CONCLUSION

(Re)Creating Ritual Experiences

Blanka Misic and Abigail Graham

> Believe nothing you hear, and only one half that you see.
>
> Edgar Allan Poe[1]

Cognition, Sensation, and Experience

In June 2017 I (Blanka Misic) had the chance, for the first time, to visit Nero's Domus Aurea. I walked in the scorching midday sun through the heart of Rome, past the Roman forum and the Colosseum, in order to make my way up to the entrance of the Domus Aurea. As the guide ushered me a few steps inside the Domus I experienced a sudden sensory overload – the temperature dropped, the air shifted from hot and dry to cool and damp, the ground underfoot was no longer firm and warm but wet and muddy, the eyes which a second ago squinted in the glaring sun were now stunned by the pitch black. This drastic shift in sensory stimuli, combined with the anticipation of the visit, produced an emotionally heightened response which seared this experience into my memory for subsequent months.

Elated by the visit and the architectural marvel of the Domus, I returned the following summer to repeat the same tour. The Domus, the tour, and the sensory overload were the same – they instantly recalled my previous visit. However, the experience itself was different. Between these two visits, I underwent emergency surgery for a detached retina which caused a strange side-effect – each eye now perceived colour differently. The bright blue hues on the wall paintings of the Domus that I remembered from my previous visit had now become pale yellows. What was initially supposed to be a re-living of the same event – a tour of the Domus Aurea – now produced a connected but distinct experience and memory. So, when

[1] Poe 1845: 194.

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it comes to lived experiences, it appears that you cannot step into the same river twice . . . or can you?

Much traditional scholarship on Roman religion has avoided looking too closely at ritual experiences, due in part to the perceived lack of material evidence and in part to the tendency to view ritual experiences as mostly individualist and subjective, and therefore not relevant to communal state religion and society at large. Similar criticisms have been laid against cognitive and sensory theoretical approaches to ancient religions[2] – as Edgar Allan Poe warns us, our senses and our perceptions can be deceptive.[3] Can we truly trust our senses and our memory? How do we extrapolate sensory experiences and cognitive processes from ancient 'dead minds'?[4] To what extent are these experiences and processes physically, neurologically, and/or culturally informed? Two individuals participating in the same ritual event may engage with it on different sensorial levels and may process and remember the ritual proceedings differently. '(Re) Creating Ritual Experiences', therefore, does not prove so simple. The title and topic of this chapter highlights two central themes of this volume: creation of ritual experiences (i.e. first-time sensory experience and original memory formation) and recreation of ritual experiences (i.e. repetition of ritual and/or ritual experience and the creation of a related but distinct/variant memory). However, what value can a collection of disparate ritual experiences have for the greater understanding of ancient religions and societies?

These questions and concerns are valid. Even with the latest technological and scientific developments in biology, neuroscience, and psychology, there is still a lot that we do not know about the human brain and body. However, this should not discourage us from asking uncomfortable questions nor finding innovative ways of re-examining the evidence and knowledge we do have.[5] Although we may all sense and perceive the world around us differently, this does not mean that we should automatically discount the value or dismiss the validity of our senses. Our senses are vital

[2] The application of cognitive approaches to ancient religions continues to be 'faced with hesitation or even hostility especially by researchers in the field of humanities and more specifically in the domain of the study of religion(s)'. Pachis 2014: 53. For a summary of criticisms raised against cognitive and scientific approaches to the study of religions see McCauley 2020: 100–03 and Czachesz 2022.

[3] Experimental studies in cognition and psychology, such as Simons and Chabris 1999, have demonstrated that selective attention impacts the way we perceive and remember the world around us. Our perception and recall are therefore subjective and can prove to be unreliable.

[4] The terminology of 'dead minds' is put forth and discussed further in Pachis 2014.

[5] In recent years, there has been a rise in interest in sensory history and archaeology. Recent publications include Hamilakis 2011, Day 2013, and Skeates and Day 2020, among others.

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in the way we access and engage with the world around us. They are inextricably linked to our bodily and cognitive experiences and processes, including the ways in which we understand and remember the world we live in. Different individuals 'sense' the world differently not only due to personal physical or neurological factors (e.g. synaesthesia, autism, injury, or impairment of sensory organs etc.) but also due to the fact that the senses are socially and culturally informed. What tastes disgusting to a person from one culture, for example, may taste delicious to a person from another culture.[6] Lived experiences can likewise affect our sensory perceptions. As the Shakespearean character Benedick shifts from a defamer of love to its victim, he notes: 'Doth not the appetite alter? A man loves the meat in his youth that he cannot endure in his age.'[7]

The brains and sensory organs of ancient peoples would have, for the most part, *functioned* identically to ours,[8] but this does not mean that they would have *perceived* the world around them identically to us. People inhabiting the Roman Empire sensed and perceived their world not only differently from modern contexts but also differently from each other. The geographical and chronological vastness of the Roman world meant that peoples of vastly different cultural, ethnic, social, and religious backgrounds would have participated in and experienced 'Roman' culture in a variety of different ways.[9] One example supporting the notion that the senses were socially and culturally informed in the Roman world is recorded by Dio Chrysostom. In his First Tarsic Discourse (33–36), Dio Chrysostom remarks on a snorting sound that he finds horrifying but which the inhabitants of Tarsus were habituated to make, describing it as being of 'local usage'.[10]

The ultimate sensory divider, however, was social status.[11] The elite and the non-elite sensed and experienced their own worlds in vastly different ways. Citizens could be visually recognized by their white, cumbersome togas, while the conquered, criminals and slaves could be recognized by their brands, tattoos, and shackles.[12] The rich could mask unpleasant bodily odours by affording expensive perfumes, while the manual labourers carried the smells associated with their work even in off-hours.[13] The non-elite lived

[6] Toner 2009: 123. [7] Shakespeare, *Much Ado About Nothing*, Act. II.
[8] Xygalatas 2014: 197–8 and Czachesz 2022: 168 and 171.
[9] The city of Rome was particularly cosmopolitan. Martial (*Ep*. 7.30) writes of a Roman woman by the name of Caelia who gives 'favours' to Parthians, Germans, Dacians, Cilicians, Cappadocians, Egyptians, Indians, and Jews.
[10] Toner 2009: 139. [11] Toner 2009: 123. [12] Toner 2009: 135.
[13] Martial, *Ep*. 6.93, and Toner 2009: 133.

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in cramped, noisy, rickety apartment buildings where neighbours could touch hands through their windows,[14] while the rich enjoyed quiet, spacious country-side villas. Since cognitive and sensory processes are influenced by a variety of factors such as physical, neurological, social, and cultural differences – and are therefore not 'fixed'[15] – preoccupying ourselves with their veracity may not be the right approach. Rather we should focus on what they can reveal to us about how the inhabitants of the Roman Empire constructed, perceived, and understood their world, including their religious ritual practices.[16]

Applying sensory and cognitive approaches to evidence of ancient rituals contributes to broadening our understanding of ancient religions and ancient societies in two significant ways: allowing a better understanding of the thoughts, feelings, and lived experiences of ordinary people of the ancient world and providing invaluable insights into the diversity of experiences in the ancient world (including neurodiverse religious experiences). Comprising the majority of the population, the non-elite, ordinary people have traditionally been either invisible or disparaged in historic and literary writings. Roman writers, mostly male, educated, and of a privileged upbringing, write for and about the concerns of other (male) members of the elite. Even when referencing disenfranchised populations such as slaves, foreigners (non-citizens), and women, for example, Roman writers tend to display elitist bias. More modern nineteenth- and twentieth-century historians do not fail to fall into this trap – by relying on writings left by Roman authors as a primary form of evidence, they have often perpetuated predominantly elitist views of the Roman world. In order to get a holistic view of the Roman world, we need to embrace and examine a variety of primary sources, including archaeological and epigraphic evidence.

Archaeological and epigraphic evidence can offer us a wealth of insight into ritual and ritual experience. From relief images depicting the use of incense and/or music during processions and sacrifices to the analysis of archaeobotanical and zooarchaeological remains consumed as part of ritual meals, archaeological evidence can give us an insight into how ritual proceedings looked, sounded, smelled, and even tasted. Epigraphic

[14] Martial (*Ep.* 1.86) writes: 'Novius is my neighbour. We can reach out of our windows and touch hands.' See also Toner 2009: 129.

[15] Toner 2009: 123.

[16] Toner (2009: 123) notes: 'The Roman sensory experience was very different from ours. We cannot hope to re-create their experience in its entirety, but we can establish some of the different cultural meanings that the senses held for them.'

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evidence, such as votive and funerary inscriptions, although formulaic, give us an extremely valuable insight into the minds of worshippers since they record the 'voices' of individual dedicators of all backgrounds – their wishes, concerns, and perspectives.[17] Comparing, contrasting, and then examining inscriptions as a group offers us a further understanding of wider socio-cultural, religious, and ritual trends. Combining historical, literary, archaeological, and epigraphic evidence with sensory and cognitive approaches, enables us to extrapolate sensory experiences and cognitive processes of ancient 'dead minds' and, in the process, offers us a more comprehensive understanding of the ancient world as a neurodiverse community, stepping beyond elite-focused worldviews and experiences.

Approaches to Neurodiversity

Whether it is a Pannonian ritual for local mother-goddesses *Nutrices Augustae*, a stately procession of Vestals in Rome, a colourful representation of Mithras, a rowdy celebration of Artemis, or a solemn Christian pilgrimage, throughout this volume rituals are defined by the diverse approaches and perceptions of the ritual act: be it different participants witnessing the same ritual, or one individual experiencing varied performances. Differences in ritual perception and experience reflect the growing importance of neurodiversity as an approach to understanding religion. How the term 'neurodiversity' should be defined and understood is often debated. For the purposes of the present chapter, the authors follow Milton: 'Here neurodiversity is stated as a "brute fact" that all brains are to a degree unique, with the embodied development of people being differently disposed in their experiences and actions.'[18] Thus, neurological differences between individuals are viewed as a natural aspect of human development, rather than as deficiencies or disorders. Yet, how can we connect the scholarship of ancient religion with modern studies on neurodiversity?

Sensory and neurocognitive approaches provide us with invaluable insights into the diversity of experiences in the ancient world – they can allow us to better understand the religious experiences of neurodiverse individuals as well as marginalized individuals and groups of the ancient world. Although research on disability in the ancient world has gained

[17] Toner 2009: 43. [18] Milton 2020: 3.

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momentum in the last few years,[19] scholarship on neurodiversity in antiquity remains largely unexplored. However, with modern technological advancements in neuroimaging and the ability to survey and interview living participants, research from the cognitive sciences and the neurosciences can offer us invaluable insights into the factors which mediate religious experiences.[20] By taking into account the role of brain networks, the role of ageing, and the role of individual perception in mediating religious experiences, these approaches also provide a new way for scholars across disciplines to gauge variation in neurodiverse responses to rituals.

Neuroscience research conducted on religiosity over the last few decades indicates that religious experiences are associated with activity in specific regions of the brain, namely the amygdala, the right prefrontal lobe, and the right temporal lobe.[21] For instance, it was observed that individuals who suffered from injury to the temporal lobes or from temporal lobe epilepsy reported powerful religious experiences.[22] Additionally, these same regions of the brain produced heightened religious experiences in individuals with neurodiverse conditions such as schizophrenia and heightened ritualization in individuals with obsessive-compulsive disorder.[23] The neurotransmitters serotonin and dopamine play a key role in the nature and intensity of religious experiences. They can cause the brain to overload with sensory stimuli, altering one's perception. Low levels of serotonin in conjunction with high levels of dopamine can result in an individual experiencing intense images and ecstatic religious experiences.[24] This research from the neurosciences indicates that religious experiences are mediated by the same areas of the brain both in neurodiverse and neurotypical individuals,[25] with variations in intensity and nature of experiences dependent partially on individual neurological differences.

Neuroscience studies have indicated that age is likely to be another key factor in mediating religious experiences. The aforementioned 'religious' areas of the brain become active in children as young as two years old, but it is in adolescence that an inclination for religiosity develops, due to hormonal and genetic influences, but also as the frontal and temporal lobes

[19] See Garland 2010 and Laes 2016, among others. For an extensive bibliography of research on disability in the ancient world see www.disabilityhistory-ancientworld.com.

[20] For broader cognitive science of religion approaches to neurodiversity, including autism, see McCauley and Graham 2020.

[21] McNamara 2014: xi. [22] McNamara 2014: 82. [23] McNamara 2014: 93–9.

[24] McNamara 2014: 128, 132, 134–5, 138, 232 and 250. On the effects of serotonin and dopamine in relation to ritual see Xygalatas 2022: 230–3.

[25] McNamara 2014: 127.

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become more developed and interconnected.[26] As adulthood sets in, additional inhibitory connections are formed between these brain regions,[27] enabling the development of mature behaviours, such as self-control, but also leading to a decrease in religiosity. However, participation in certain types of ritual practices can re-awaken these brain networks for a time. Finally, as one enters old age, inhibition of these brain regions often weakens, allowing for a potential re-emergence of religiosity.[28] In short, from a neuroscientific perspective, religious experiences are influenced by hormonal, environmental, developmental, and genetic factors, accounting for variability in the nature and intensity of religious experiences throughout one's life.

The difficulty of studying religious experiences, in the modern and ancient world alike, lies in the fact that they are mediated by several enmeshed internal (e.g. neurological, genetic etc.) and external (e.g. environmental, socio-cultural etc.) components, making them highly complex and simultaneously objective and subjective. Although modern researchers can employ a variety of objective (e.g. brain imaging, physiological data etc.) and subjective (e.g. eyewitness interviews, verbal and/or written surveys etc.) methods when studying religious experiences, it is not uncommon for 'subjective' data to contradict the 'objective' data.[29] A famous study by Dimitris Xygalatas and colleagues of a fire-walking ritual in Spain illustrates just how our perceptions and memories of ritual experiences can prove to be variable.[30]

Xygalatas and colleagues had equipped ritual participants, who were about to walk barefoot over red-hot coals, with heart-rate monitors before the ritual. The monitors recorded exceptionally high heart rates during the ritual experience, yet the participants reported feeling calm.[31] When participants were interviewed two days after the ritual, they scarcely recalled the details of the ritual event. They could, however, describe how they were feeling at the time of the ritual. The participants were interviewed again

[26] Koenig *et al.* 2005, McNamara 2014: 232–3, 242–4, and Corley *et al.* 2015. McNamara (2014: 232) states: 'In short, certain genes turn on during the adolescent period and influence religious interests and behaviors.' Hormonal, genetic and environmental factors play an important role in psychological and behavioural development during adolescence, and the irregular development of prefrontal and temporal cortices during adolescence can trigger the onset of certain neurodiverse conditions such as schizophrenia.

[27] Neuroscientist Adam Burnett (personal correspondence) likens this process of myelination to driving on a ten-lane highway as opposed to driving on a country road – the development of additional connections between brain regions leads to a significant increase in inhibition and more complex cognitive processing.

[28] McNamara 2014: 244–5. [29] McCauley 2020: 106. [30] Xygalatas *et al.* 2013.

[31] Xygalatas *et al.* 2013: 3, 5, 6–8 and Xygalatas 2022: 138. See also McCauley 2020: 106.

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after two months, but this time they gave more details of the ritual event and less description of their affective states. What was remarkable, however, is that even though these memories of the ritual event were largely inaccurate, the participants were nevertheless convinced of their accuracy.[32]

We know from neuroscience research that the interconnected areas of the brain which regulate religious experiences (i.e. amygdala/hippocampus, frontal and temporal lobes on the right side) are also involved in regulating memory, emotion, and social cognition.[33] Xygalatas and colleagues argue that this inability to remember ritual details is the result of emotional suppression and cognitive depletion. In essence, highly arousing rituals can overload or deplete cognitive resources, making individuals 'unable to encode details or ponder meanings in the course of ritual performances and, thus, have impaired memory for these events'.[34] Since individuals are unable to remember specific details of the event, religious events and experiences can become 'framed' within socio-cultural and interpretative narratives by influential religious figures and fellow participants. Thus, the memories that participants in the fire-walking ritual believe to be accurate are in reality socially and culturally informed reconstructions rather than authentic sequences of events.[35] These findings by Xygalatas and colleagues reveal the variability of ritual experiences and experiential memories – as stated in the Introduction to this volume (and contrary to what Plautus claims) eyewitness and first-hand accounts cannot always be trusted; and when it comes to memories, one cannot step into the same river twice.

Neuroscientific and cognitive research on religious experiences presented above reveals that the ways in which neurotypical and neurodiverse individuals process religious experiences are both similar and variable. While religious experiences in both neurotypical and neurodiverse individuals are mediated by specific neurological, genetic, environmental, developmental, and socio-cultural factors; it is the interplay and variation between these elements which leads to the variability of religious experiences. Neuroscientific, cognitive, and sensory approaches, therefore, do not merely offer us a collection of disparate and subjective religious

[32] Xygalatas *et al.* 2013: 8–11, van Mulukom 2017: 193, McCauley 2020: 107–08 and Xygalatas 2022: 146.
[33] McNamara 2014: 82, 126, 129.
[34] McCauley 2020: 108 (quote) and van Mulukom 2017: 194. For the cognitive resource depletion hypothesis see Schjoedt *et al.* 2013.
[35] Xygalatas *et al.* 2013: 12–13 and McCauley 2020: 108.

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experiences but provide us with invaluable insights into the diversity and malleability of religious experiences in ancient and modern worlds alike.

Subjectivity in Ritual Experience: Believing in What You Can't See – Seeing the Invisible

> Cognitive processes span the brain, body and the environment: to understand cognition is to understand the interplay of all three . . . The interaction between 'inner' processes and the 'outer' world is not peripheral to cognition, it is the very stuff of which cognition is made.
> T. Van Gelder and R. F. Port 1995: ix

How we view our sources plays a fundamental role in how we interpret them. Cognition is a complex process in which the brain engages with a number of different interfaces, not as a disengaged computer but as an embodied participant.[36] Engagement between the 'inner' processes and an 'outer' world results in experiences that are both subjective and objective in character. From a historical perspective, Cairns and Nelis's scholarship on history and emotions urges scholars to engage with ancient sources as embodied and emotional accounts that function in two ways: embedding emotional information in a culture, and as a unique emotional account, both of which could impact an audience's perception.[37] This means assessing sources objectively and subjectively, for what they reveal about both an event and an author's personal engagement with the event. Approaches to rituals must, therefore, be flexible, allowing us to recast the way we view rituals through a number of cognitive perspectives. A flexible and broad-ranging approach to the role of cognition in ritual experiences offers a means of assessing and understanding connections between 'inner' processes and the 'outer' world, allowing us to engage with 'dead minds' on several levels. This dynamic approach is more inclusive, offering broader perspectives from diverse social groups and more opportunities for interdisciplinary engagement. Despite differences in rituals and cognitive approaches, applying a similar framework of understanding to rituals as embodied experiences can unite these practices across time, space, and religions. This approach can also make ritual experiences accessible to a wider audience of readers, who can connect

[36] Kundtová Klocová and Geertz 2019: 75–6.

[37] Cairns and Nelis (2017: 11) state: 'Not only do works of literature embed and embody the emotional scripts of their society and culture, they also constitute emotional scripts in themselves, feeding back into, recalibrating, and extending emotional repertoires and capacities of their audiences.'

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with sensory engagements and experiences on the basis of their own lived experiences of rituals.

One of the most interesting outcomes of discussions between contributors of this volume was the heightened awareness of the role of emotional and physical engagement in shaping memory. The topic of ritual failure and ritual transgression (i.e. what happens when the script or expectations for a ritual are not realized) emerged in many discussions. We often accessed this topic through an understanding of our own lived experiences: ritual and/or social transgressions are a part of daily life. In scholarship, however, there can be a tendency to treat historical records as objective accounts, overlooking the reality of a lived experience as an emotional event through which memories were created. A fundamental bias of script-based approaches to ritual, discussed by Abigail Graham (Chapter 4) and Steven Muir (Chapter 5), is the assumption of a singular or positive outcome for a ritual performance. As Abigail Graham states in her chapter (p.119): 'These static script-based reconstructions of ritual events can obscure the mutability and spontaneity that made these events exciting, engaging, and memorable experiences.' The fact that ritual transgressions are not regularly recorded, however, is not proof that they were not frequent occurrences or that ritual experiences, like their diverse audiences, could not result in a wide range of outcomes and reactions. How can we recreate experiences that are invisible or otherwise unattested in literature?

Cognitive approaches and the emotional context of ritual offer venues for accessing and understanding these experiences to a greater degree.[38] Scholars across disciplines, such as Cairns, Chaniotis, Geertz, and Hamilakis, have employed modern experiences of rituals, including emotional contexts, to recreate and understand the complexities of ritual experiences.[39] Geertz's scholarship has also illustrated how a 'bottom-up approach' to embodied religion and rituals should begin not on a 'macro-level' of assessing why people acted in certain ways or what the overall event meant, but instead considering how a person's actions and manner of performance could influence the perception, memory, and subsequent

[38] Cairns and Nelis (2017: 8–10) present a history of the study of emotions and interdisciplinary perspectives, including cognitive approaches, tracing origins to the late twentieth century (primarily the past twenty years). Kundtová Klocová and Geertz (2019: 88) state: 'Analysis of the body in ritual can also throw light on underlying relations and interactions that take place in religious ritual activities. From a broader perspective, the results of such analyses could identify degrees of emphasis in different religious traditions and possibly fill in the gaps where there are not enough data in the historical sources.'

[39] Cairns and Nelis 2017: 8–11. Chaniotis (2007: 49–51) reconstructs a ritual gone wrong. Kundtová Klocová and Geertz (2019: 87–8) examine the experience of 'kneeling' in rituals.

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performance of a ritual.[40] These studies examine how lived experiences can be used to recreate ritual experiences, by applying personal knowledge of cognitive experiences and constraints to ritual performances. In our discussions between contributors of this volume, we followed a similar path: scholars from differing disciplines and perspectives converged by sharing personal ritual experiences, not as a means of interpreting ancient rituals but as a means of providing a framework of cognitive experience (i.e. how we process and remember rituals through sensory and emotional engagement). To illustrate how ritual, cognition, and memory operate as a framework for ritual perception, it is useful to explore a modern ritual: Catholic mass.

As an individual steps through the large doors of a church, they are greeted by soft strands of music, and the scent of incense and burning candles lingers in the air. Visually the eye is guided on an axial plane down the pews, past the stations of the cross, towards an altar, where radiant light streams down on a priest in ornate and brightly coloured robes, surrounded by gleaming metal vessels and a series of religious icons. While this sensory framework is similar for all who enter the church, the way that it is cognitively processed plays a vital role in how this information is interpreted. For the priest, mass is a frequent and familiar experience in which he plays a defining role as a performer: distinguished through words, gestures, dress, props, and the sacred context. His movement through the rituals is habitual and almost second nature. Performers (e.g. ministers of the bread and wine, acolytes carrying the ritual objects, singers in the choir), as regular attendants of the ritual, may also feel defined by their roles. Regular attendees of mass may notice subtle differences in scents, hymns, and space but the overall impact of the ritual context and behaviour is inclusive; individuals know the ritual performance and its meaning.

The ritual performance serves to define both the space and a person's role within it. If the script is followed, the experience for the intended audience will be positive, creating a sense of connection between a person, a place, an action, and a community. However, as recent studies have illustrated, there are (at least) two key elements of variation in a ritual: the audience and how the ritual is performed.[41] The passage above assumes an audience with significant knowledge and a positive reception of the ritual; neither of which is guaranteed. While experiencing the ritual of

[40] Kundtová Klocová and Geertz 2019: 82.

[41] Schieffelin 1998, Stavrianopoulou 2006, Chaniotis 2007, Hüsken 2007, Sofer 2010, Moser and Feldman 2014, Dillion, Eidinow and Maurizio 2016, and Latham 2016: 39–43.

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communion as a non-Catholic can be a transformative event, it may not have a positive outcome. Outsiders can feel like Indiana Jones trying to traverse a cave of booby traps, there are many ways of being caught out in the ritual: sitting down without genuflecting, not knowing when to stand or sit, standing alone as others shuffle past for the rite of communion, mumbling words during prayer recitations etc. A Catholic mass can feel quite foreign, even for members of other Christian faiths. The scent of the incense may feel stifling, and the number of images (different scenes and saints), vessels, and prayers may overwhelm the senses. Because ritual acts are so familiar to regular attendees, they are often not signalled or explained to outsiders: one may not recognize cues or gestures, even though the ritual is based on a similar text. For those who have never entered a Christian church, the communion ritual may be even more mysterious, foreign, intriguing, and thought-provoking, engaging the uninitiated viewer in fundamentally different ways. These sensory experiences are intimately linked to memories, the sight of iconography, the scent of incense, the sound of a hymn, the feel of one's legs on a prayer cushion – all of these sensations could transport an individual to a place of comfort and familiarity or an exotic and uncomfortable new place, based on one's own expectation, memory, and perception of lived experiences.

Rituals, often designed to create feelings of inclusion and solidarity, can result in a myriad of emotional responses: a sense of exclusion, shame, or alienation. Many entertaining tales of ritual transgression were shared between contributors to this volume, and in the interest of privacy, I (Abigail Graham) will share a personal one. A week after his holy communion, my seven-year-old went to receive communion. In haste to get out of the spotlight, he snatched the communion from the priest's hand, rather than holding out his hands in supplication. The priest immediately stopped the ritual to offer a scathing reprimand. This was a fascinating departure from ritual and had a plurality of different reactions: satisfied nods from traditionalists, looks of concern from parents whose children's eyes were wide with apprehension, and probably a bit of *schadenfreude* (a small pleasure that they were not the subject of public reprimand). Although the mass continued minutes later, there was a definite feeling of derailment: the exclusion of one disrupted the ritual for many. This is not an isolated event in communion rituals, but it is always one which draws the attention of the audience. Variability makes repeated rituals exciting, prompting both hope and fear: a performance is a roll of the dice. Transgressions, despite their paucity in recorded accounts, are often more memorable on account of the charged experience.

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For my son, the event profoundly shifted his perception of the ritual and, by association, his religion.

Transgressions illustrate the variance and subjectivity of rituals as well as the emotional power of experience in perception and memory. Experiences shared during discussions between contributors of this volume reflected similar patterns: scripts designed for one outcome could, in reality, have a plurality of outcomes, dependent upon the success of the ritual performance. These outcomes could have significant emotional impacts on the perception of the ritual experience and how it is codified as a memory. Rituals are often successful as transformative experiences which illustrate a person's place in a community, however, whether this is a 'good' place or a 'bad' place is subjective, and often based on the outcome of the ritual performance.[42] The objectivity of a ritual (often implied in its script) does not always come to fruition in the performance, which is by definition a subjective experience: subject to a person, a place, the materials, and the audience. Understanding this aspect of ritual performances is crucial to managing our expectations and our interpretation of the events. Imagine, for example, an apocalyptic future in which my son's experience of communion was the only surviving account of the ritual. While it is a valuable eyewitness account, like that provided by Plautus (in the Introduction), it is a single event in a spectrum of experiences across time and space. An awareness of subjectivity and the emotive contexts of ritual experiences allows us to reconstruct an embodied ritual experience that is often missing from accounts; it is a means of seeing the invisible: variance in ritual experience.

To assess the ritual of a Catholic mass as a lived experience, one needs not only a singular account of how the ritual was supposed to happen but numerous accounts from varied audiences and performers. As we discovered in discussions among contributors, a single individual could have many different experiences: different masses, churches, and emotional states. In a modern context, we do not assume that repetition results in the same outcome, we expect variance in our own ritual experiences, and acknowledge that these experiences shape our perception, expectations, and memories of religious events. This understanding of subjectivity and variance could also be applied to the way we approach religions of the past.

[42] This concept is well illustrated in the philosophically waxing TV series 'The Good Place'.

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A Holistic Approach to Rituals As Embodied Experiences: Embracing Variance

Can the individuality and subjectivity of an embodied experience be understood not only as a source of variance but as a framework of perception that unites all ritual experiences? We believe it can. However, to understand how variance operates, one must explore the concepts of variance and repetition a bit further. As a scripted event, a repeated ritual implies a similar framework of action, perception, and outcome. For example, in the film *Groundhog Day* (1993), Phil Connors, played by Bill Murray, must repeat the same day over and over. In theory this sounds like a tedious premise, but as a performance repetition becomes a background for change: even within the same sensory environment Phil Connors transforms into someone else. He learns through repeated actions, which slowly alter his perception and expectations of himself and his surroundings. The repeated experiences do not result in a mindless or exact replication, rather, they provide a setting in which change can be viewed more clearly, allowing for reflection and a more nuanced understanding of one's place in the world. Repetition is not necessarily an assurance of continuity, it is a metric against which change can be measured and understood in a lived experience.

Despite divergent rituals, approaches, and lived experiences in this volume, its case studies converge on the value of a holistic approach to religion that embraces variance in rituals as dynamic and embodied experiences. Cognitive approaches in each case study defy tendencies to generalise rituals, even repeated ones, allowing readers to step beyond traditional boundaries of the field, and to understand the intimate interconnectivity of ritual experiences. Rituals are dynamic processes defined not only by repetition but by constant change, activity, and progress. As Emma-Jayne Graham notes in Chapter 2 (p.85): 'The lived experiences of the women who upheld some of the most traditional religious ideas of ancient Rome highlight quite how potentially fluid and constantly in the process of becoming Roman religion truly was.' In short, a ritual experience, like Blanka Misic's visit to the Domus Aurea, is never the same river twice. Rather than understanding ritual variance as an element of division between individuals, religious groups, cultural traditions, and historical periods, we believe instead that the fluidity of ritual experiences is the common constant that binds rituals together.

This volume explores the plurality of ways one can recast rituals as lived experiences, through different sensory and cognitive approaches and

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perspectives. The first three chapters present a range of ancient evidence, applying theories of memory and sensory cognition to explore a variety of ritual experiences. In the first part of this volume, variance and the dynamic nature of embodied experiences are contextualised through a close examination of the interplay between objects, places, individuals, and memories. Blanka Misic and Emma-Jayne Graham note the centrality of sensory engagement in forging relationships and memories between people, objects, actions, and spaces. As observed by Blanka Misic (Chapter 1, p.54): 'emotional bonds combined with repetitive exposure to external stimuli to form a dynamic network of memory associations, which created a narrative within the life-experience of the individual, making it easier to store and retrieve memories of religious rituals'. Blanka Misic's novel Religious Learning Network (RLN) model, applied to the cult of *Nutrices Augustae*, explores how rituals are learned and remembered as encultured and embodied experiences, through a combination of external stimuli, emotion, and repetition. Blanka Misic and Emma-Jayne Graham's chapters, particularly, underline the importance of social learning alongside experience in understanding cognitive processes.

Emma-Jayne Graham (Chapter 2) focuses on individual haptic experiences of Vestal Virgins with ritual objects, deconstructing traditional approaches of ritual immutability and inflexibility. Graham's embodied assessment of a procession of Vestal Virgins (cf. quote above) defies conventional ideas, presenting the ritual as a source of flux and a process of 'becoming'. By recasting the framework through which we view rituals as a highly personalised experience of lived religion, Graham provides readers not only with a means of viewing Vestals beyond their chaste status, but also contributes a more nuanced understanding of proximal and distal frameworks than has been explored to date in the Cognitive Science of Religion (CSR).[43]

Vicky Jewell's examination of individual haptic engagements through an assessment of chromatic language in Mithraic religious spaces (Chapter 3), approaches ritual experiences in a similar way, presenting sight as an active process in a lived experience: 'to see something is to touch it with the visual body streaming from the eyes – the sacrifice is now personal to every member in the audience' (p.113). Jewell's study of

[43] In CSR the concepts of proximal and distal have been employed to assess the manner in which individuals reason about a particular event. For example, CSR scholar Cristine Legare and colleagues discovered that individuals can hold both proximal (natural) and distal (supernatural) explanations when attempting to account for a cause of an illness. See White (2021: 126, 134–6) for a summary of Legare's findings.

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embodied experiences through texts and imagery, with a particular focus on the perception of colour, allows us to engage with objects in new and imaginative ways (p.113):

> Colour can enhance and add to the imagery of these ritual spaces, to create a visual communication of ideas and meanings which could impact upon the viewer not only with the immediacy of sight but with what was then understood as a haptic experience – that these colours and images reached forth and interacted with the viewer in an altogether more dynamic way than we might otherwise imagine.

From whatever perspective we approach rituals as embodied events, they emerge as dynamic experiences that capture the senses of an individual.

The following two chapters by Abigail Graham and Steven Muir explore rituals as enacted experiences in specific spaces, applying recent concepts from studies of emotions, space, place, and performance theory to our understanding of ritual events. Abigail Graham (Chapter 4) recreates a ritual procession in Ephesus from several perspectives: from the expectation of the script (the creator of the foundation) and from the perspective of a performer and various viewing audiences, noting the role of variance in repeated performances. The variance of rituals also demonstrates how deviance from a script or expected outcome does not necessarily result in a negative outcome. The experience of an *ephebe* marching in Salutaris's procession may have imbued a sense of continuity, responsibility, and importance, even if he did drop a statue or slip in a puddle on his way down the *embolos*. The deviant actions of a dog on stage during an orchestral concert at the theatre in Ephesus in 2017 did not render the performance a failure, but rather, a unique, emotive, and more memorable experience.

Finally, Steven Muir's chapter (Chapter 5) on the Christian experiences of Egeria applies similar theories of emotions, performance, and space, integrating literary descriptions of the ritual performance with props and archaeological space. Muir's focus on the role of space and action in transforming props into sacred objects draws attention to the fact that an object or 'prop of faith' is representative and symbolic. The sacred Christian items handled by Egeria may not have been 'true' relics (e.g. a piece of the 'true' cross or Solomon's ring), but these sacred objects, like theatrical props, acquired symbolic value and meaning through a ritual act, performance, space, and/or engagement with the performer. As Steven Muir notes in his chapter (pp.168–169) 'Through touch and intense gaze in a small and communal setting, the pilgrims vividly experience key historical events valued in their

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community. The past becomes the present in the ritual moment.' The cognitive frameworks employed in these case studies provide a means of reconstructing rituals as dynamic and embodied experiences, which illustrate the different ways a ritual could be experienced and remembered by a broader and neurodiverse audience of individuals.

Both Graham's and Muir's chapters shed light on a cognitive bias commonly found in Roman culture – the presumption of a successful ritual outcome. Graham points out how this presumption is encultured via material evidence by analysing a monumental stone inscription attesting to a successful ritual. For an individual to experience and be encultured into the practice of glorifying successful ritual outcomes only, and not acknowledging ritual failures, reinforces this cognitive bias. Graham and Muir's chapters, therefore, caution us on the ways in which experience and social learning can reinforce existing cognitive biases.

By focusing specifically on the exploration of ritual experiences, this volume aligns with the central CSR tenet of fractioning religion into distinct components which can be analysed using interdisciplinary approaches. This volume, therefore, applies a 'bottom-up' approach to the study of religious experiences, with each chapter reflecting on different aspects which make up a religious experience: sensory engagement, embodiment, enactment, and cognitive processing of a ritual event, as well as encoding and retrieval of ritual memories, and transmission of religious and ritual knowledge.[44] The case studies in this volume also contribute to furthering CSR research on religious and ritual experiences in several ways. Much research to date in behavioural and cognitive sciences has been focused on studying the religious practices of WEIRD (Western, Educated, Industrialized, Rich, and Democratic) populations.[45] By examining religious rituals and ritual experiences within the broad chronological, socio-cultural, and geographic scope of the ancient Roman world, the case studies in this volume contribute to diversifying the study of rituals and ritual experiences outside WEIRD traditions while offering CSR scholars 'the exciting prospect of gaining access to "data from dead minds"'.[46] Furthermore, several theoretical approaches in this volume, such as Blanka Misic's RLN model and Emma-Jayne Graham's proximal and distal forms of religious knowledge, contribute to the CSR

[44] As Czachesz (2022: 169) states: 'On a more positive note, we have to recognize that the only way to gain knowledge about a phenomenon is to isolate its salient features, create models that account for their existence and dynamics, and understand them in a broader context.'

[45] White 2021: 88–9, 316, Newson *et al.* 2022 and Slingerland 2022: 503.

[46] Slingerland 2022: 502.

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aim of developing theories which can account for cross-cultural trends in religion.[47] Existing CSR theoretical approaches are 'sometimes criticized for not endorsing emotional or motivational components of religious thought and experiences'.[48] By integrating sensory and affective approaches alongside research from the cognitive sciences, the case studies in this volume contribute to closing this gap in CSR research.

As a whole, the volume not only presents a broad range of ritual case studies across time, space, and religions, but also a variety of cognitive concepts and theories on lived experiences – from social learning, high-fidelity imitation, and enculturation, to embodiment, sensory pageantry, emotional arousal, place and space theory, and performance theory. The underlying concept connecting each ritual case study, however, is the dynamic and individual nature of an embodied ritual experience: there are many ways to approach ritual experiences. A flexible and diversified approach to rituals is rooted in a deeper understanding that rituals are dynamic experiences with numerous audiences and outcomes, which cannot be properly understood through a singular perspective or approach.[49] As Emma-Jayne Graham observes in her Chapter 2 (p.84) 'despite sharing in the same activities there could never be any sort of singularly 'Vestal experience' of a public sacrifice, or anything else'. What links these case studies is the diversity and variance of experience, not only among different rituals but within the same repeated ritual.

The variability observed in objects, performances, spaces, and outcomes is not necessarily a vulnerability – it is the very unpredictability of performance that makes it both exciting and adaptable to different circumstances: performers, locations, objects, atmospheres, and audiences. Ephebes grew up, Solomon's ring may have fallen down a hole, and the colours on Mithraic depictions faded, but the rituals that defined them remained, even when the meaning behind these objects was lost. This principle can be observed in rituals such as Lupercalia and its modern-day equivalent Valentine's Day. These rituals survived for hundreds of years not on account of props or beliefs, but because of the dynamic emotive experience they offered, which adapted to different environments,

[47] According to White (2021: 204), one of the key aims of CSR is 'to produce broad theories to explain general trends across the world between cultures'.

[48] White 2021: 164.

[49] Eidinow *et al.* (2022: 3) note the need for a dynamic cognitive approach to religious experiences as events and processes that are 'configured by previous experience'; not unvaried but 'continually updated throughout life'. Similar points about prospection and how experiences can shape future perceptions have been made by Popkin and Ng 2021: 15–16.

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performers, and audiences. The knowledge gained in cognitive approaches is applicable both to the study of ritual experiences and to broader questions of how and why rituals evolve over time. It is not rigidity and repetition which allows rituals to perpetuate, but fluidity and flexibility, the ability to expand and adjust the script, to add props, actions, and participants, to alter the setting. Rituals are dynamic lived experiences whose divergent outcomes need not divide an audience, they can unite viewers within a similar framework of perception: variance. Repeated rituals do not have a similar outcome, nor were they expected to, it is their fluctuation and their ability to change that draws the audience's attention each time, preventing a repeated event from becoming predictable or boring. It is the spontaneity of a lived experience that binds us across the past, present, and future.

Cognitive approaches are means of contextualising and engaging with material and literary evidence in a different way: exploring how rituals could be understood and remembered as experiences by individuals and communities. The aim of this volume has not been to provide definitive conclusions about ritual experiences but to explore how interdisciplinary scholarship on cognition and memory can be applied to rituals as embodied, enacted, and encultured religious experiences.[50] These case studies, which consider how to embed the variability of experience and outcome in rituals, reflect the initial stages of a dialogue on the role of cognitive experience, which we hope will stimulate further research on cognitive and sensory approaches to rituals and ritual experiences in the ancient world. These approaches could also be applied more broadly to the acts of viewing and/or reading ancient monuments, objects, and events.

Cognitive Approaches: Oh, the Places You'll Go . . . 'May You Live in Interesting Times'

Recent scholarship in archaeology and ancient history has demonstrated how cognitive frameworks can be applied to the interpretation of texts, artefacts, and ancient contexts. Hamilakis and others have applied sensory networks, concepts of space, and multi-temporality to a range of embodied experiences, from the ways in which ancient monuments shaped experiences of reading, to the role of archaeological excavations as performative spaces and the role of museums in labelling, teaching, and engaging with

[50] Rüpke 2016.

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artefacts.[51] Chaniotis's historical scholarship of emotions, an impetus for a number of studies, continually urges historians to incorporate emotions as a primary feature in analysis: 'ancient historians should not only study texts in order to understand emotions; they should study emotions in order to understand texts . . . and through them ancient society, political life and culture as well'.[52] These approaches focus not only on objects and spaces but on the physical and emotional engagement of modern participants with ancient objects and spaces. Chaniotis's observations on the role of emotion in historical scholarship could be applied similarly to the role of cognitive approaches to ritual: we do not need ancient rituals in order to understand cognitive theory, we need cognitive and sensory approaches in order to understand rituals, past and present.

Cognitive approaches have been applied across various fields of study. In fields such as museum and heritage studies, as well as in teaching, sensory experiences and performances are employed to captivate and ensnare a broader audience and to embed learning in a more profound and meaningful way. Multi-sensory and embodied experiences also pervade the world of art and culture. The 2019 Venice Biennale, 'May you live in interesting times', examined the complexity of culture from the ground up by exploring different perspectives and memories through sensory experiences. The installations, a feast of images, sounds, spaces, scents, and textures, placed the viewer within the beating heart of the exhibition. The aim of this exhibition – 'to challenge existing habits of thought and open up new readings of objects, image, gestures and situations' – was achieved through 'entertaining multiple perspectives: of holding the mind in seemingly contradictory and incompatible notions and juggling diverse ways of making sense of the world'.[53] The objectives of the exhibition are, in many respects, what scholars of anthropology, history, religion, and ritual are seeking to achieve with cognitive approaches to embodied religion and lived experiences. During the compilation of this volume, these aims and approaches have developed further, especially regarding

[51] Hamilakis and Theou (2013) explore the role of archaeological sites as shared performative spaces for social engagement and interaction. Papadopoulos, Hamilakis *et al.* (2019) explore the role of digital sensoriality in the display, labelling and experiencing of Neolithic figurines as objects. Anderson *et al.* 2019 consider the concept of distributed cognition in sources, spaces and places across Antiquity. Graham (2021) explores how individuals cognitively engaged with inscribed monumental texts in the theatre at Aphrodisias. Popkin and Ng (2021) assess concepts of the future in antiquity through cognitive approaches to memory and prospection.

[52] Chaniotis 2012: 124. A similar point is also made in his introduction to the volume.

[53] Brochure of the 2019 Venice Biennale: https://universes.art/en/venice-biennale/2019/may-you-live-in-interesting-times.

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neurodiversity and sensory engagement. An exhibition called 'An Archaeology of Disability' at the 2021 Venice Biennale Architettura by David Gissen, Jennifer Stager, and Mantha Zarmakoupi created an installation of sensory engagements: 'exploring what it means to reconstruct lost elements of the Acropolis through the lens of human impairment', where 'disability emerges as a form of historical inquiry, archaeology, and reconstruction, informed by the experience of collective human difference across space and time'.[54]

Applying cognitive approaches to understanding modern art and culture demonstrates the benefits and limitations of cognitive approaches as a means of re-reading and reinterpreting cultural narratives. Having experienced art installations through complex sensory networks, one remembers them vividly but is also struck with the difficulty of describing them to a second-hand audience. It is not only that human memory is unreliable, but that written accounts or static images struggle to convey the complexity of a sensory experience. This is a challenge that we must acknowledge and address through cognitive approaches, applying creativity and imagination to recreating lived experiences within sensory frameworks.

Managing expectations of our sources is not an act of disqualification but one of contextualisation: one has to consider, possibly even imagine, how cognitive factors could shape an experience in positive and negative ways. Our ability to do this as scholars and human beings is based directly on our lived experiences. Social, moral, and legal codes, the scripts by which people conduct their lives, are continually redrafted and reshaped by repeated performances. This experience prompts us to approach such codes critically: love may not be eternal, promises may not be kept, scripts may not be followed, and (especially in Britain) it may rain on one's parade. Assessing rituals as cognitive experiences through different senses is a way to address this bias and to apply a set of practical knowledge and skills to our understanding of ritual practice: recreating elements of an experience that are most likely to have played a formative role in perception and memory.

Cognitive approaches, employed across and between disciplines on a global level, are a lens through which ancient historians and archaeologists can connect with a broader network of scholarship in anthropology, geography, arts, philosophy, cognitive neuroscience, psychology, and beyond. Our disciplines are, perhaps, not as independent as we might

[54] Brochure of the 2021 Venice Biennale: www.labiennale.org/en/architecture/2021/stations/david-gissen-jennifer-stager-and-mantha-zarmakoupi.

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imagine – like our minds and bodies, they are enmeshed in individual aims and objectives.[55] Approaches to ritual experiences explored in this volume could be applied not only across interdisciplinary boundaries but also within the ancient world to consider how expectation and experience can impact perception on a larger scale: how a broader audience of neurotypical and neurodiverse individuals may have engaged with monuments, performances, speeches, and art. Our lived experiences, however variant, unite us in the understanding that seeing is not always believing (as Edgar Allan Poe remarks) – what we perceive is impacted by our sensory organs, our cognitive processes, our affective states, our cultural lenses, and our individual expectations. While there is great value in an eye-witness account, the individual nature of embodied experiences requires a more dynamic approach. Embracing variance in human experiences is a way of seeing what is absent from an eyewitness account, and a means of gauging how 'inner' cognitive processes interact with an 'outer' world. We certainly do live in interesting times, but more importantly, what makes them interesting is unique for everyone. How boring and predictable life would be if it were otherwise.

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[55] See Geertz (2017: 35) quote in the introduction.

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