among many examples from worldwide cultures.

Frazer divided sympathetic magic into two categories following two different laws of nature. Homoeopathic or imitative magic follows from the law of similarity. A frequent application is to create an image of the person a practitioner or customer is trying to affect and produce an effect on the image instead of the person itself. The basis for this homoeopathic magic is that like produces like or that an effect resembles its cause. Magic practitioners can use this law to produce an effect by imitating it (Frazer, 1922, pp .11-13).

Contagious magic follows from the law of contact or contagion. This law assumes that things that have once been in contact continue to be in contact with one another, even over a distance, once the connection is severed. A typical application of this is the connection between a person and their body – hair and nails are recurrent elements used in contagious magic. Magic practitioners infer from this that whatever he does to a material object will affect the person it was once in contact with in the same way (Frazer, 1922, pp. 11, 37-38).

According to Frazer, the laws of similarity and contact are based on the fallacious association of ideas. Homoeopathic magic makes the mistake that things that resemble each other are the same and can affect each other. The mistake contagious magic makes is assuming that things that were once in contact with each other are still in contact with each

other (Frazer, 1922, pp. 11-12). Both laws are often combined; magical dolls or figurines often include contagious elements such as hair, nails or spittle (Frazer, 1922, p. 13).

Magicians assume that the law of similarity and contact do not only apply to magic but are universal laws of nature. The principles of association are sound but misapplied; when used correctly, these principles yield science; when wrongly applied, they yield magic. Magic is necessarily false in Frazer's view; otherwise, it would no longer be magic but science (Frazer, 1922, pp. 48-50). To the magician, magic is always an art and never a science. Frazer (1922, 11-12) argues that the idea of science is lacking from the undeveloped mind of a magic practitioner and that he never reflects on the mental processes or abstract principles of his actions.

Frazer did not believe that magic never had a purpose and could not or did not benefit earlier societies. One of the benefits of magic was that it helped earlier societies get the most able men in places of power. Magic was not only an individual thing but could also benefit communities or societies. A magician was often a prestigious function and offered wealth and power. In a 'savage' society, this helped to get control in the hands of the most able people. Frazer argues that the most able members of society must know this and are thus deceiving the 'less able' believers. This deception also gives the magician many excuses since he knows he is deceiving the general public, while a 'real' practitioner will be surprised if their magic does not work. In Frazer's opinion, this was one of the benefits of magic in earlier societies since it placed able men in a position of power with the ability to keep their position. Another benefit of magic is that it paved the way for science and has been the source of a lot of good; magic may have been based on the fallacious association of ideas, but it benefited individuals and communities alike (Frazer, 1922, pp. 45-48).

3.2 The magic-religion dichotomy

Emile Durkheim was one of the foremost scholars in early sociology and philosophy. Durkheim believed that society was much more than just the individuals involved. He regarded society as an entity that incorporated all its members' mental processes and actions, including religion, magic and science. Durkheim argued that processes in societies should be studied in the same way as natural processes. Following this, he had no regard for the individual and mainly focussed on society as a single entity. Durkheim argued that

religious and scientific thought were continuous. Scientific thought followed religious thought. He also assumes a similar view that a society with the simplest technology will have the simplest religion, with totemism as the most 'simple' form. Durkheim assumed an evolutionist point of view, also adopted by early intellectualists such as Tylor and Frazer (Cunningham, 1999, pp. 43-44; Greenwood, 2009, p. 153).

In *The Elementary Forms of the Religious Life,* Durkheim published the culmination of all his work. Here, he made his famous distinction between the profane and the sacred. Science is classified as the profane, while the sacred is inextricably linked to magic and religion, with religion's primary goal being to unite a society into a single moral community. For Durkheim, religion was a binding force within communities: "A religion is a unified system of beliefs and practices relative to sacred things, … beliefs and practices which unite into one single moral community" (Durkheim, 1915/1964, p.47). His standpoint was that there was no need for a belief in the supernatural to be religious. Instead of supernatural factors, religion accounted for things like the movement of the stars, the seasons and the growth of plants (Greenwood, 2009, p. 153).

On the other hand, magic was a transaction between individuals and had no value in a society as it could not connect people or bind a society together. In short, magic and religion have similar beliefs but different social functions, making one inherently superior (Cunningham, 1999, p.44). Magic is a hostile and private activity opposed to public religion (Greenwood, 2009, p. 5). Magic and religion are based on beliefs and rites and have their myths and dogmas. Magic, however, is the more elementary of the two as it seeks "technical and utilitarian ends" (Durkheim, 1915/1964, p. 42). Durheim even classifies fertility rituals that Frazer would describe as homoeopathic or imitative mages as religious acts because they function to integrate society. They are part of a system of belief and practice that unite into one community (Cunningham, 1999, pp. 45-46).

3.3 Application to Palaeolithic art

The early views on magic and religion by Frazer and Tylor and Durkheim's ideals also influenced archaeology, visible in the interpretation of Palaeolithic art from the 19th to the 20th century. The view on Palaeolithic hunters in the 19th century was heavily influenced by social-evolutionist thought. Hunter-gatherers were denied any form of symbolic or

intellectual complexity. Their material life was characterised by need, and their intellectual life was seen as dull and simple. This made it impossible to equate cave art with the concept of a 'savage' society. In the second half of the 19th century, the belief was that religious thought was impossible for 'primitive' society. In addition to the incompatibility of 'primitive' thought with religion, there was the understanding that only portable art was ancient and was generally seen from a decorative-amusement standpoint. Prehistoric art was generally classified into two groups: Parietal art (Including rock and cave art) and portable art (Moro Abadía & González Morales, 2013, p. 270). Portable objects were generally classified as crafts, a 'lesser art' in contrast with the 'fine arts' of civilised societies (Palacio-Pérez, 2010a, pp. 1-2; Palacio-Pérez, 2010b, pp. 853-854).

After 1885, this rigid and simplistic view started to change with the help of Tylor's theories of cultural-mentalist evolutionism. Already in 1866, Tylor introduced his theory of animism to explain the primitive and basic expression of religion and attributed this to the most primitive humans. A few years later, totemism was introduced as the oldest animist belief. Following Tylor's research, Frazer produced his first edition of *The Golden Bough* in 1890, pursuing an evolutionary organisation of the different belief systems. He argued that modern religion is the development of more ancient ways of thought, and this 'primitive' mentality can described as magic. Sympathetic magic and totemism became the generic interpretative framework for primitive religion (Palacio-Pérez, 2010a, p. 3).

These new ideas about primitive religion in the Palaeolithic did not immediately change the interpretation of art from a decorative-amusement standpoint. Simplistic evolutionism still did not allow religious thought for 'primitive' societies. In addition, there was still a 'lesser' and 'fine' arts classification. In the 1890s, the concept of art was enlarged, and anthropological and ethnographical studies played a larger role in aesthetic thought. This transformed the way of understanding 'primitive' art (Palacio-Pérez, 2010a, pp. 4-5).

This change in art theory in the late 19th century allowed for works of art that had previously been classified as 'lesser' craft to be incorporated into the broader category of 'fine' art. The surge in anthropology also contributed to art theory with the acknowledgement that artistic activity could have a social function. Creativity and functionality were combined through this acknowledgement, fulfilling a symbolic and material function in society. This new discourse was accepted over the last decades of the 19th century and led to a new paradigm where magic-religious motivations became the

accepted explanation for Palaeolithic art. This new paradigm was first applied to portable art and later to the newly discovered parietal art (Palacio-Pérez, 2010b, p. 854).

The start of the 20th century saw a period of intense research and the discovery of numerous sites with prehistoric art. During this period, Palaeolithic art was judged on representational accuracy. This included the presumption that art had progressed from rough, non-representative drawings to three-dimensional paintings. Despite these new classifications, parietal and portable remained popular and, by the 1950s and 1960s, had become increasingly popular (González Morales, 2013, p. 277). Portable art included transportable visual images, including "statuettes, figurines, contours de´coupe´s, engraved implements, plaquettes, rondelles, perforated antler batons, and personal ornaments" (Moro Abadía & González Morales, 2013, p. 278). These were judged on their naturalism during the first half of the 20th century. Breuil (1905, p. 120) suggested that nonfigurative art resulted from the degradation of naturalistic representation and argued that lack of skill contributed to this.

The depiction of portable artwork differs from the definition of parietal art in the first three-quarters of the 20th century. During this period, most archaeologists considered paintings and drawings to require higher technical and cognitive skills than portable art. The prominent role of rock images can be seen in the explanations of prehistoric art. These were almost entirely based on cave paintings. Important archaeologists such as Reinach and Breuil proposed hunting magic to explain palaeolithic images. These theories suggested that palaeolithic images were part of sympathetic rituals designed to ensure success when hunting. Portable objects were generally omitted in hunting-magic theories. Art history heavily influenced prehistoric art studies, resulting in the interpretation that prehistoric art had evolved from primitive to naturalistic representations. The importance of naturalism and the introduction of magic supported each other as representation is an important factor in sympathetic magic (Moro Abadía & González Morales, 2013, pp. 279-280).

Salomon Reinach was the driving force behind these changes at the start of the 20th century. Reinach was an important intellectual in the French academic world in the late 19th and early 20th centuries. Most of his work was on Classical philology and archaeology, but also expanded to the history of religion, art history and prehistoric archaeology. The two main trends in the 19th century in the social sciences were to achieve an understanding of human behaviour and a particularist and racial interpretation of different societies. Ieinach

incorporated the British evolutionist school theories by authors such as Tylor and Frazer. The expansion of anthropology in the late 19th century heavily influenced other disciplines, such as archaeology and the history of religion and art. The application of ideas about totemism, animism, and sympathetic magic was slowly incorporated in France, and Reinach was among the first to do so. Reinach and Breuil, among other scholars, proposed hunting magic to explain palaeolithic images during the first half of the 20th century. These theories suggested that palaeolithic images were part of sympathetic rituals designed to ensure hunting success (Moro Abadía & González Morales, 2013, pp. 275). (Palacio-Pérez, 2010b, pp. 854-857).

We can identify two key moments that contributed to this paradigm shift. The first is a series of isolated references to this new magic-religious interpretation with no continuity by different authors in the late 19th century. The second is a group of proposals that were developed at the turn of the century at the same time as the increasing acceptance of the antiquity of cave art, no longer isolated references but an accepted theory for interpreting 'primitive' art. The renewal in artistic theory took place between these changes. These changes led to a different discourse on the origin and nature of art. Leading scientists on Palaeolithic art, Reinach and Breuil, built on this new anthropological approach to studying art in the late 19th century. Reinach accepted that magic-religious behaviour was related to the origins of art and must, therefore, also explain Palaeolithic art. This new paradigm finally concluded that magic–religious beliefs lay the basis of art's origins (Palacio-Pérez, 2010a, pp. 9-10; Palacio-Pérez, 2010b, pp. 859-860).

3.4 The rise of practical anthropology

Malinowski's work was a product of 20th-century anthropologists using fieldwork to study specific questions about the nature of religion, science and magic in 'primitive' cultures (Cunningham, 1999, p.28). Malinowski was one of the pioneers of fieldwork and studied the Trobriands in New Guinea, where he developed many of his ideas (Berry, 1966). The focus shifted from studying the origins of magic to studying magic in the current climate. Magic was not just a 'primitive' aspect anymore but was also not seen as directly opposed to religion and science (Davies, 2012, p. 21). Malinowski made his own distinction between magic, science, and religion in opposition to magic as a pseudo-science, as was Frazer and

Tylor's theory. He rejected the evolutionist or developmental hypothesis that magic, religion and science all replace one another and stated that all three elements can be found in all societies and exist next to each other (Cunningham, 1999, p. 29).

Malinowski's view can be seen as a negation of the viewpoint of Frazer and Tylor. Frazer and Tylor saw magic, science and religion from a developmental perspective and that magic and religion had to be tested against the rationality of science, which would eventually replace both. Malinowski argues that basic psychological or organic needs make certain kinds of behaviour that Frazer and Tylor describe as irrational as perfectly reasonable (Tambiah, 1990, p. 67). Malinowski held that all magical acts are primarily conveyed through emotion, and the accompanying objects and substances have the same purpose: to add to the required or produced emotion (Malinowski, 1948/1954, pp. 70-74).

Malinowski compares magic and science and magic and religion in his *Magic, science and religion and other essays*. He starts with science. Science gives people dominion over their surroundings. It allows them to use the forces and laws of nature and science and use these to their advantage. Religion establishes, fixes and enhances a multitude of mental attributes. These attributes include respect for tradition and the environment and giving people the courage and confidence to confront their difficulties and be more at peace with death and the afterlife. Magic exists to give men several pre-packaged ritual acts and beliefs that they can apply in difficult and crucial situations. For Malniwoski, the point of magic is to "ritualise man's optimism, to enhance his faith in victory or hope over fear" (1948/1954, p.90). It gives people rituals to hold on to, to give them confidence instead of doubt and to remain optimistic instead of pessimistic in emotional scenarios (Malinowski, 1948/1954, p. 85-90).

Magical beliefs and practices are not invented from nowhere but come from lived experiences in which people receive the power to create a desired effect. For Malinowski, magic is not derived from an observation of nature or knowledge of the laws of nature. Still, it is a possession of men known through tradition and is especially effective in affirming men's autonomous power to create desired results. Magic is a human possession and is physically and mentally enshrined in people. Because magic is inherently human, this also means that magic does not use some otherworldly substance, such as **mana**. Magic results from the spontaneous flow of ideas in man's spontaneous reaction to his environment

(Malinowski, 1948/1954, pp. 74-79). At this point, we can also include myth into the conversation. Tradition is vital in magical rituals as magic does not have an origin; it was not created or invented. There is always a story in mythology accounting for its existence. Magic is the most developed mythology in 'primitive' cultures. Malinowski sees myth not as a passive or 'dead' story of the past but as a living force that creates new stories and shares new experiences surrounding magic. Myth is not in the business of explaining magic but in the business of reinforcing it. It exists to give confidence in magic. This distinction is also where sociological myth differs from religious myth, as it exists to explain its dogma (Malinowski, 1948/1954, pp. 74-84).

Malinowski divided magic, science, and religion into two groups: the sacred, which constituted magic and religion, and the profane, which constituted science. His division is related to Durkheim's analysis of the sacred and the profane. Still, it is only loosely based on this dichotomy since he rejected the rigid division between the sacred and the profane. He denounced the evolutionist view on magic, religion and science (Tambiah, 1990, p.70). Malinowski (1948/1954, p.17-18) defines sacred as traditional acts or observances which were seen by the natives as sacred and were usually connected to the supernatural. The profane, he relates to arts and crafts, which were carried out based on observation and within the realm of natural laws. Malinowski's characterisation of magic and science is simplistic and generous (Tambiah, 1990, pp. 67-68). Still, his most significant contribution to the field of magic was his insistence on the interaction between the sacred and the profane in everyday life.

Malinowski, magic corresponds to emotion. Magic served two functions: Psychological and sociological. Moments of hardship and practical matters are the precipitators of magic. Magic is turned to when the control of nature has reached its limits or technology is of no further help. For example, lagoon fishing is safe and thus, no magic is seen in this practice. However, deep-sea fishing is dangerous and is surrounded by magic. This observation has some problems as sharks have more inherent ritual importance than lagoon fishing; there are different factors at work than technological difficulties. The sociological function comes into play here. Certain plants have more social value than others as they are more important to the community. Despite having the most sophisticated cultivation techniques, Yam and Tari's cultivation is surrounded by magic in Trobriand culture. Psychological and sociological factors both contribute to when magic is turned and

when it is not (Tambiah, 1990, pp. 71-73). Here, we also see the interaction between the sacred and the profane; science creates sophisticated cultivation techniques, but these gardening practices are still interlaced with the sacred.

Malinowski did not shy away from the inherent problems he noticed surrounding magic. Why do the failings of magic presumably go unnoticed in most cultures? Malinowski has several explanations for this. First of all, Positive cases overshadow multiple negative ones. Second, as seen in Frazer's account, magic often coincides with personal success, skill, and power, which inherently enhances the belief in magic. Failings can also be explained away rather effectively in magic as they often rely on strict conditions and the fact that a counterspell exists for every spell created (Malinowski, 1948/1954, p. 85).

While studying the Trobrianders, Malinowski realised that they made a distinction between ordinary and magical speech. He attributed the unique character of this ritualistic, magical language to three different factors. The first is the intrinsic character of this language. The language itself is sacred and is completely separated from ordinary language. The second is the context of native belief. We saw that magic was not created from anywhere but that there is always a story accounting for its origin. The Trobrianders believe that magic existed from the beginning and that magicians could use it (Malinowski, 1966, pp. 213-218; Tambiah, 1990, p. 74). The last factor is the "coefficient of weirdness" (Malinowski, 1966, p. 218). This factor comes from the belief that magical speech is derived from different sources as everyday speech and is used to achieve different goals. Ordinary rules of grammar, logic and consistency do not apply to magical speech, hence the coefficient of weirdness (Malinoski, 1966, pp. 218-223). Malinowski argued that there are two different languages in every society: the language of technology and science and the language of magic and persuasion. This language of persuasion can be seen in modern cultures through legal formulas such as binding contracts and political speeches with persuasion as a goal (Tambiah, 1990, pp. 79-80).

Malinowski was the first of this new school of practical anthropologists in the 20th century, and his ideas are still commonly referred to in modern discourse (Frankfurter, 2019; Wallis, 2023). In the late 1930s, Alfred Reginald Radcliffe-Brown eventually replaced him as the leading figurine in British anthropology as a product of his studies of the people of the Indian Ocean Andaman Islands and the Australian aborigines (Davies, 2012, pp. 22-23).

Instead of following Malinowski's social-psychological approach, he continued in much of the same vein that Durkheim had. His research pointed him to the same statements that religion functions to unite and maintain a society. He rejected Malinowski's emotionalist and functionalist approach by saying magic could have just as easily given men fears and anxieties it would not have had before as it could have helped with confidence and comfort.

> Thus, while one anthropological theory is that magic and religion give men confidence, comfort and a sense of security, it could equally well be argued that they give men fears and anxieties from which they would otherwise be free—the fear of black magic or of spirits, fear of God, of the Devil, of Hell. (Radcliffe-Brown, 1952, p. 149)

He argued that the division Durkheim made between magic and religion were unhelpful categories and should be encompassed in ritual (Cunningham, 1999, pp. 48-49).

3.5 Conclusion

This chapter focused on late 19th and early 20th-century theories on magic, religion and science. Tylor and Frazer saw magic as a mistaken association of ideas. They also adopted an evolutionary point of view where magic was the first step and a sign of a 'primitive' mindset. This new generation of scholars from Tylor's and Frazer's were the first to 'evolve' far enough to correct the 'mistakes' the 'primitives' make. Religion would completely replace magic, while science would eventually replace religion.

Durkheim and Mauss were contemporaries of Frazer and Tylor and created a dichotomy between magic and religion. Durkheim and Mauss adopted the reigning evolutionist mindset. One of Durkheim's contributions was his distinction between the sacred, as linked to magic and religion, and the profane, as linked to science. Magic was secret and individualistic, while religion was of communal benefit and bound society together through a central institution such as the Church. Magic was of no benefit to society and could thus be discarded. Religious study would be of more benefit to society. Durheim also made the distinction between the sacred.

Theories from the surge in anthropology also heavily influenced other disciplines, such as archaeology. These new theories can be observed in the shifts in interpretation of Palaeolithic art. Cave art interpretation used to be hampered by a crude view of 'primitive' societies that allowed nothing more than a decorative-amusement interpretation. With the introduction of anthropological theories around religion, magic and earlier societies, and

their contemporary counterparts, this interpretation changed to magic-religious belief as the origins and explanation of Palaeolithic art.

Finally, we see the introduction of practical anthropology, which came as an answer to the armchair anthropology by Tylor and Frazer. Malinowski is seen as the father of modern anthropology because of his high standards for fieldwork. His research on the Trobriand Islanders led him to take an emotionalist and functionalist viewpoint on magic. He argued that magical practices were perfectly reasonable and understandable in the environmental and social context of the Trobriand Islanders. Malinowski's research also led him to recognise the existence of two different languages: Magical speech and normal speech. A last important point of his research was that the sacred and the profane distinction that Durkheim developed was not that strict. The sacred and the profane often interacted or existed next to each other in every society.

Radcliffe-Brown was another early practical anthropologist who rejected Malinowski's views on magic and followed much of Durkheim's theories on religion's social value but argued for an overarching category or ritual instead of a magic-religion dichotomy.

4. Critiques and the disappearance of 'magic'

This chapter will first discuss the major critiques of the early discourse discussed in the last chapter. As science evolved, people began to better understand earlier and contemporary society. Major critiques were delivered against Frazer's accounts in *The Golden Bough* and other so-called armchair anthropologists. Wittgenstein was especially critical of many of the statements that 'primitive' cultures were less developed and did not have the mental capacity for scientific thought. These changes will be reflected in the evolution of the interpretation of Palaeolithic art. These critiques heavily influenced the perception of magic, eventually leading to a large disappearance of magical studies and a general apprehension to use terms related to magic and the supernatural.

4.1 Critiques on the early discourse

We start by taking a critical look at some of the flaws in the theories of Tylor and Frazer's account of magic, religion and science in primitive cultures with the help of some significant voices in the discourse of religion and magic in the 20th century. Marcel Mauss *A general theory of magic* (1950/1972) started with the same philosophy as his nephew Emile Durkheim. He also started with magic as a primarily individualistic and private practice, while religion was a collective practice. He described magical rites as "any rite which does not play a part in organised cult—it is private, secret, mysterious" (Mauss, 1902/1972, p. 24). However, Mauss did not see such a clear distinction between religion and magic as Durkheim attested to in his works. He argued that magical rites were often found on the same conceptions as religious acts. Mauss developed the term magico-religious to avoid the entire debate around magic and religion. He argued that the religious impulse developed before magic. Where religion was an expression of society, magic developed as individuals appropriated religious rituals and customs for themselves. (Davies, 2012, pp. 18–19).

First, we will discuss Wittgenstein's *Remarks on Frazer's The Golden Bough* (1922/1993). Wittgenstein read Frazer's remarks in 1930, after which he wrote several remarks on Frazer's ideas. Wittgenstein was generally critical of the notion that magic was false science in an evolutionary scheme before religion. Wittgenstein was interested in magic because it represented a symbolic language (Davies, 2012, p.20).

Frazer notes that the people in 'primitive' societies were from a time before science and that their undeveloped minds could not comprehend science itself. Thus, magic was a step before science and even religion on the evolutionary ladder. Wittgenstein argues that Frazer thinks way too lowly of these 'savages' when attributing superstitious fears and reasoning errors to them while we are much alike. Wittgenstein argues that general human reason and imagination, by which we all reason, can be applied to the processes and rituals of primitive societies to figure out all the possibilities for ourselves (Tambiah, 1990, pp. 54-61, 63). Frazer and Tylor 'regress' to the way primitives think, but Wittgenstein argues that they had the same symbolising and ritualising as we do:

> That is, the principle according to which these practices are ordered is a much more general one than [it appears] in Frazer's explanation, and it exists in our own soul so that we could think up all the possibilities ourselves. (Wittgenstein, 2020/1967, pp. 38-40).

Wittgenstein immediately noted the significance of performing rain ceremonies in the wet season instead of the dry season or sunrise ceremonies at dawn instead of any other moment in the night. He also commented on Frazer's beliefs that rituals that involve homoeopathic magic are inherently connected to false casual action. Wittgenstein argues that imitative rites are not necessarily meant to convey their result upon the image but that the process or act is in itself the fulfilment. Representation is fulfilment(Tambiah, 1990, pp. 55-59; Wittgenstein, 2020/1967, pp. 36-38, 52-54).

Another interesting point Wittgenstein makes regarding Frazer's work concerns language. Frazer insists that taboos are grounded in superstitious fears of the ghosts of the dead. Wittgenstein raises the question of translation between cultures. Frazer uses ghosts and gods in his work, but this implies that he is equating these terms to those familiar to him, while these terms might not have the same meaning in another culture. It also implies that Frazer had more in common with these cultures than he might have realised since terms such as ghosts and gods are, in turn, familiar to him (Tambiah, 1990, pp. 59-62, Wittgenstein, 2020/1967, pp. 44-46).

Tambiah (1990, pp. 63-64) lists two strategies that Wittgenstein advanced that can be used for interpreting religious/magical views and acts. The first is to try and identify motivations and inclinations in general human reasoning and imagination in general circumstances: "We could think up all the possibilities ourselves" (Wittgenstein, 2020/1967, p.40). The second strategy is reflecting on our language in which heritage and mythological

conceptions are embedded to find connections between all ritual languages, modern or ancient: “A whole mythology is deposited in our language” (Wittgenstein, 2020/1967, p.40).

Evans-Pritchard was a student of Radcliffe-Brown and is famous for his research on *Witchcraft, oracles and magic among the Azande* (1937/1972). His fieldwork focused on the Zande people in Central Africa, where he reflected on the specific instances in which magic and religion occurred. Evans-Pritchard made a distinction between modes of thought as mystical and empirical. Similar to how Malinowski made a distinction between magical speech and normal speech. Magic was still generally believed to be a product of the ‘primitive’ mind in contrast to modern Western scientific thought. Evans-Pritchard argued, however, that scientific thought only occurred in specific circumstances. We do not continuously engage in scientific thought. When scientists are out of the laboratory or not at work, they think the same as everyone else. He argued that the contrast between ‘primitive’ and modern society was much exaggerated (Douglas, 1980, p. 31). Evans-Pritchards' view is that it is important to compare like with like in any given society. Magic and scientific thought should be compared to similar thought systems in our own society, Not magical thought to scientific thought (Greenwood, 2009, p. 23).

Evans-Pritchard felt it important to equate Zande terms for different types of magical activity to direct English translations. He equated *Mangu* with witchcraft, *Ngua* with magic and medicine in ritual action and sorcery as a separate category of *Ngua.* These clear and precise definitions of witchcraft, secrecy, and magic as general terms became standards for further anthropological research. These classifications are, however, problematic. His definition of sorcery differed from that of most practical anthropologists before him, as sorcery was described as harmful magic before Evans-Pritchard’s publications. The focus on witchcraft and sorcery that resulted from his publications led to a neglect of a broader, richer, but much more complex world of African magic and magic in general (Davies, 2012, pp. 24-25).

4.2 Critiques of hunting magic and Palaeolithic art

The early discourse around Palaeolithic art followed the evolutionist viewpoints in the last chapter. Art was incompatible with ‘primitive’ society. This statement had a profound impact

on the 20th-century conception of Palaeolithic representations. Scholars stressed the differences between 'modern' art and 'primitive' art and even stressed that 'modern' art was purely aesthetic while 'primitive' art was primarily utilitarian. 'Primitive' art also needed a dark side: its magic-religious interpretation that was quickly adopted from anthropology and art history. These factors stressed the differences between modern Europe and the 'primitive' Palaeolithic (Palacio-Pérez, 2012, pp. 706-707). We have seen from earlier critiques by Wittgenstein and Evans-Pritchard, among others, that the contrast between 'primitive' and modern society was exaggerated if it existed at all. Wittgenstein argued that they had the same symbolising and ritualising as we did.

Due, in part, to this recognition, the art-as-magic theories and the magic-religious interpretations of the Palaeolithic were replaced by structuralism in the 1960s. This interpretation regarded Palaeolithic images as symbols representing an underlying mythology in prehistoric societies. Pleistocene representations were interpreted as part of a system that reproduced a male-female structure. Structuralists kept assuming the superiority of parietal over portable art. Leroi-Gourhan explained this position by arguing that parietal art had not lost its context in contrast to portable art. However, portable objects can be easily dated, whereas parietal paintings are dated with more difficulty. Structuralism was largely based on cave art, whereas portable art was largely ignored (Moro Abadía & González Morales, 2013, p. 279-280).

Structuralism also included the different areas within the cave, the animal position and the association of certain representations. Portable objects were only included to confirm the hypotheses about chronology, distribution or meaning of parietal representations but were not included in making the hypotheses themselves (Moro Abadía & González Morales, 2013, p. 280). Whereas the cave was first just seen as a medium for Palaeolithic art, it was now seen as a vital element of the art itself. Instead of focusing on individual drawings or creating connections based on simple procedures, the entire picture became the focus. Traditional studies equated a bison plus a line to an image of a bison subjected by magic; a horse plus a small figure as a representation of spirit or fertility penetrating a mare; an animal with a rounded farm as a wish for fertility; and a woman of ample forms as a mother goddess (Leroi-Gourhan, 1986, p. 8).

New studies feature a method similar to decoding texts by equating a vocabulary to more than 2000 figures from Palaeolithic art. A distinction can be made between animals,

signs, human shapes and stencilled hands. There might have been a link between the economic importance of the animals and the number of representations, but magical practices do not account for this entire number. A bison plus a line (Figure 2) was traditionally equated to a bison subjected to magic. Further data on these connections have shown that the combination of aminal figures and signs is plentiful and often varies. Some might be placed near animals, some are isolated, and others are placed on the animal. Sometimes, the sign is even replaced by another representation. This data does not exclude a magical interpretation, but if there were multiple symbolic equivalents of the same thing, the limits of magical behaviour would be far surpassed (Leroi-Gourhan, 1986, pp. 12-14).

Figure 2. Niaux cave painting from the Salon Noir. This painting was interpreted as sympathetic magic during the first half of the 20th century due to the arrows on the bisons. (Alpert, 2012, p. 692).

4.3 Marginalisation of magic

Another view on the disappearance of magic from academic literature is the term itself. Some words have lost their credibility in academia; these include supernatural, folklore, and magic. Part of this problem was Evans-Pritchard's problematic classifcation of witchcraft, sorcery and magic which let to the neglect of magic as a broad and rich subject (Davies, 2012, pp.24-25). Merrifield (1990, xiii) argued that the field was neglected because scientists were hesitant to dip their toes into magic because of the aura of sensationalism around it, partly due to the inclusion of magic in popular cultures, such as fantasy fiction, which took off with publication such as *Lord of the Rings* by J.R.R. Tolkien in 1954 and *Narnia* By C.S. Lewis from 1950-1956. Greenwood mentions in her introduction that many disciplines do not fully understand magic and have often dismissed it as "bizarre or peripheral" (2009, p. 1). These terms were also often seen as controversial by the researchers themselves. As an archaeologist, do you dare explain a site by talking about folklore, magic or the supernatural? Gazin-Schwartz (1999, pp. 36-37) argues that many archaeologists fear explaining sites this way for fear of ridicule and not being taken seriously.

We can derive a similar point of view from Keith Thomas' book *Religion and the decline of magic* (1971). This book starts with a comment on magical practices "which no longer enjoy much recognition today. Astrology, witchcraft, magical healing, divination, ancient prophecies, ghosts and fairies, are now rightly disdained by intelligent persons" (Thomas, 1971, p. ix). Thomas moved on from the evolutionist standpoint from the start of the 20th century, where he instantly mentioned that these theories and practices were taken seriously by intelligent people in the past. However, he saw magic as an aspect of religion that eventually gets expelled; there was a clear distinction between magic and religion and magic was doomed to decline (Hanegraaff, 2003, p. 358; Tambiah, 1990, pp. 22-23; Thomas, 1971, p. ix).

4.4 Conclusion

Over the course of the 20th century, evolutionism began to fade. Wittgenstein argued that these so-called 'primitive' societies had the same reasoning and mental capacity as Western scholars. Scientists should not leap to conclusions about magical practices as a 'lesser' form of thinking, and that magic was not a frontrunner for religion and, eventually, science.

We can see a similar change in the interpretation of Palaeolithic art, where magic-religious reasoning for parietal art was disregarded in favour of structuralism. Magic was not completely shunned, but other interpretations, such as seeing the cave as a language that can convey a story, took a more frontal role. Individual paintings and connections in the painting themselves, such as arrows in bisons, were less important, and the complete picture of the cave was seen as the leading explanatory factor. These individual paintings had more explanations that a magical interpretation could no longer cover.

Another reason for the disappearance of magic was the marginalisation of terms like magic, folklore and superstition. Evans-Pritchard problematic classification of witchcraft, superstition and magic played an important role in this marginalisation. Folklorists and archaeologists, among other disciplines, were scared to talk about magic, folklore, or the supernatural as they were seen as bizarre fields of study on the fringes of accepted science. Scholars studying these subjects could face ridicule and were generally not taken seriously. The sensationalisation of magic and the supernatural through popular culture and fantasy fiction certainly attributed to the marginalisation of magic, the supernatural and folklore.

5. The return

In the last chapter, we determined the major elements for the disspaerenace of magic as an interpretive category. Before determining what factors contributed to the return, we must first look at some developments in the 20th century that led to this resurgence. Changes in academic theories in disciplines such as anthropology and archaeology can be seen in the evolving interpretation of Palaeolithic art. Especially the shift in thinking in anthropology from studying magic from a Western point of view to studying magic from a magical or similar point of view and the resurgence of material culture studies contributed heavily to this change.

5.1 A different way of thinking

The return of magic was slowly initiated in the 1960s with Murray and Rosalie Wax's proposition of a fundamental shift in the study of magic. The Waxes criticised the distinction between magic and religion popularised by Frazer and Durkheim at the start of the century. They argued that these distinctions were based on Western Judaeo-Christian conceptions, which were inappropriate for studying other cultures. Magical had to be interpreted within a worldview fundamentally different from Western rationalism. The Waxes even argued that the Western worldview was harmful and toxic to the study of magic and led to magic being categorised as a thing of 'primitive' and 'savage' societies. Even Malinowski's more accepting ideas were rationalised from a Western worldview (Davies, 2012, pp. 25-26; Wax & Wax, 1963, p. 502).

In a similar timeframe, another shift in thinking can be observed in the humanities and social sciences. A new 'postmodern' way to examine witchcraft and magic was introduced. Participant observation became much more critical, where the participant participated in magical practices while remaining neutral and objective. For the study of magic and witchcraft, this meant taking one's experiences seriously while engaging in magical practices. This change was initially led by feminism in the 1960s, where the presumption that ethnographic accounts were neutral and objective was challenged since most were written by white, middle-class, western men (Wallis, 2023, p. 246). This male-centred bias could have impacted these ethnographic accounts in a big way: "sources relating to women being ignored, sources relating to men being interpreted as if

representative of both sexes, and sources relating to both sexes being interpreted only from the perspective of men" (Cunningham 1999, p. 103). Therefore, the assumption that an anthropologist could remain completely unbiased was challenged, and new methodologies were created.

An example in Palaeolithic art can demonstrate this bias in ethnographic accounts and academia. The impact of globalisation has led archaeologists from 1980 to 2010 to demonstrate that Palaeolithic art is a global phenomenon. Even in the 1960s, specialists were very Eurocentric and neglected global evidence. Scholars even attributed rock paintings in Africa to European and Asian travellers. This view was largely unchallenged until the 1970s. Developments in anthropology, such as participant observation and objective and neutral interpretation of ethnographic accounts led by feminism in the 1960s, led to a change in this department. These changes bled over to archaeology as biased interpretations, such as the White Lady of Brandberg (Figure 2), were corrected. This painting from Namibia was originally interpreted as a Mediterranean woman because of her white skin and dark-reddish brown hair by Breuil in 1952 (p. 236) but reinterpreted by Lewis-Williams in 2000 (p. 69-71) as a man, probably a shaman, performing a ritual (Moro Abadía & González Morales, 2013, pp. 281-282).

Figure 3. The White Lady of Brandberg. (Ali, 2022, p. 21).

One of the authors who wrote in response to this bias in ethnographic accounts was Jeanne Favret-Saada. Favret-Saada set out to investigate contemporary witchcraft in the countryside of Western France. She argued that there is immediately an assumption of a pre-logical or medieval attitude among the countryfolk when talking about their beliefs of magic and

witchcraft, an immediate assumption that they do not understand cause and effect. “Witchcraft is put forward as a nonsense theory which peasants can afford to adopt because it is the local theory” (Favret-Saada, 1980, p.5). She argued that this assumption is false. She found that the people in the Bocage (the name of the countryside in Western France) were neither less intelligent nor backward nor practised rituals for no apparent reason that held no meaning (Favret-Saada, 1980, pp. 3-5).

Favret-Saada took an experiential approach to anthropology, where she immersed herself in the practices she was researching. This approach meant that a neutral position did not matter since her experiences as an agency in magical discourse were part of the research. In the late 1980s, Tanya Luhrmann did similar research on magic and witchcraft in London, published as *Persuasions of the Witch’s Craft: Ritual Magic in Contemporary England* (1991). She similarly immersed herself in these practices to observe them from an insider point of view instead of from the outside, which was common in previous decades. For example, when researching the Azande, Evans-Pritchard was accorded a status by which he could not be affected by witchcraft while among the Azande (Wallis, 2023, p. 247).

Luhrmann argued that Favret-Saada became too immersed in the studied practices. At the same time, she could obtain her anthropological point of view by holding on to her belief that rituals had no effect on the material world and that she had her credibility to lose if she started to believe in the studied practices. Luhrmann's research devalued magical practices by proposing that magical belief originated in ‘interpretative drift’. Non-magicians begin to participate in magical rituals, find magical ideas persuasive, and experience a shift in thinking about and responding to events. Repetition of this sequence builds a magical belief in practitioners (Wallis, 2023, pp. 248-249).

5.2 A magical consciousness

Another anthropologist who continued on this postmodern or inside approach to anthropology was Susan Greenwood. She studied various magical rituals and practices in London and surrounding counties in the 1990s. Instead of Luhrmann's conclusion that devalued magic, Greenwood argued that her experiences with magic were part of the fieldwork and were vital to understanding and analysing magical practices. Anthropology needed a new perspective on studying magic. She proposed that magic is a different mode

of thinking or consciousness that cannot just be studied but must be experienced. (Greenwood, 2009, pp. 1-3; Wallis, 2023, p.251).

We will start with philosopher Lévy-Bruhl (1857-1939) before looking at these different modes of thinking. Lévy-Bruhl spent most of his academic career discussing primitive mentality and the distinction with Western logic. Later scholars have discarded this distinction between 'primitive' and 'modern' logic, but a distinction between two modes of thought has been prominent in later discourse on magic and religion (Cunningham, 1999, p. 56). For Lévy-Bruhl, the essence of what he called a 'mystical mentality' and Greenwood later dubbed 'magical consciousness' is participation. Mystical thought creates relationships and patterns between things. Everything is connected through participation. For Lévy-Bruhl, there was no individualism; people are always part of patterns and relationships. He rejected the evolutionist viewpoints of earlier scholars. Like Malinowski, he viewed magic as part of everyday human thought and experience. It is not part of a 'primitive mindset' but is common in everyone. The individual's mentality was derived from the collective, and specific ways of thinking corresponded to certain social structures.

Magical participation was based on different patterns, relationships or connections. A psychic connection is based on the notion of connectedness we have seen by Frazer; things that have once been in contact are still in contact. Another connection is the dream world and the waking world. Both of these are as real as the other. This connection is also used in shamanism, where the 'soul' or personality can exist outside the body. A third connection is that between humans and animals. A connection between humans and animals is seen in many cultures where animism is common. A fourth connection is that between the dead and the living. A deceased person can become a ghost while still being a deceased body, simultaneously being both.

Frazer based his views of magic on the mistaken association of ideas, namely sympathetic magic consisting of homoeopathic and contagious magic, which were often combined in practice. He interpreted magic as being on the evolutionary ladder's first step, eventually replaced with religion, which would eventually be replaced by science. However, magic is not simply the result of a mistaken association of ideas. Many of magic's practical and experimental aspects would eventually be incorporated into science. Aspects of magic were called applied physics in Ancient Greece. Magic was a storehouse of ideas that gave rise to

many scientific disciplines such as medicine, pharmacy, astrology and alchemy (Mauss, 1950/2001, 175-177; Greenwood, 2009, pp. 45-52).

Here, we are introduced to analogical thinking. Analogical thinking is a type of logic that connects one thing as it takes on the qualities of another. Tambiah shows us that analogical thinking is often used in magical thinking. Analogical thinking creates meaningful patterns or relationships with individual importance, often with magical connections rather than causal ones. Magic cannot be compared to science, according to Tambiah, since science bases its analogies on casual connections where known instances serve as a model for further testing and new instances. In contrast, magic bases its analogies on magical or persuasive connections, often accompanied by persuasive language in hte form of rituals or spells (Greenwood, 2009, pp. 52-54; Tambiah, 1973/2017, pp. 451-452).

Tambiah wrote much on the use of persuasive language in magic. We have seen that Malinowski argued that there were two different types of languages in every society: magical and ordinary. Tambiah expanded on this. He argued that there were two different types of thought. The first was the empirical mode of science, and the other was the persuasive, performative mode of magic. Frazer's sympathetic magic and Tambiah's persuasive analogy can be seen as two different ways to explain how a magical consciousness operates. Sympathetic magic tries to show this by the association of ideas by similarity or contact. Persuasive analogy tries to show this by the transference of values or meaning through magical association (Greenwood, 2009, pp. 53-56).

5.3 Actor-network theory & object agency

The 1970s and 1980s also saw a renewed interest in material culture studies. Hicks (2012) classified this as the material-cultural turn. Material culture became a central subject in archaeology and anthropology but has been incorporated into other disciplines, such as history, geography, sociology and more. Tilley described material culture as "the idea that materiality is an integral dimension of culture and that there are dimensions of social existence that cannot be fully understood without it" (2006, p. 1). Magic is a similar dimension of social existence that cannot be completely understood without hte study of material culture. Material culture is integral to studying magic and the supernatural (Armitage & Houlbrook, 2015, p. 4).

A big part of this renewed interest in material culture was the publication of the Actor-Network theory. This theory instigated a shift in the cultural sciences where humans were not the only subjects anymore. Objects were introduced as powerful subjects and agents in anthropological and sociological discourse. We have no literary sources for much archaeological research that allow for completely different insights. The archaeological record should not be seen as a mirror of the past but only as a small part of what life was like. We must also remember that much material decays over time or gets recycled. Artefacts are also often found out of context. There is also precedent for studying only the 'interesting' over the less attractive materials. We must make do with an incomplete record further fragmented by archaeological selection of artefacts (Stockhammer, 2015, pp. 1-4).

Many of the recovered objects have lost their original context. Archaeologists can still research these objects with the help of technological innovations. They can often reconstruct the techniques used to construct an object through the *châine opératoire* or experimental archaeology and ethnoarchaeology (Stockhammer, 2015, p. 4). We have seen a similar approach in anthropology where ancient practices are reconstructed by anthropologists such as Luhrmann or Greenwood by studying these practices from the inside. A detailed study of the materiality of an object can help with more than its production, it can tell us about the use of the object. Studying traces of practices on the object might inform us whether these traces are intentional or accidental. Residues from practices can also be found on objects to indicate their use. Objects are difficult to attribute to an object or category since objects transform and change meaning (Stockhammer, 2015, pp. 5-6).

An object was rarely attributed only a single meaning. Its perception and meaning are active and exist in relation to other factors. The power of things is connected to what extent they can induce human actors to act. This statement asks whether agency is solely a human attribute or whether an object can possess agency. This question is often linked to intentionality, but this is virtually impossible to infer from the archaeological record since we cannot discuss this with the original actors. Sometimes, even decoration of an object is not intentional behaviour but simply behaviour since it has always been done (stockhammer, 2015, p. 11-12).

Latour created the Actor-Network theory to solve this intentionality and behaviour dilemma. Latour laid the groundwork for this theory in the early 1990s. This theory benefits

prehistoric archaeology since it ignores the debate between intentional action and behaviour. In the Actor-Network Theory, objects act very actively. Anything that modifies a state is an actor; this includes knives that 'cut' but can also be understood as modifying a state of mind. Generally, no literary sources are available for prehistoric archaeology telling us anything about an object. In archaeology, there is no separation between the material, the practices it represents, and the behavioural or intentional action (Stockhammer, 2015, p. 12).

This change also affected the incorporation of Palaeoltihc's art. Chapters 3 and 4 have shown that portable art was still neglected in interpreting Palaeolithic art and was rarely considered when creating new hypotheses and theories. Portable items were given less attention since parietal art required more cognitive and technical skills. Since the 1970s, this has been reevaluated, and several archaeologists have demonstrated that making Palaeolithic figurines may be as complex as cave paintings. Similar studies have resulted in portable art being recognised as having high symbolic value. Another noticeable change was the rise of abstract expressionism, which led to the realisation that abstract art was just as meaningful as representational art (Moro Abadía & González Morales, 2013, p. 284). This change will be further discussed in the next chapter, where we will discuss the materiality of figurines and the significance of accurate representation.

5.4 The materiality of magic

Due to this material-cultural turn, the introduction of object agency and the Actor-Network Theory, objects suddenly gained much more agency and became much more important. This greatly benefited archaeologists as it allowed archaeology to have a much bigger impact on cultural science (Stockhammer, 20151, p.2). The first book devoted to the materiality of magic was *The archaeology of ritual and magic,* published in 1987 by Ralph Merrifield. Merrifield argues that magic and ritual were aspects of everyday life and should leave archaeological traces. However, he recognises that terms like magic, ritual and superstition have a certain scholarly prejudice due to the loose use of these terms in academic discourse. He also recognised that these terms had become sensationalised through popular culture. He believed that archaeologists were "not exactly eager to admit the possibility that odd

occurrences for which they find evidence have anything to do with religious or magical practices" (Merrifield, 1987, p. 9). He states there is a great danger in dismissing an entire range of human activity for the abovementioned reasons. Archaeological investigation of ritual and magic is lacking because of the failure to recognise evidence of these activities. One of the main motivators for writing this book was to stimulate active research into this subject and to gain awareness for careful excavation and documentation of unknown and less known practices as well as gaining awareness for ritual and magic in archaeology (Merrifield, 1987, p. xiv, 5-21, 184-195)

Most of the subsequent works have only focussed on specific periods or specific aspects of magic. The main focus lies on the social, intellectual side of magic, generally prioritising texts and their categorisations, along with the practitioners of magic and their social practices. The Roman world is especially overrepresented in these works between 1990 and 2010 (Bremer, 2015, pp. 7-8). In the second decade of the 21st century, several books came out of proceedings which included names such as magic and materiality in their title and thoroughly discussed these subjects.

One of the first of these books was *Materia Magica* by Andrew Wilburn (2012). This book discusses the archaeology of magic in Roman Egypt, Cyprus, and Spain. It explores magical practices at these three different locations in the Roman empire. Willburn first establishes a methodology for finding magic in the archaeological record. He argues that through context and analysis, it should be possible to recreate the life cycle of an artefact and identify if ritual and magic led to the deposition of the artefact while providing valuable data on magical objects and their contexts. He continues by proposing four different classes of materials that can indicate a magic ritual: inscribed language, Figurines and other representations, flora, fauna and minerals, including those collected from the intended target and objects that have been revalued as magical. Willburn ends his book by giving us three factors he deems important for the materiality of magic: Secrecy, the local identity of the practitioner and the spread of magical technology (Willburn, 2012, pp. 8-12).

A couple of years later, *The materiality of magic* by Boschung and Bremmer (2015) was published. This book is based on the proceedings of a conference in May 2012, which focused on classical antiquity but included other cultures for a better look at the long-term history of the materiality of magic. The book focuses on magical speech and ritual and the material aspects of magic that influenced people's lives, such as amulets, books, curse

tablets and gems (Bremmer, 2015, p. 12). Bremmer indicates that a second wave of interest in magic started in the middle of the 1980s with the publication of David Jordan's survey of Greek *defixiones*. The Greek world was initially overrepresented in many of these earlier publications. The premise for this book is that most of the previous authors have mainly focussed on the social, intellectual or philological side of magic, as we have done for most of this thesis, and the ones that focus on materials entirely miss or gloss over categories. This book's primary focus is the materiality of magic. Bremmer shows that this results from the material-culture turn in the 1980s and 1990s (Bremmer, 2015, pp. 7-9).

In the same year, Armitage & Houlbrook published *The materiality of magic,* a book with the same title as Boschung and Bremmer's book. The book is the proceeding of an academic conference in 2012 led by Armitage (English and American studies) and Houlbrook (archaeologist), focussing on how magic manifested materially. Armitage and Houlbrook believed that magic and its materiality deserve academic attention and that an archaeological perspective is critical. One of the reasons presented for the disappearance or decline of magic in academic discourse was the term itself; Fear of ridicule and not being taken seriously was one of the problems terms like magic, superstition, and folklore faced. One of the reasons for the title chosen by Armitage and Houlbrook was this marginalisation of magic; to show that they are not afraid to use it and resist the disappearance of a crucial category (Armitage & Houlbrook, 2015, pp. 2-3).

We can instantly see in the reasons of these authors that they start to recognise that magic was being marginalised in academic discourse. Merrifield noticed this in the late 1980s, but much of the subsequent research still did not fully commit to this subject or recognise what Merrifield presented. Wilburn, Houlbrook and Armitage, and Boschung and Bremmer recognised that magic was marginalised and slowly driven out of the research. They decided it was time to provide a platform for the subject.

5.5 Conclusion

The main question for this chapter was: Why has magic made a resurgence in the last decades? So far, we have been on a journey from critiques of some of the reasons that led to the disappearance and decline of magic to shifts in several disciplines. All in all, we have seen three main reasons for this return.

The first is the material-cultural turn. Material culture gained popularity in the 1970s and 1980s, eventually becoming one of the most widespread studies across disciplines. This material culture, in turn, coincided with the emergence of the Actor-Network Theory in which humans were not the only actors in the world anymore. Any object could become an actor if it modified a physical or a mental state. The introduction of object agency also greatly changed the interpretation of Palaeolithic art since portable art had been left to the wayside. This change brought portable art back into the spotlight as a category of Palaeolithic art that was just as important as parietal art. Magic and the materiality of magic greatly benefit from the Actor-Network Theory since the explanation of magical objects relies on triggering a shift in the state of mind.

The second reason is a shift in thinking in the humanities and social sciences. Participation became much more critical, and anthropologists such as Favret-Saada, Luhrmann and Greenwood introduced an insider perspective to anthropology. This shift in thinking coincided with a feminist movement in which ethnographic accounts were seen as biased as they were primarily written from a white, western, middle-class male perspective. This change can be seen in the interpretation of the White Lady of Brandberg. This movement was built on earlier ideas on a different mode of thinking by Malinowski, Lévy-Bruhl and later on Tambiah. Magic relied on a different analogical mode of thinking. This change in thinking cast a much more important light on ontologies such as animism and practices such as shamanism, to which this shift in thinking lent much agency.

The final reason is the recognition of one reason for the disappearance of magic. This recognition of the marginalisation of subjects like magic, the supernatural and folklore. Merrifield was one the first who recognised these problems and took it upon himself to write the first book on the materiality of magic in 1987. The following two decades saw more work on magic. These works mainly focussed on the psychological and intellectual side of magic while studying only certain parts of the materiality of magic and focusing mostly on the Roman World. The second decade of the 21st century finally saw a rapid increase in works focussing on the materiality of magic with the *Materia Magica* by Willburn and the proceedings of two different conferences on the subject published in 2015 by Armitage & Houlbrook and Boschung and Bremmer.

6. Discussion

In Chapter 2, we started with a theoretical framework that discussed the ideas of Popper, Kuhn, and Tambiah as applications to the discipline of science and the behaviour of theories. Chapters 3, 4, and 5 continued by giving an overview of the early ideas, the critiques of these ideas, and the disappearance and return of magic in academic discourse. The first part of this chapter will re-evaluate the past three chapters in light of the theoretical framework.

The second part of this chapter will try to answer if magic adds anything to the archaeological discipline. Can incorporating magic in interpreting archaeological sites and materials deliver new insights to new and old problems? Figurines are seen in virtually every culture worldwide and have been used as examples for magical interpretation for a long time. Frazer already used it as his main example in which both elements of sympathetic magic, contagion and similarity are included. Insoll (2017, p. 13-14) indicated in his introduction to *The Oxford Handbook of Prehistoric Figurines* that magic was another future research question for figurines, indicating that the lack of such an interpretation was perhaps a reflection of the decline of magic discussed earlier on in this paper. This second part of this Chapter will focus on the materiality of magical artefacts, primarily figurines, and an application of this approach.

6.1 Evaluation of the theoretical framework

Popper argued that seeking falsification is the only way for science to progress. Following the problem of indication, strict verification of a theory was impossible, so scientists should not look to verify theories to make them 'stronger'. They should only seek to falsify and develop new ones, preferably by advancing 'risky' theories, so falsification becomes easier.

One of the problems with Popper's theory is that it is so rigid. Under Popper's claims, developing or improving a theory is impossible. Popper accounted for these 'anomalies' with corroboration, which shows resilience to falsification but does not equal verification. Popper was practically forced to develop corroboration into his falsification theory because of the history of Newtonian mechanics (Rosenberg & MacIntyre, 2020, p. 198), in which scientists have consistently improved and developed the theory, proving that sometimes the right course of action is to preserve the theory. Falsification might sometimes be the right course of action, but it is not such a rigid theory as Popper suggests.

In the last three chapters, we see a similar development in the history of magic. In Chapter 3, we see early theories, such as sympathetic magic by Sir James Frazer (1922) and the emotional approach to magic by Bronislaw Malinowski (1935/1965; 1948/1954). Chapter 4 saw critiques of these approaches, especially to many of Frazer's ideas, which Wittgenstein eloquently criticised. Following Popper, these theories would be falsified, and new theories and hypotheses would be developed. Initially, this might seem like the correct approach. Still, in later works on magic, we see Frazer's and Malinowski's ideas return as context or interpretations of materials and contexts.

Frankfurter describes sympathetic magic as one of the ways to interpret magical figurines in *Magic and the forces of materiality* (2019). He argues that the transformation of figurines, be it melting, flattening, piercing, sinking or twisting, can be interpreted as the result of sympathetic magic. He continues that we should be careful when using Frazer's notion of sympathetic magic since his theories are not based on ethnographic accounts but on his *Golden Bough* (1922) and Frazer's view of magic as a primitive misunderstanding of the world. Following Frazer, sympathetic magic resulted from a 'mistaken association of ideas'. Frankfurter argues that this is not how figurines have ever worked as it is not a "nuanced, context-specific approach to ritual action" (Frankfurter, 2019, p. 661). Scholars should be careful when using terms like sympathy or sympathetic magic, as they focus on physical causality instead of the interpretation of figurines or ritual action (Frankfurter, 2019, pp. 661, 672).

Malinowski's ideas of magical acts primarily conveyed through emotion are often referred to in modern academic discourse. In his emotional approach, magic originates from a human desire to succeed in emotional or physical distress or gain control over difficult situations (Malinowski, 1948/1954, pp. 79-82). This approach to magic is another way figurines or image magic can work. Especially as accompanying objects and substances have the same purpose as the magic act: to increase emotional response. In the past, it might have been believed that ideas and sentiments sometimes attached themselves to materials. Nowadays, it is recognised that materiality is essential and that ideas, sentiments and mythology work through materiality (Frankfurter, 2019, pp. 659-660).

We can see that theories do not just replace another when falsified. Malinowski's, and especially Frazer's, ideas might have been criticised and rejected initially, but we keep seeing these theories come back over time. They might be more nuanced or only seen as

part of the picture. Frazer's theory of sympathetic magic was further developed and improved, and recent research has nuanced his idea of sympathetic magic into a persuasive analogy by Tambiah (1973/2017) (Willburn, 2019, p. 460). Malinowski's emotional approach was developed and improved and is still referred to in modern discourse. Popper argued for continuous falsification as the only way for science to advance; theories improving or developing cannot happen. We see that some theories get discarded in favour of new ones. These include the evolutionist standpoints of the late 19th and early 20th century, regarding magic as pseudo-science or some of Durkheim's ideas regarding the sacred and the profane. Nevertheless, the history of science shows us that, at least in certain situations, improving and developing past theories is the right course of action.

Thomas Kuhn regarded science from a historian's perspective. He argued that the history of science was not one of progress but of change. From his historical perspective, Kuhn reasoned that claims and theories we nowadays regard as unscientific or myth were embraced by the greatest minds of their time. This realisation led to Kuhn arguing for a different approach to science, one of replacement instead of reduction.

For Kuhn, periods of normal science were where the actual work got done. In this period, one could run into an unsolvable problem, which would sometimes lead to a crisis that could only be resolved by a period of revolution, after which a paradigm shift occurred. Kuhn argued that paradigms are incommensurable. When one paradigm supersedes another, it leaves behind a remainder. The first time we see such an unsolvable problem or a period of crisis in the history of magic covered in the paper is after the start of the 20th century. Magic was a thing of the past, of a 'primitive' mindset that 'modern' scholars had overcome (Harvey, 2006, pp. 5-6). Magic had no communal value as an individualistic practice (Durkheim) and was based on the fallacious association of ideas (Frazer & Tylor).

Frazer and Tylor, as well as Durkheim and Mauss, were evolutionists. They argued that magic was a thing of the past and was replaced with religion. For many of these authors, science would eventually replace religion as well. Wittgenstein, among other scholars, critiqued this and said that we have the same symbolising and ritualising as people in hte past did and that they were not so different from us. Malinowski and other functionalists also followed this development and argued that magic, science, and religion could be found simultaneously in every society. This change is one of the first big breaking

points in the history of magic. New evidence that came with the rise of practical anthropology with fieldwork by Malinowski, Radcliffe-Brown and Evans-Pritchard could not be interpreted within the reigning paradigm of the late 19th and early 20th century. Following this limitation, a paradigm shift occurred, partly thanks to Kuhn's historical perspective on science, where this new evidence could be interpreted.

A second change is that interest in material culture rapidly increased in the 1970s and 1980s. This increased interest sparked new research into materials and initiated new theories to interpret material evidence. Latour created his Actor-Network Theory in the early 1990s, where anything that modifies a state is an actor. Agency is taken away as a human characteristic and applied to objects that can change action and behaviour. For magic, concrete features of rites and spells reflect the central value of materiality in the new paradigm. Where once it was believed that it consisted of a series of ideas and sentiments that sometimes latched onto materials, now it is recognised that materiality is essential and ideas, sentiments, and mythology work out through materiality (Frankfurter, 2019, p. 660).

The insider shift in anthropology can be explained in a similar matter. Anthropologists and scientists in the 20th century, in general, looked at magic from an outsider's perspective. The Waxes pointed this out in 1963. They explained that magic had to be interpreted from a fundamentally different rational Western worldview. This change was adopted over the last decades of the 20th century when anthropologists such as Favret-Saada, Luhrmann, and Greenwood adopted this view and started studying contemporary cultures and rituals from an insider perspective. Greenwood eventually developed the theory of a magical consciousness through earlier theories of Lévy-Bruhl and Tambiah. We can see a complete shift in thinking from the first half to three-quarters of the 20th century to the last part of the 20th century and beyond. A paradigm shift occurred since magical interpretations were incompatible with the reigning paradigm of studying contemporary cultures and practices through a Western point of view.

Stanley Jeyaraja Tambiah has shown us that another part of the internal structure of science is the scientific community itself, which is reigned by the external context. This external context includes the socio-political and economic interest in society, the impact of external history and the social construction of knowledge, cosmological and ideological belief systems. Chapters 4 and 5 show that a reason for the disappearance of magic was the

stigmatisation and marginalisation of terms such as magic, superstition and folklore. This marginalisation was partly due to the sensationalism of the subject with its introduction into popular culture and the rise of genres like fantasy fiction. Scientists were less interested in studying the subject, not out of theoretical or philosophical considerations since we see that in anthropology, magic is still a discussed subject (Evans-Pritchard, 1937/1976; Favret-Saada, 1980; Luhrman, 1990; Tambiah, 1985; 1990; Greenwood, 2005; 2009).

From Tambiah's model, we know that a large part of why certain theories get researched is the scientific community itself (Figure 1). Scientific testing and research are not just based on the internal structure of science with its rules and logic. Testing and research are also largely based on external factors. Social constructs, such as cosmological or ideological beliefs and the socio-political interests of the scientific are as much, if not more, responsible for what does or does not get researched. Scientists must be open to change.

Kunn shows us that paradigms replace one another, and theories get falsified, verified or corroborated. Furthermore, scientists tend to be less open to change regarding social constructs or religious paradigms. Magic can be seen as part of a religious paradigm since much of the research around magic is either part of religion, science, or both. Additionally, magic was often seen as superseded by religion. A combination of these factors may have led to less research being devoted to this magic, as well as folklore and superstition, especially if we include the subject's popularisation and sensationalism.

Research on magic from the 1990s to the early 2010s primarily focuses on the Mediterranean (Collins, 2007; Dickie, 2001; Faraone, 1991; Faraone & Obbink, 1991; Graf, 1997; Ogden, 2002) while still clinging to magic's social, intellectual side. Even the first complete book devoted to the materiality of magic, *Materia Magica* by Willburn (2012), is still focused on the Mediterranean as it focuses on the magic in Roman Egypt, Cyprus and Spain. This might partly be because of the evidence available for each region. The most extensive evidence collection is from ancient Greece and the Mediterranean (Bremmer, 2015, p. 8). Another explanation can be given through Tambiah's model. A combination of interest in Classical archaeology with increased textual evidence and recovered artefacts could easily contribute to an overrepresentation of the Mediterranean region in Archaeology and the study of magic from the 1990s to the early 2010s.

This established mould gets broken with Wilburn's *Materia Magica,* which still focuses on the Mediterranean but solely on the materiality of magic. A couple of years later,

two proceedings on the materiality of magic were released by Boschung and Bremmer (2015) and Armitage and Houlbrook (2015), both of which appeal to a broader region and subjects. The recognition of the marginalisation of a subject and the broadened horizons from the 2010s onwards can be explained by a recognition of the internal workings of the scientific community. The authors mentioned above recognised the marginalisation of magic and the overrepresentation of the Mediterranean and responded to it with their publications.

6.2 The materiality of magical objects

How could magic contribute to a deeper understanding of historical artefacts, and does it need to be included in archaeological research and interpretation? In the last chapters, we have looked at the reasons for the disappearance and resurgence of magic in academic discourse and archaeology. We have seen that materiality and the development of agency theory and the actor-network theory have greatly contributed to archaeological contribution in general and specifically to the study of magic. Figurines are not just images but objects that matter and have agency (Insoll, 2016, p. 5). We will look at figurines as an example of a field where magic can add to a deeper understanding of established knowledge and new data.

Insoll (2016, pp. 5, 13) writes in his introduction to the *Oxford handbook of prehistoric figurines* that the magical role of figurines has not been studied extensively and requires further research. Figurines require interpretation, not just description, as they are objects with complex meanings. A magical interpretation of an object requires a different mode of thinking, a magical consciousness because it differs from the representational and functional interpretations in archaeology. Studying the materiality of magic does not need an understanding or consideration of the anthropological method of finding meaning in materiality. People and actions change objects, creating change in the people themselves. The materiality of figurines is well suited to this and will be further explored below (Nakamura, 2005, pp. 18-22).

Materiality is increasingly vital to studying magic. Scholars previously assumed that the material's spell, writing or imagery was the most crucial part, but with new research, the material itself has become the most essential aspect. The material is not just a vehicle for

the texts and images. Following Faraone's (2011, p. 57) study of magical gemstones, the material is the most crucial part of the gemstone, followed by the imagery and the inscribed text. Magical artefacts are often studied the other way around as more importance is placed on text and imagery, but this order should be reversed. The images and texts were interpretations or strategies to guide the existing powers in the material. Thinking of magic present in the material itself is not simply a notion of sympathetic magic that the ancient practitioner or author held but recognising an ancient perspective that things in nature have agency (Frankfurter, 2019, pp. 662- 663).

There are multiple ways in which magic can be recognised in materiality, which will be discussed below. The first we have already seen, the material itself not being a backdrop or vehicle for the spell, is how magic can be recognised in materiality. Another factor contributing to the material's importance is emotion conveyed through materiality. Many texts on ancient spells designate an object that focuses the spell. The material here is as essential as the spell: “May their limbs melt (liquescant) just as this lead shall melt (quatmodum hoc plumbum liquescat) so that it shall be their death; just as this is to melt, so may his neck, limbs, strength, savings melt away” (Gordon, 2015, p. 165). This spell fragment shows Malinowski’s (1948/1954, p. 72) argument that all magical acts are primarily conveyed through emotion. The accompanying objects/substances have the same purpose. Magic is closely connected to materiality, and it should focus on materials as primary contexts for religious or ritual experience (instead of peripheral artefacts) and as possessing directing agency in the world (Frankfurter, 2019, pp. 660-661).

Another context for the materiality of magic is their shift in cultural status through performance, exchange, craft or ritual. In these shifts, objects become subjects and gain agency in influencing human behaviour. Rituals often involve the assemblage of things, the designation of things and the imbuing of things. These things can then convey agency. Regular animals are *shifted* to become powerful amulets through the site they should be taken from or the manner of their death. Renaming ingredients can also imbue the material with meaning and agency, although this method generally relies on written sources. The magic lies in the designation of a thing and the agency in that thing (Frankfurter, 2019, pp. 663-665). Within the ritual context, it is essential to consider that the magic and agency of these materials come not from the ritual but from their materiality. Images and figurines and

similar materials or collections depend for their agency and value on the media and their agencies themselves (Frankfurter, 2019, pp. 667-668).

A third context is in the form of the medium used for ritual processes. Willburn (2019, pp. 461-462) observed that creating a medium for ritual processes did not need an accurate representation of the intended target. The aspects that allowed ritual attention were shown, or connections were created through magical consciousness. The process in which a figurine comes to represent the target is a ritual transformation, usually involving chants, performative acts and the addition of substances which can be directly related to the victim (e.g. hair or nails) (Frankfurter, 209, pp. 668). The actual form of the figurine is determined only by the need for efficacy. The anthropomorphic form of some figurines is only essential in addressing the characteristics needed to be effective. However, the elements chosen to be represented are very relevant (Wilburn, 2019, p. 461). A fertility doll needs those elements to be represented for the magic to work. It can even be said that the form governs the subsequent procedures in the rite.

Another component of this efficacy is the miniaturisation. Through miniaturised ideals, the figurine is capable of mediating ideals and agency. Miniaturisation also allows for control. The intended target will not just sit in place when manipulated; a figurine will. Miniaturisation also calls for certain gestures by itself. It is small, so it 'asks' to be handled in a certain way and 'asks' to be deposited in certain places such as windows, doorframes or shrines (Frankfurter, 2019, pp. 669-670; Willburn, 2019, p. 461). Deposition plays a crucial role in magic and ritual in general. Liminality was the key aspect here. The most common placement for magical or religious objects is in threshold space or along boundaries. Common liminal places are crossroads, graves, doorways, windows, rivers, or caves (Augé, 2022, p. 4).

We should not image a figurine as a blank medium whose actions are only dictated by text or incantations. The form the figurine takes 'asks' for specific gestures and responses, and these gestures and responses can, in turn, transform the medium itself. The most common transformations or manipulations are twisting the head back, piercing, burning, breaking the body, placing it in coffins or capsules (Figure 4), burial, submerging it in water and writing names or spells on the figurine (Figure 5) (Faraone, 1990, p. 200; Neméth, 2019, p. 192). These transformations generally correspond to the nature of the material. Lead 'asks' to be sunk, wax 'asks' to be melted or flattened, and clay 'asks' to be twisted or

flattened. Agency is attributed to the figurine, but responses are attributed to the figurine. Certain emotions are invoked on specific images, which result in these actions. In all of these transformation cases, we must interpret the use of these figurines in the context of the entire ritual: The preparation, the attention to form and materiality, and the subsequent action, ritual and deposition. Within this context, the figurine acquires agency (Frankfurter, 2019, pp. 670-672).

Figure 4. Figurine inscribed with the name "Mnesimachos" and placed within a capsule of binding tablets from the Keramaikos cemetery, Athens (Willburn, 2019, p. 484).

Figure 5. Flattened figurine with writing on it from Carystus, Euboea (Willburn, 2019, p. 490).

A last context diverges from the idea that the material itself conveys agency. Sometimes, the figurine represents someone or something else's agency. Malinowski (1948/1954, pp.74-75) observed that societies always have an origin story for magic. While he focused on

mythology's social value, it reinforces and gives confidence in magic when encountering difficult situations. Frankfurter argues that the mythology of magic is a feature of the object itself (Frankfurter, 2019, pp. 673-674).

Many rituals call for materials or substances to be used with a spell that mythically revalues the material or substance. The material or substance is then imbued with the agency of a god or otherworldly being. Important here is that it is not as simple as saying that a god imbues the material or substance. The god must have a personal connection to the material or the ingredients so the agency of the material can be established as the agency of the god. The main point of such a ritual is to create a greater agency than the material or substance would have had outside of the ritual (Frankfurter, 2019, pp. 674-675).

A magical object can refer to any material thing that has agency. The process of creating a magical object is described above. Object agency is fundamental to anything we associate with the magic category. Frankfurter observes that we should be careful when referring to magic in the material. We should not assume 'mana' or some otherworldly substance separate from the material. The agency of a magical object comes from the material and its qualities. This statement is the essence of object agency. As we have seen from Malinowski (1948/1954, pp.74-75), magic always has an origin story from which the agency might ultimately derive. Still, the object itself contains this agency in its material form (Frankfurter, 2019, p. 676).

Figurines play many different roles across many cultures, but most represent a belief in some form of sympathetic magic or persuasive analogy. This observation makes it difficult to determine if a figurine was used for magic or some other ritual. The archaeological context can provide additional support for such claims. The manner of deposition and the manipulations of the object and the material itself is vital here (Willburn, 2019, pp. 505-506). We must remember that the survivability of certain materials hampers the understanding of figurines. Wood, textile, dough, and wax were common figurine materials and are generally scarce in archaeological contexts. Even metal is rare as it is often recycled (Insoll, 2016, p. 7).

6.3 Conclusion

The first part of the chapter focussed on analysing the history of magic described in Chapters 3, 4 and 5 through the theoretical framework in Chapter 2. Following Popper's ideas, falsification is the only way for science to progress. We see that this is the case in some instances. However, the history of magic shows us that theories often get reused, improved and developed. Kuhn argued that science moves forward in 'normal science' periods. When this paradigm runs into unsolvable problems, eventually, a paradigm shift occurs. From the history of science, we have seen that this does indeed happen, first with the rejection of the evolutionist viewpoint and later with the material-cultural turn and the increased importance of object agency. Finally, Tambiah shows that the internal structure of science does not just decide the development of theories but is as much, if not more, decided by the external context. We have seen this in the marginalisation of the terms magic, superstition and folklore and the later adaptation of these theories into new academic discourse. The exposition of this problem is as much a reason for the resurgence of magic as new or developed theories are.

Nevertheless, where can we apply this study of magic in archaeology? We generally consider curse tablets, figurines, amulets, witch bottles, and so forth the primary evidence for magic. Figurines are objects that can be differently interpreted when looking at them from a magical perspective. Magic might be recognised by the language used on the items, but as seen in this chapter, the object's materiality is often the most important factor. Describing what magic is or entails is often difficult, and as Willburn has mentioned, it is hard to distinguish between ritual and magical practices. Magic can, however, serve as a quality of practices and materials that can highlight certain features of materiality, potency, and verbal or ritual performance that we otherwise would not have noticed. Magic becomes a tool to learn more about practices and materials by looking at them from a different point of view or with a magical consciousness.

7. Conclusion

The main research goal for this thesis was to determine whether magic could be used as an interpretative theme in archaeology. Before answering this question, we needed to examine the subject's history and how it changed over time. The three subquestions covered why theories such as magic change over time, why magic fell out of fashion in academic discourse in the 20th century, and why magic has made a resurgence in the last decades.

This thesis started by giving an overview of the most important science philosophers from the 20th century. Karl Popper was one of the most influential philosophers of this century. He argued that Hume's problem of induction does not stand in the way of scientific progress. Scientists should never look for verification but rather should seek falsification. When looking at the history of magic, we see that this is often not the case since many of the early ideas around science, such as sympathetic magic by Sir James Frazer or Malinowksi's emotional approach to magic, get reused, developed and improved in later research.

These theories by Tylor and Frazer relied on an evolutionist viewpoint that painted earlier societies as uncivilised, unscientific, and of a 'primitive' mindset. Only modern scholars were far enough 'evolved' to recognise these problems with magic and correct them. This quickly became quite controversial, and many authors were scared or apprehensive to use them for the negative connotations connected to these theories. Frazer's simplistic evolutionary scheme regarding magic and his classification of magic as a bastard science, combined with his theatrical representation of his work and the fact that all of his work was done in a library with no actual ethnographic research, made his valuable insights not recognised in later periods.

Thomas Kuhn's historical approach to the philosophy of science brought many interesting ideas with it. He introduced paradigms and saw science as a continuous cycle of periods of normal science, periods of crisis or unsolvable problems and periods of scientific revolutions in which paradigm shifts occur. Kuhn's important observation in his work was that scientific change did not have to be progressive. He even argued that we are no closer to the truth than we were in the past and that the science of the past should be seen as good rather than irrational superstition. In the history of magic analysed in this thesis, we see at least two such shifts. The first is the rejection of the evolutionist theories of early

scholars of the late 19th and early 20th centuries. The second is the material-cultural turn, in which material culture and object agency become much more critical and completely change how objects and artefacts are observed and interpreted in archaeological contexts. The third is the paradigm shift in anthropology, where magic was studied from a rational Western worldview when it should be studied from a Worldview appropriate to the culture.

We see these changes in the evolution of the interpretation of Palaeolithic art. This was a magic-religious interpretation in the first half of the 20th century. In the 1960s, this view was rejected in favour of structuralism. Finally, at the end of the 20th century and the start of the 20th century, we see the changes in anthropology and archaeology take effect. Portable art that had fallen to the wayside has now become as important as parietal art, and biased interpretations of cave art have been recognised and reinterpreted.

Tambiah's model about the logic and sociology of scientific inquiry finally leads us to another part of science that has not been much considered. These are the external factors that contribute to what theories get studied. Kuhn and Popper generally discuss the internal structure of science, which decides what theories get researched on a theoretical and philosophical basis. The rules of logic, research operations, methodologies and reigning paradigm are the key here. Tambiah introduced the external part of science as another essential factor for scientific inquiry. This external context includes the socio-political and economic interest in society, the impact of external history and the social construction of knowledge, cosmological and ideological belief systems. We have seen this impact on the study of magic. The marginalisation of magic among similar terms such as folklore and superstition affected how and if magic was studied in the 20th century. Scientists were afraid of not being taken seriously and of ridicule if they studied these subjects since they had become widely popular due to modern media and fantasy fiction. One look at the 'voodoo doll' is enough to realise that modern media severely impacted how we see and perceive magic and ritual, which is not always accurate or representative of the actual practice (Armitage, 2015, p. 85).

We even see the impact of external factors after the resurgence of magic in the early 1990s. Even with Merrifield's exposition of the lack of magical or ritual interpretation of archaeological data, it would take until the early 2010s to integrate into academic discourse fully. Between 1990 and 2010, almost all discourse on magic focused on the Mediterranean region. Scientists still shy away from researching the subject to its fullest, only researching

certain classes of materials or studying certain branches of magic. After 2010, we started to see the full incorporation of materiality into studies around magic. Authors start to recognise that the subject has been marginalised and even intentionally adopt titles such as *The materiality of magic* to shine a light on this. Perception of the subject itself is crucial when researching it.

So why did magic fall out of fashion in academic discourse? And why did it return? Reasons for the disappearance were the rejection of much of the work of the earlier scholars, such as the *Golden Bough* by James Frazer and *Primitive culture*s by Tylor. Following Durkheim, magic was also seen as not helpful to study as religion unified society, but magic was secret and of no social value. A second reason for the disappearance of magic in academic discourse was the marginalisation of magic and similar terms through problematic classifications of witchcraft, sorcery and magic by Evan-Pritchard and the influence of modern media.

The reason for its return lies partly in the rejection or development of the statements made by these authors of the late 19th and early 20th centuries. Merrifield recognised the marginalisation of the subject in the late 1980s. His ideas were developed through the next decades when the materiality of magic became a much more studied subject, even outside of the classical areas. A big reason for this rise of materiality was the material-cultural turn when material culture gained much popularity in the 1970s and 1980s. Latour introduced the Actor-Network Theory in the 1990s, so archaeology played a much more significant role in the cultural sciences. A shift in the social sciences also started a shift in thinking about magic. The Waxes argued that magic could not be studied through a rational Western worldview but should be studied through a culturally appropriate worldview. This argument led to the early ideas of Lévy-Bruhl about a magical consciousness developed by Tambiah and Greenwood to explain magic.

For archaeology, several objects are generally connected to magic. These include curse tablets, amulets, and figurines, among others. Describing what magic is or entails is often difficult, and as Willburn has mentioned, it is hard to distinguish between ritual and magical practices. Figurines were chosen to highlight what the object itself might tell us and how a magical interpretation can help with the different characteristics that go into the material itself and the surrounding ritual. Magic might be recognised by the language or

imagery on the items themselves, but as we have seen in this thesis, the object's materiality is often the most essential factor.

Magic can be used as an interpretative theme for archaeology. It should be studied from a culturally appritate worldview that differs from the rational Western worldview. Magic can serve as a quality of practices and materials that can highlight certain features of materiality, potency, and verbal or ritual performance that we otherwise would not have noticed. Archaeology can significantly contribute to magical studies through context and material studies. Magic is a tool to learn more about practices and materials by looking at them with a magical consciousness.

7.2 Further Research

This thesis has gone in-depth into the history of magic and interpreted it through a theoretical framework focussing on the logic and sociology of scientific inquiry. The last chapter has briefly touched upon figurines, some of the ideal candidates for a magical interpretation, as much of the surrounding ritual and characteristics of the material itself are open to this. Further research can focus on similar materials which might be less obvious but adhere to some of the same characteristics in deposition, manipulation and cultural status. Another future research direction is to reinterpret evidence from the 20th century that might have led to the disappearance of magic from scientific interpretation.

8. Abstract

Magic has been a much-debated topic over the last centuries. This thesis discusses the disappearance and return of magic in academic discourse and evaluates it through a theoretical framework for scientific inquiry. Finally, it aims to evaluate the use of magic as an interpretative theme in archaeology. The late 19th and early 20th centuries saw many new theories and approaches to the subject. Influential anthropologists and sociologists released theories that were mainly based on evolutionist ideals. The rejection of these ideals, the problematic classification of witchcraft, sorcery and magic, and its adoption in modern media contributed to the disappearance of magic in academic discourse. In archaeology, these changes can be seen by studying Palaeolithic art. The return can be seen from 1990 to 2010 by its adoption in more archaeological research. These studies primarily focussed on the Mediterranean and failed to incorporate materiality fully. The full return of magic can be observed in the 2010s when publications specifically focused on the materiality of magic over a larger geographical and cultural area. This return resulted from a paradigm shift in anthropology where magic was now studied from a magical Worldview or consciousness instead of a rational Western worldview. An increase in material culture studies with the adoption of object agency and recognising the marginalisation of magic also contributed to the return. Object agency also contributed significantly to recognising the importance of portable artefacts in Palaeolithic art. The rise of material culture studies, its adoption of Latour's Actor-Network Theory, and the shift in anthropology can be explained as two paradigm shifts vital for the return of magic in academic discourse. Magic can serve as a quality of practices and materials that can highlight certain features of materiality, potency, and verbal or ritual performance that would otherwise have gone unnoticed. Magic is a tool to understand ancient practices and materials better. Archaeology has much to contribute to studying magic through material studies and archaeological contexts

References

Ali, A. (2022). The White Lady painting in Namibia and its counterpart in Algeria (4000 ± 500 BC) (A comparative study in African rock art). *Miṣriqiyā*, *2*(1), 18–39.

Alpert, B. O. (2012). La grotte de Niaux, théâtre des illusions. *L' anthropologie*, *116*(5), 680–693. https://doi.org/10.1016/j.anthro.2012.08.001

Armitage, N. (2015). European and African figural ritual magic: The beginnings of the voodoo doll myth. In C. Houlbrook & N. Armitage (Eds.), *The Materiality of Magic: An artifactual investigation into ritual practices and popular beliefs* (pp. 85–101). Oxbow Books.

Armitage, N., & Houlbrook, C. (2015). *The Materiality of Magic: An artifactual investigation into ritual practices and popular beliefs*. Oxbow Books.

Augé, C.R. (2022). *Field manual for the archaeology of ritual, religion, and magic*. Berghahn Books.

Barberousse, A. (2018). Scientific change. In A. Baberousse, D. Bonnay, & M. Cozic (Eds.), *The philosophy of science: A companion* (pp. 225–258). Oxford University Press.

Berry, J. (1966). Introduction. In B. Malinowski (Ed.), *Coral gardens and their magic; The language of magic and gardening* (Vol. 2).

Boschung, D., & Bremmer, J. N. (Eds.). (2015). *The materiality of magic*. Verlag Wilhelm Fink.

Breuil, H. (1952). The influence of classical civilizations on the cave paintings of South Africa. In L. S. B. Leakey & S. Cole (Eds.), *Proceedings of the First Pan-African Congress on Prehistory* (pp. 234–237). Blackwell.

Breuil, Henri. (1905). La dégénérescence des figures d'animaux en motifs ornementaux à l'époque du renne. *Comptes Rendus Des Séances de l'Académie Des Inscriptions et Belles-Lettres*, *49*(1), 105–120.

Collins, D. (2008). *Magic in the ancient Greek world*. Blackwell Publishing.

Cozic, M. (2018). Confirmation and induction. In A. Baberousse, D. Bonnay, & M. Cozic (Eds.), *The philosophy of science: A companion* (pp. 53–94). Oxford University Press.

Cunningham, G. (1999). *Religion and magic: Approaches and theories*. Edinburgh University Press.

Davies, O. (2012). *Magic: A very short introduction*. Oxford University Press.

Dicker, G. (2019). The origin and classification of ideas. In G. Dicker (Ed.), *Locke on knowledge and reality* (pp. 31–41). Oxford University Press.

Dickie, M. W. (2001). *Magic and magicians in the Greco-Roman world*. Routledge.

Douglas, M. (1980). *Evans-Pritchard*. Fontana Press.

Dubuisson, D. (2016). *Religion and magic in western culture*. Brill. https://doi.org/10.1163/9789004317567

Durkheim, E. (1964). *The elementary forms of the religious life* (J. W. Swain, Trans.). Hollen Street Press. (Original work published 1915)

Evans-Pritchard, E. E. (1976). *Witchcraft, oracles and magic among the azande*. Oxford University Press.

Faraone, C. (2011). Text, Image, and Medium: The Evolution of Graeco-Roman Magical Gemstones. In C. Entwistle & N. Adams (Eds.), *"Gems of Heaven": Recent Research on Engraved Gemstones in Late Antiquity, AD 200–600* (pp. 50–61). British Museum Press.

Faraone, C. A. (1991). Binding and burying the forces of evil: The defensive use of "voodoo dolls" in ancient Greece. *Classical Antiquity*, *10*(2), 165–220. https://doi.org/10.2307/25010949

Faraone, C. A., & Obbink, D. (Eds.). (1997). *Magika Hiera: Ancient Greek magic and religion*. Oxford University Press.

Favret-Saada, J. (1980). *Deadly words: Witchcraft in the bocage*. Cambridge University Press.

Frankfurter, D. (2019). Magic and the forces of materiality. In D. Frankfurter (Ed.), *Guide to the study of ancient magic* (pp. 659–677). Brill.

Frankfurter, D. (2020). "Voodoo doll": Implication and offense of a taxonomic category. *Arethusa*, *53*(1), 43–58.

Frazer, J. G. (1993). *The golden bough: A study in magic and religion*. Wordsworth Editions. (Original work published 1922)

Gazin-Schwartz, A. (1999). *Constructing ancestors: Archaeology and folklore in Scotland*. University of Massachusetts Amherst.

Goodman, N. (1983). *Fact, fiction, and forecast* (4th ed.). Harvard University Press.

Gordon, R. (2015). Showing the gods the way: Curse-tablets as deictic persuasion. *Religion in the Roman Empire*, *1*(2), 148. https://doi.org/10.1628/219944615x14296073073539

Graf, F. (1999). *Magic in the ancient world* (F. Philip, Trans.). Harvard University Press.

Greenwood, S. (2005). *The nature of magic: An anthropology of consciousness*. Routledge.

Hacking, I. (2012). Introductory essay. In Thomas Kuhn (Ed.), *The structure of scientific revolutions* (4th ed.). University of Chicago Press.

Hanegraaff, W. J. (2003). How magic survived the disenchantment of the world. *Religion*, *33*(4), 357–380. https://doi.org/10.1016/s0048-721x(03)00053-8

Harvey, G. (2006). *Animism: Respecting the living world*. Columbia University Press.

Henderson, L. (2022). The problem of induction. *The Stanford Enc*, *Winter 2022*. (Original work published 2018)

Henderson, L. (2023). Crossing levels: Meta-induction and the problem of induction. *Philos. Sci.*, *90*(4), 985–993.

Hicks, D. (2018). The oxford handbook of material culture studies. In D. Hicks & M. C. Beaudry (Eds.), *The material-cultural turn: Event and effect* (pp. 24–98). Oxford University Press.

Hodder, I. (2012). *Entangled: An archaeology of the relationships between humans and things*. Wiley-Blackwell.

Houlbrook, C., & Armitage, N. (2015). Introduction: The materiality of the materiality of magic. In C. Houlbrook & N. Armitage (Eds.), *The Materiality of Magic: An artifactual investigation into ritual practices and popular beliefs* (pp. 1–14). Oxbow Books.

Hume, D. (1739). *A treatise of human nature*. Oxford University Press.

Hume, D. (1948). *An enquiry concerning human understanding*. Oxford University Press. (Original work published 1748)

Insoll, T. (2017). Miniature Possibilities? An Introduction to the Varied Dimensions of Figurine Research. In T. Insoll (Ed.), *The oxford handbook of prehistoric figurines* (pp. 3–16). Oxford University Press.

Kuhn, T. (1974). Second thoughts on paradigms. In F. Suppe (Ed.), *Structure of scientific theories* (pp. 459–482). University of Illinois Press.

Kuhn, T. S. (2012). *The structure of scientific revolutions* (4th ed.). University of Chicago Press. (Original work published 1962)

Leroi-Gourhan, A., & Michelson, A. (1986). The religion of the caves: Magic or metaphysics? *October*, *37*, 6. https://doi.org/10.2307/778514

Lévy-Bruhl, L. (1975). *Notebooks on Primitive Mentality* (P. Riviere, Trans.). Blackwell. (Original work published 1949)

Lewis-Williams, D. J. (1990). *Discovering southern African rock art*. David Philip.

Locke, J. (2008). *An essay concerning human understanding* (P. Phemister, Ed.). Oxford University Press. (Original work published 1689)

Luhrmann, T. M. (1991). *Persuasions of the witch's craft: Ritual magic in contemporary England*. Harvard University Press.

Malinowski, B. (1954). *Magic, science and religion and other essays*. Doubleday Books. (Original work published 1948)

Malinowski, B. (1965). *Coral Gardens and their magic (Volume II): The language of magic and gardening*. Allen & Unwin. (Original work published 1935)

Mauss, M. (2001). *General theory of magic* (R. Brain, Trans.). Routledge. (Original work published 1950)

Merrifield, R. (1987). *The archaeology of ritual and magic*. Batsford.

Moro Abadía, O., & González Morales, M. R. (2013). Paleolithic art: A cultural history. *Journal of Archaeological Research*, *21*(3), 269–306. https://doi.org/10.1007/s10814-012-9063-8

Nakamura, C. (2005). Mastering Matters: Magical Sense and Apotropaic Figurine Worlds of Neo-Assyria. In L. Meskell (Ed.), *Archaeologies of Materiality* (pp. 18–45). Blackwell Publishing.

Németh, G. (2018). Voodoo dolls in the classical world. In E. Nemeth (Ed.), *Violence in prehistory and antiquity* (pp. 179–194). Parthenon Verlag.

Ogden, D. (2002). *Magic, witchcraft and ghosts in Greek and Roman worlds: A sourcebook* (D. Ogden, Ed.). Oxford University Press.

Palacio-Pérez, E. (2010a). Cave art and the theory of art: The origins of the religious interpretation of Palaeolithic graphic expression. *Oxford Journal of Archaeology*, *29*(1), 1–14. https://doi.org/10.1111/j.1468-0092.2009.00337.x

Palacio-Pérez, E. (2010b). Salomon Reinach and the religious interpretation of Palaeolithic art. *Antiquity*, *84*(325), 853–863. https://doi.org/10.1017/s0003598x00100274

Popper, K. (2002). *Conjectures and refutations: The growth of scientific knowledge*. Routledge. (Original work published 1963)

Popper, K. (2002). *The logic of scientific discovery*. Routledge. (Original work published 1959)

Radcliffe-Brown, A. R. (1952). *Structure and Function in Primitive Society*. Free Press.

Rosenberg, A., & McIntyre, L. (2020). *Philosophy of science: A contemporary introduction* (4th ed.). Routledge.

Scarre, C. (2018). *The human past: World history & the development of human societies* (4th ed.). Thames & Hudson.

Stockhammer, P. W. (2015). Lost in things: An archaeologist's perspective on the epistemological potential of objects. *Nature and Culture*, *10*(3), 269–283.

Tambah, S. J. (1985). *Culture, thought and social action: An anthropological perspective*. Harvard University Press.

Tambiah, S. J. (1990). *Magic, science, religion, and the scope of rationality*. Cambridge University Press.

Thomas, K. (2003). *Religion and the decline of magic*. Penguin UK. (Original work published 1971)

Tilley, C. (2006). Introduction. In C. Tilley, W. Keane, S. Kuechler-Fogden, M. Rowlands, & P. Spyer (Eds.), *Handbook of Material Culture* (pp. 1–6). SAGE Publications.

Turnbull, M. G. (2018). Underdetermination in science: What it is and why we should care. *Philos. Compass*, *13*(2), e12475.

Tylor, E. B. (1871). *Primitive culture: Researches into the development of mythology, philosophy, religion, language, art and custom* (Vol. 2). Nabu Press.

Wallis, R. J. (2023). Witchcraft and magic in the age of anthropology. In O. Davies (Ed.), *The oxford history of witchcraft and magic*. Oxford University Press.

Wax, M., & Wax, R. (1963). The notion of magic. *Current Anthropology*, *4*(5), 495–518. https://doi.org/10.1086/200420

Wilburn, A. T. (2012). *Materia magica: The archaeology of magic in Roman Egypt, Cyprus, and Spain*. University of Michigan Press.

Willburn, A. T. (2019). Figurines, images, and representations used in ritual practices. In D. Frankfurter (Ed.), *Guide to the study of ancient magic* (pp. 456–506). Brill.