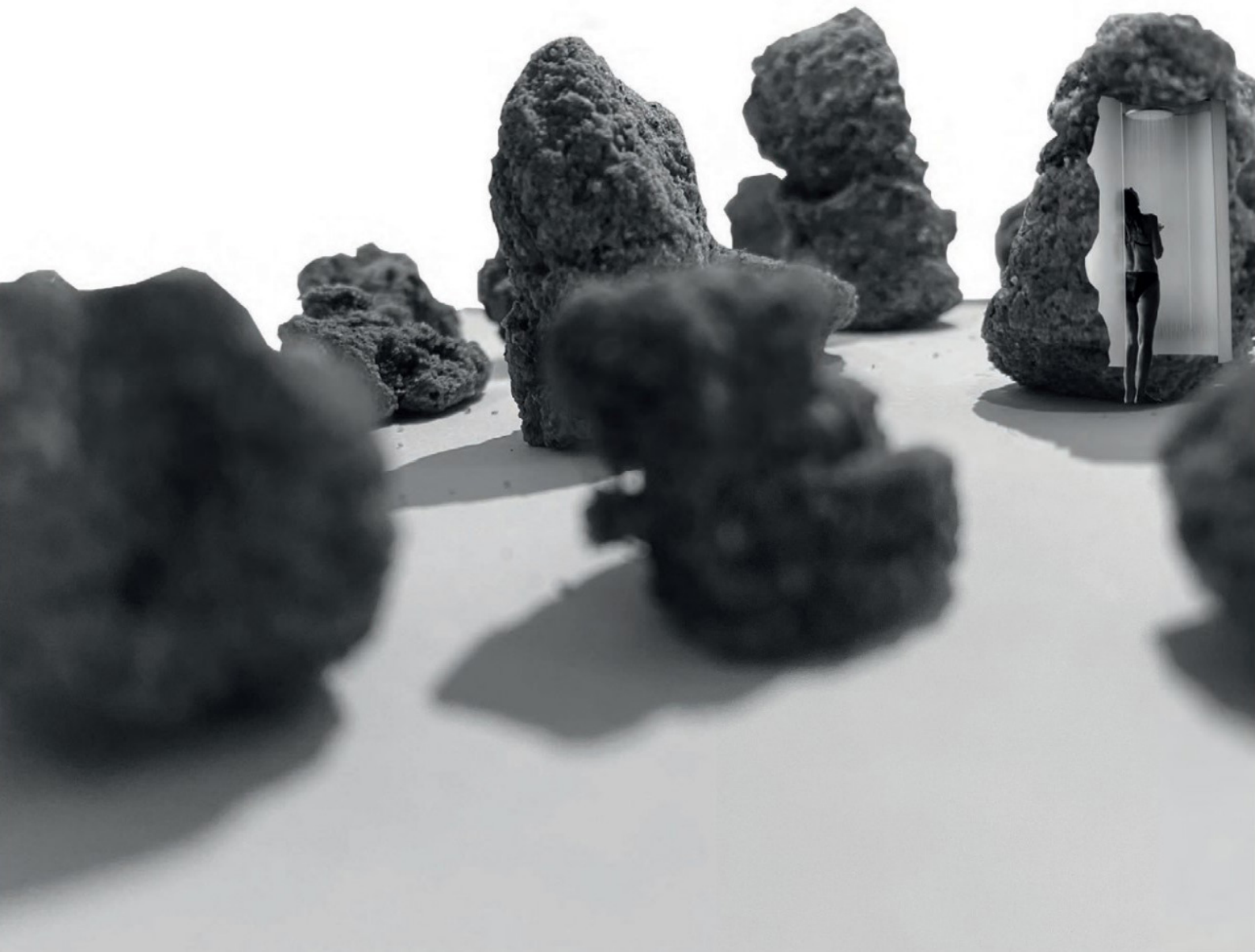


THE RHYTHMIC ESCAPE

Environmental Features in Landscape Ecology





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RESEARCH QUESTION

Which environmental forms and patterns within landscape ecology can manipulate rhythms and behaviour, and how can these be extracted to be reimplemented within the territory of architecture to promote wellbeing?

DICTIONARY

Implicating	- Bringing in/ choosing
Complicating	- Relating
Explicating	- Expressing
Environmental Forms	- Shapes found in the environment
Environmental Patterns	- Symmetrical or unsymmetrical features found in the growth behaviour of placement of the environmental features
Landscape Ecology	- Study of patterns and interactions between ecosystems within a region of interest
Rhythms	- Interactions and actions
Territory	- Subtraction or addition of elements to construct a space for a specific action or rhythm to take place
Wellbeing	- Overall positive feeling for yourself and your future / belonging
Extract	- Remove or take out/ a preparation containing the active ingredient of a substance in concentrated form
Reimplement	- To implement again or differently
Sensorimotor Theory	- Perceiver’s active bodily engagement with the environment

INTRODUCTION

Nature is often seen as greenery or the direct perception of trees, mountains and water. Yet, nature conducts a deeper knowledge beyond its stereotypical classification. It holds memory and energy and can be manipulated and transformed. Culturally, nature has been central through history withholding specific meanings of belief, wisdom, knowledge and emotions (Han, 2016). It has been used as a tool to provide jobs, shelter, medicine, and in this current time: an escape. Historically, humans worked in nature and sought escape in a home. Today, most workplaces are not in natural environments but rather located in office buildings constructed within urban scapes.

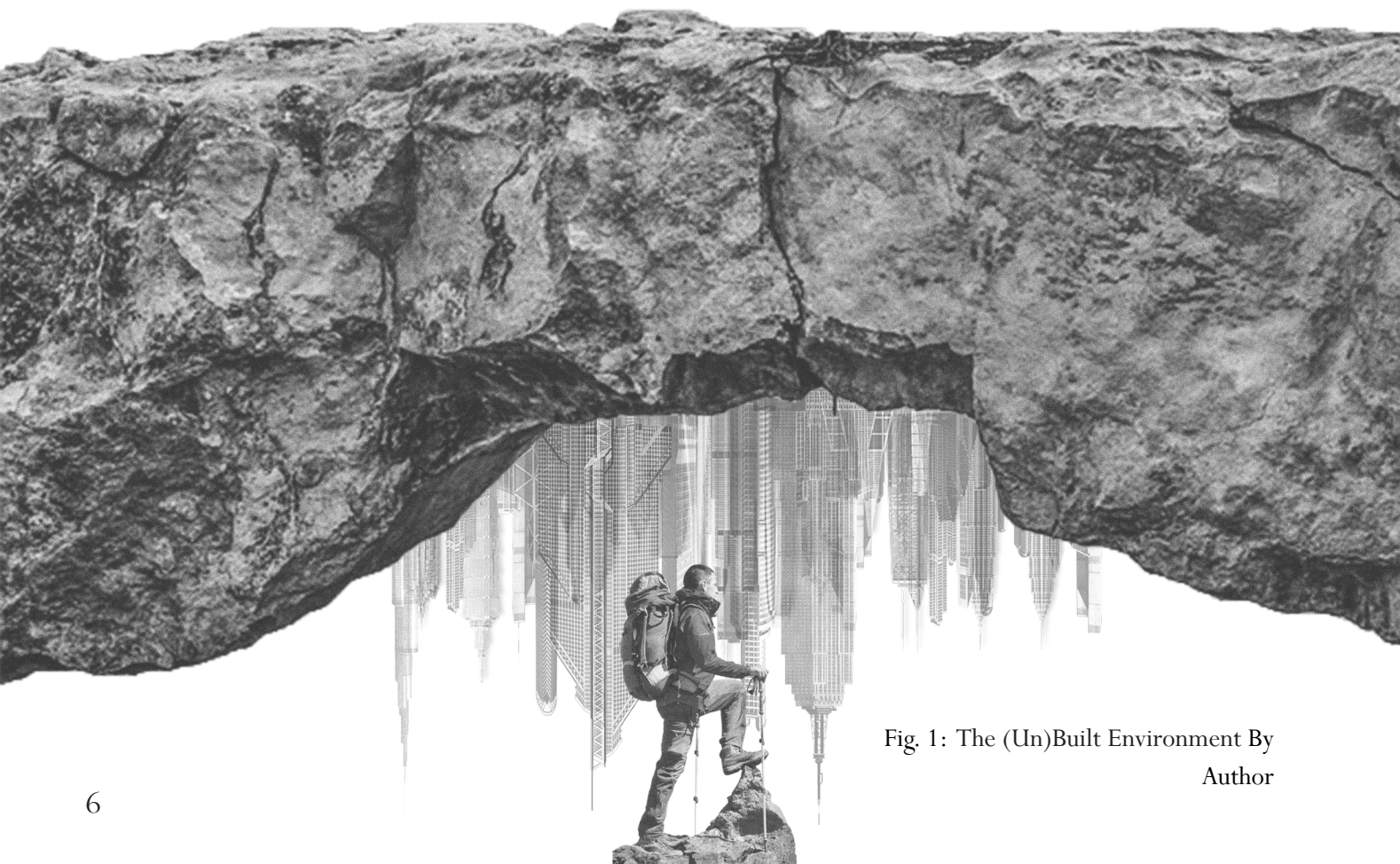


Fig. 1: The (Un)Built Environment By
Author



Fig. 2: My Escape By Author

LANDSCAPE ECOLOGY

How can the healing features nature produces, both physically and mentally, be architecturalised and reimplemented within the architectural scale? First, one needs to identify those factors. When treated with respect, the spacious ambience of nature endorses physical and emotional freedom. It forms an outdoor room which is essential to thought and atraumatic development (Morton, 2007). This outdoor room becomes an ambient rhetoric that translates into the physicality of nature. An example Morton gives when explaining the ‘outdoor room’ is the ambience of the lawn which becomes an extension of the living room as an exterior carpet (Morton, 2007). Furthermore, nature could be referred to as the cosmos, due to the word’s collective description of plants, landscapes, animals, and other features that are not humans or man-made. The cosmos is a broad term that constantly gets affected by the chaos and territorialisation of its components (Grosz, 2008). Therefore, a better word for nature, in relation to the epistemic focus of this paper, would be landscape ecology. Landscape ecology studies patterns and interactions between ecosystems within a region of interest. However, by removing the environmental content from landscape ecology and focusing on the environmental form (Stewart, 2002), the focus metamorphoses the perceptive and sensorial forms found in the landscape environment that affects the rhythmic movement of humans through emotion. Accordingly, it is the epistemic focus of the bionomics regarding rhythmic and sensorial features within the landscape ecology of rituals, that will be of interest.

The human-nature relationship is based on philosophical cores that hold human values and views of landscape ecology. Landscapes represent nature through the cultural wisdom held in the territory. The cultural filters are the drivers of innovation within the built environment, whereas the wisdom of bionomics translates into the execution of social construction (Han, 2016). This construction varies globally as the practice and wisdom of sociology and landscape ecology differ. Zakaria Djebbara found in his research that the way humans perceive, and process environments happen in the thalamus of the brain. However, as well as interpreting the environment, the thalamus gets affected when humans experience anxiety and depression (Djebbara, 2022). Here, the link between environmental features and well-being are made. The processing of the environmental features in the thalamus can potentially be a great factor in promoting or preventing well-being. Behavioural spaces are territories manipulated in ways of unforeseen or contrasting and distinctive design choices, that change the moving and acting behaviour of the user (Roth, 2018). Therefore, researching the potential effects landscape environmental forms have on affordances and behavioural patterns through a neuropsychological approach, would open a further discussion on to what extent architecture impacts human’s well-being. How can sensorial and perceptive environmental features in landscape ecology be architecturalised and translated into stimulation tools for our sensorimotor cognition?



Fig. 3: The Human-Nature Relationship
By Author

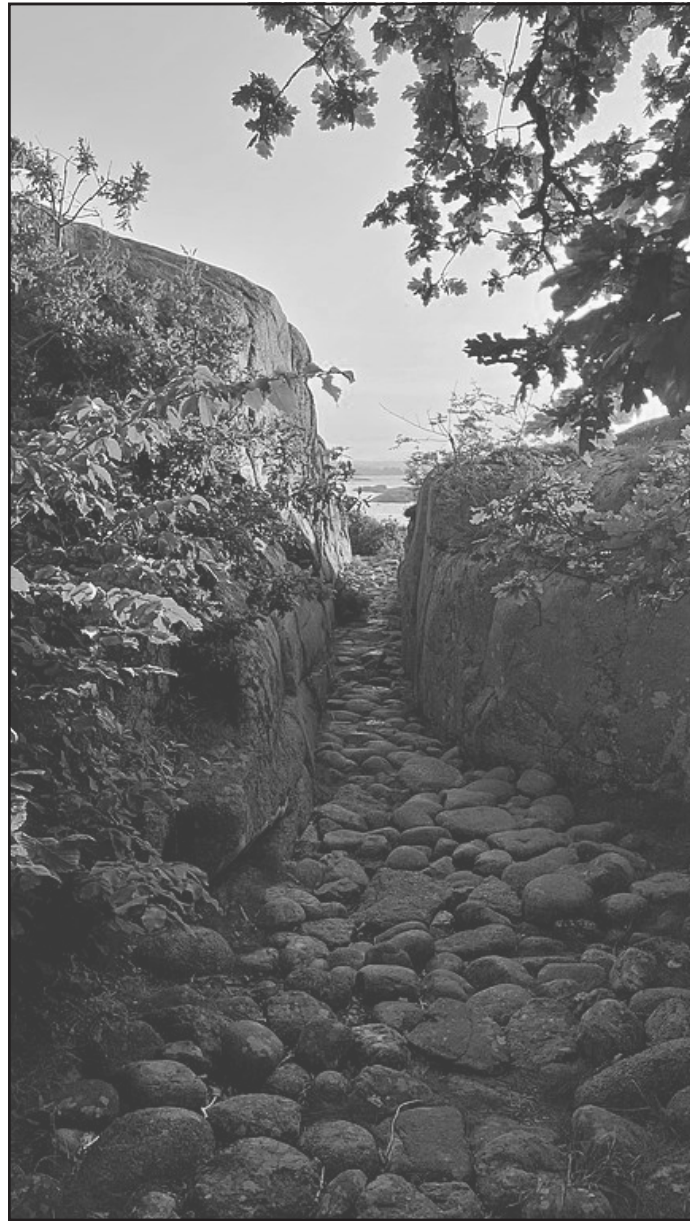
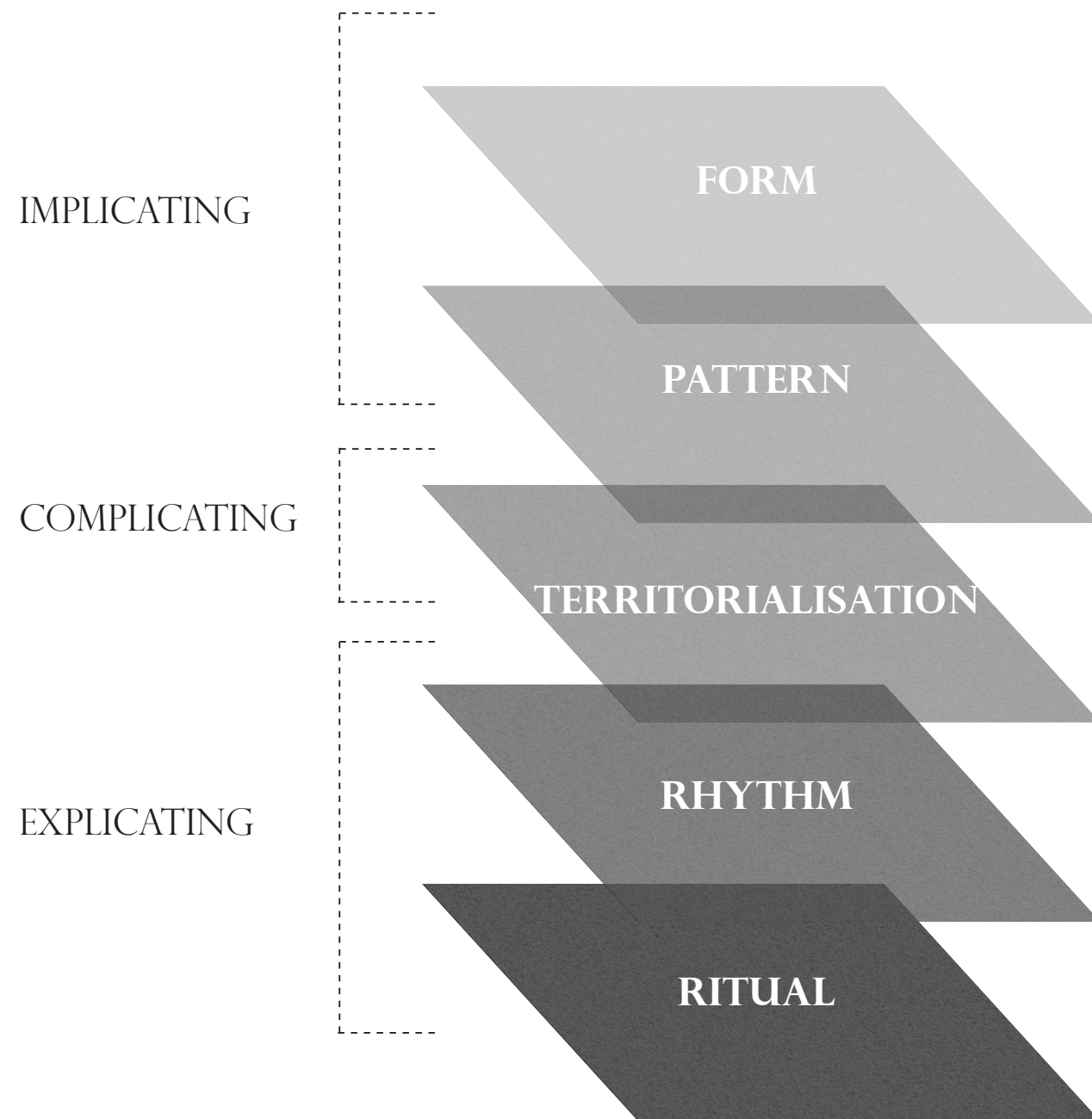


Fig. 4: The Outdoor Room
By Frittfallfoto

Discovering that the environmental features and our sensorimotor response have a great impact on well-being and behavioural patterns, one can start questioning certain design decisions made in the urban environment. Therefore, this paper will investigate the environmental impact landscape ecology has on the sensorimotor system and how landscape-inspired patterns and forms can positively adjust the individual's brainwaves for more mindful living. The focus will be on the amalgamation of rhythms and rituals conducted between landscape ecology and humans, and how to translate and transform these towards the interiority and exteriority of a spiritual retreat for self-healing and self-awareness. The formation of landscape ecologies does in many cases show a lasting and intimate relationship with anthropology through its human-impacted patterns and morphosis. It becomes the spiritual relationship between people and ecology through powerful beliefs and artistic and traditional customs (Han, 2016). However, the harmonious human-nature relationships are decreasing, and with it disappears the cognitive healing power it holds. In The Netherlands, this might be due to the overly-ordered urban expansion. With this said, there is an urgency to rebuild the relationship between humans and nature through re-learning the knowledge and philosophies landscape ecology produces and reintegrating it into daily human life.

The theoretical approach will focus on Northern Europe, whereas the architectural case will be located in Rotterdam, The Netherlands. The Netherlands is mostly a man-made landscape which is built on the knowledge and wisdom found in nature. Built up, the landscape of the country is socially constructed, meaning the construction has layers of meaning. These meanings are associated with the social subjects of construction, the cultural input process, and the construction process itself (Han, 2016). The man-made landscape is a territory based on the reflections of relationships, memories, emotions, and deep social values. The aim is to extract rhythms, rituals, and patterns from the landscape environment to reimplement these as architectural processes. Can the architecturalised man-made reproduction of environmental forms and patterns within landscape ecology generate cognitive healing within an already man-made landscape such as The Netherlands?

RITUALS



HUMAN INTERACTION IN LANDSCAPE ECOLOGY

Fig 5: Methodological diagramme
By Author

This paper will combine phenomenological and praxeological epistemes with neuroscientific interest, researching how the environmental features of landscape ecology can positively affect behaviours, emotions, and rhythms. These three factors are important for the possible outcome of spaces that enhance mindfulness through design. In this research paper, the use of ‘mindfulness’ is used as a term to describe a state of awareness. It is a state where one is fully present in conversations and situations, aware of the surroundings, reflecting on past experiences, and fully experiencing movement. The individual is one with their mind and body allowing for reflection and reasoning inward and outward. Mindfulness leads to inner healing and creates a state that projects positive energy and effortless rhythms. A state where the daily rituals become an emotional healing tool with environmental awareness.

Rituals and ceremonies are basic human instincts that can be traced back over ten thousand years ago. They create comfort and continuity enabling human daily lives to be lived more mindfully (Montley, 2005). In comparison with mindfulness, rituals are also argued to strengthen humans’ well-being which has been supported by neuroscientific and psychological research (Lamb, 2020). Rituals are tools to help refocus attention on concrete behaviours by allowing thoughts, feelings, and perception to follow action (Lamb, 2020). The rituals in focus will be emphasizing the human-nature relationship. Pamela Montgomery explained rituals as a conscious act of connecting to the vast web of life. Expressions of gratitude for this connection are important to partner with all relations to move into deep communion and find a common union with Nature Consciousness (Montgomery, 1997). Montgomery describes Nature Consciousness as an intelligent level of consciousness within nature that functions as the architect within all forms (Montgomery, 1997). Therefore, when territorialising with a level of Nature Consciousness, the act of construction becomes an enhancement of the existing natural qualities rather than destruction.

Research suggests that occupying spaces surrounded by natural environmental features has restorative effects which enhance cognitive attentiveness and emotional systems (Berman, et al., 2012). It is therefore suggested to place oneself within a landscape ecology to improve subjective well-being if mindfulness meditation does not seem to work for the individual. A study done by Berman placed nineteen undergraduates in an urban environment and an equal number of participants within a natural environment. When returned, the battery of stress and short-term memory measures showed that the individuals who had walked around natural environmental features had lower stress levels and heightened attention compared to the control group who ventured into the urban environment (Berman, et al., 2009). The research concluded their findings by stating that natural environments are much less mentally taxing than urban settings which leads to more intuitive movements and behaviours. In contrast, urban environments are



Fig. 6: Ritual in Nature
By Author

highly distracting and therefore cause the mind and body to be on alert.

Furthermore, the Buddhist view of mindfulness has been explored through neurophysiological, subjective, and behavioural patterns without a comprehensive and scientific framework (Brown, et al., 2015). Nonetheless, if categorising the mindfulness state within the brainwave frequency chart, this state of mind would possibly be activated during a larger production of the alpha brainwave which enhances relaxed focus, positive thinking, stress reduction, and fast learning (Vala, 2013). Perceptive and sensorial structures and formations, including architecture and landscape ecologies, articulate a boundary between self and the world which redefines the contour of the consciousness and externalises the mind (Pallasmaa, 2017). As the sensorimotor response gets affected by the environmental features of the immediate surroundings, man-made architecture and landscapes are projections and metaphors of the architect's mindscapes (Pallasmaa, 2017). With Pallasmaa's interpretation of the architects' mindscapes in his book 'The Creative Hand' in mind, the experience of the built environment in this century seems to show a disconnection between architecture for the mind and the finalised built structure.

Humans' sensory systems aim to structure a relationship with the world. To gain knowledge and skills in sociological and societal encounters, the human body and brain reside in the sensory and muscular memory that is embedded and encoded in situations of life (Pallasmaa, 2017). Juhani Pallasmaa explains in his book 'The Thinking Hand' that humans are unconsciously guided to the 'threshold of being' through aesthetical environmental features that restructure the biological and unconscious realms of the mind and body (Pallasmaa, 2017). This action maintains vital connections to the biological and cultural past and affects the behaviour to establish certain rituals that are rooted in the memory of the mind and body. In comparison, memory is also a large part of the growth behaviour and pattern creations found in landscape ecology.

To further describe rituals, they are powerful tools that can be explained as a sequence of activities involving words, rhythms, environmental features such as objects or elements, and actions, which are performed according to a set of sequences (Folorunsho, 2022). It is categorised by traditionalism, invariance, sacral symbolism, rule-governance, formalism, and performance. When viewing rituals through an architectural lens it is interesting how people form rhythmic behaviours within and throughout the architectural space that has been chosen and territorialised for the action to take place. When viewing the ritual through the relationships happening between human and environmental features such as architecture, one can accept that territorialised spaces and buildings influence shaping one's life (Jones, 2016). This shaping happens through conscious rhythmic interactions between the human body and the environmental features. Meditational sessions can also become a ritual; however, rituals do in many cases integrate action into their procedure. Meditational practices are interoceptive practices (the body's ability to sense itself from the inside), whilst rituals are proprioceptive (the body's ability to sense itself in space). Mindfulness actions, as formulated in this paper, are a middle ground between proprioception and interoception. Continually, the commonalities of meditation and rituals are the integration of the four elements (fire, air, water, and earth) and the positive neurophysiological and psychological outcomes.

A worldview of rituals foregrounds things and states over processes and actions. This view presents a significant departure from the ways methods and models of religion, ritual, and space are conceived. Scholarly religions, like Christianity, Buddhism, and Hinduism, are explained through materialistic focuses to portray their actions (Fralick, 2002). One example is the image of the cup which is found in the Christian communion and the Japanese ritual of the tea ceremony (Nooteboom, 2013). However, when the emphasis turns towards the object, the glorification of its presence overtakes its important position in the action. When doing so, the ritual becomes objectified and with time people's perceptions and actions towards the practices change. These objects now label the ritual and conceal the intention rather than working as an interactive environmental feature present during the rhythmic actions. In contrast, when emphasising the processes and actions, rituals and sacred practices can be perceived as a lived human activity rather than a convenient category entangling material possession (Fralick, 2002). Therefore, the creative efforts of the selection of space, the preparation, the environmental features, the rhythmic actions, and the correlation between these factors are all of importance to understand rituals as a dynamic and adaptive practice and not as something static. When tackling the concept of rituals through attention to movement and change, the ritual can be understood as the living



Fig. 7: Meditation Within the Elements
By Author

and creative processes (Fralick, 2002) that no longer are seen as single actions but rather actions that flow and interact positively towards the upcoming actions and events.

The ever-changing relationships between the human, behaviour, and environment during the ritual are reliant on the dynamic process of spatiality within the landscape ecology. This change of boundaries, orientation, and fluidity may give insight into how the landscape ecology is used to change rhythmic behaviours and create awareness through actions by the method of implication, complication, and explication. The focus will be given to the healing power of the environmental forms within landscape ecology where rituals are held. The rituals of interest will investigate the process of preparation up until the execution process. Three case studies will be analysed focusing on the space picked within the landscape environment, preparations in terms of how they territorialise the space, and how these environmental features then are used to prepare for certain rhythms and behaviours to take place.

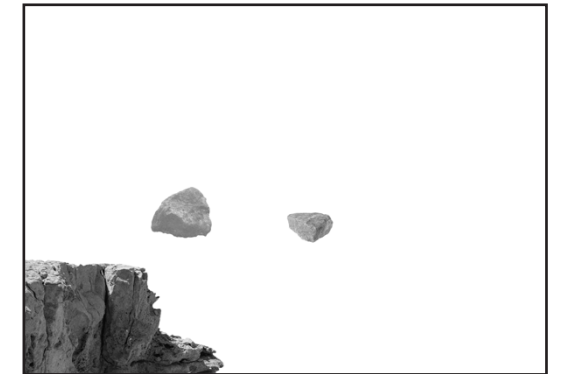
TERRITORY

To claim spaces and territorialise them are important factors for how rituals are put into actions. Therefore, before further analysing the ritualistic process, it is important to understand how to construct a territory, the rhythms that happens there, and the milieu. A milieu is an exterior factor that is formed by relevant components in the immediate material surrounding of a thing (Kleinherenbrink, 2015). As an example, ritual practitioners need objects and materials (often used are the four elements: earth, water, fire, or air) to centre the focus, create a calm environment, and practice their action. Without any ritualistic environmental features, it may be harder to keep focus and therefore the ritual becomes more of a social gathering. Furthermore, rhythms are not routes or regularity, but the variations in the comings and goings within a milieu (Kleinherenbrink, 2015). As a person practicing their ritual, they might move around the chosen sacred ground in rhythmic circular movements. However, they dodge obstacles that may come up in their path. These potential detours between the different object milieus are dependent on what is the most adequate given the circumstances which, thereafter, reinforces the practitioner's milieu against chaos. Therefore, rhythms are never entirely within one's control but is constituted by the capacities of a being in exchange and encounters with the affordances and events within the environment (Kleinherenbrink, 2015).

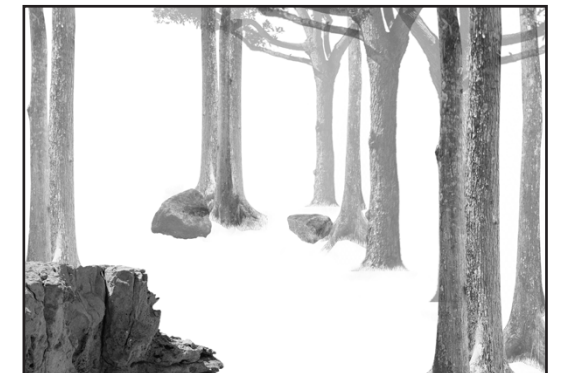
However, a territory is not solely constituted by milieus and rhythms. A person practicing rituals between and with object does not mark routes and destination as their territory. To fully create a territory, it also needs expression which draws out the territory and develops it into territorial motifs and landscapes. Expressions can be seen upon as signatures which formats a domain. Expressing can be done through contingent and experimental expressions, gestures, postures, colours, and sound (Kleinherenbrink, 2015). The sound of drums or humming during the ritual, or the placement of people standing in a circle are ways of performing territorialisation.

The construction of expression creates a calm and stable centre in the heart of chaos, which then allows for the organization of this space. The milieu components are used to organize the space which keeps the forces of chaos on the outside of the territory and protects the interior for the task or action to be done. This involves an activity of elimination, selection, and extraction (Kleinherenbrink, 2015). A person who wants to practice a ritual would therefore select space and objects they need to facilitate the ritual, eliminate objects or environmental features that are not relevant for the procedure, and extract potential obstructions. The selected objects and environmental features chosen for the ritual then becomes directional and functional, which then, through expression, becomes dimensional and expressive. The sounds, markings, or placement of people then marks where the territory begins and ends, and who may enter. However, expressions and territories do not solely emerge from conscious actions and decisions, but rather a system of signs (Kleinherenbrink, 2015). In other words, actions and perceptions within the space produce

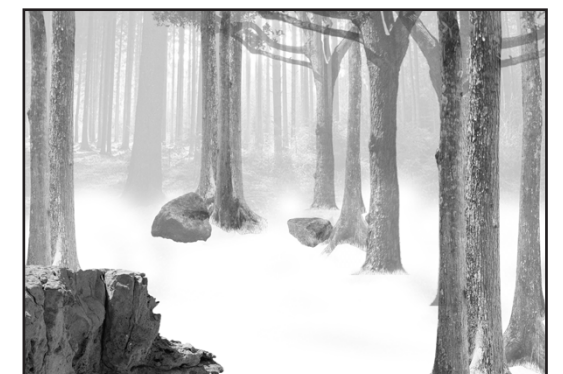
ENVIRONMENTAL FORM



ENVIRONMENTAL PATTERN



LANDSCAPE ECOLOGY



RHYTHM



TERRITORY



Fig 8: Explaining Territory
By Author

and constructs territorial signs.

There are four things that happens when expressions constitute a territory. Firstly, it creates an occurrence within the territory which is a recurring and possibly varying behaviour or event that is expressive. For example, a ritual practitioner will always place themselves with a posture that relates to a chosen centre to keep focus and sustain a meditative state. Secondly, counterpoints are made which are located outside a territory and operates autonomously from it. The territory is always constructed with them in mind. For example, a ritual that takes place within an opening in the woods still take the surrounding trees into consideration. These helps create a sense of privacy although they are not integrated into the ritual itself. The grove of trees is therefore a counterpoint. The combination of these two creates a style. Creating a circle of people within the open space are limited in size due to the surrounding trees. The trees itself is not within the territory and is not a part of the ritual but is taken into consideration and therefore alters the size of the circle and the movements and behaviours of the practitioner. A territory is therefore not just a demarcation of a certain place, but an intense centre where living beings act out interrelated patterns of behaviour (Kleinherenbrink, 2015). The two last points of a territory is the reorganisation of functions and regroup of forces. When pertaining to a territory, control plays a large part. Functions are now added which allows the people who territorialised the space to control who, and what gets to leave and enter the territory. In addition, territories give rise to new sets of functions (Kleinherenbrink, 2015). When formed, a sense of belonging takes place for people from the same homogenous group. To conclude, a territory is primarily an act or set of acts.

SPACE, THE PROBLEM OF TYPOLOGY

For the case studies, this paper will investigate three groups of people that worship nature. The underlying interest is to how these people pick certain locations and prepare them in ways that will fulfil the worshipping, and in return attain nature-healing. The environmental forms and patterns specifically looked for when inaugurating the space for rituals, and actions of territorialisation (subtraction and addition of elements) in preparation for the act to happen, will be the outcome of interest in these case studies. Implicating, complicating, and explicating are the three main focuses when investigating the case studies which will allow for the understanding of which environmental forms and patterns are sought, how they territorialise the space for ritual and the relationship between the humans and the environmental features during the rhythms and action of the ritual. The environmental features found to be of significance during the investigation will be identified with further analysis of their psychological and behavioural impact. The elements later identified hold features that draw the perceptive eye and stimulate sensorimotor cognition. Correspondingly, the act of territorialisation demonstrates how humans subtract and add elements that will allow an outdoor room to be formed. The act itself is rooted in the memory of the body and mind, leading the human to territorialise the landscape ecology in certain ways which allow the basic human instinct of rituals to take place (Montley, 2005). As a result, this outdoor room will catalyse certain behaviours and emotions that psychologically and neurologically change the rhythms of the individual and enhances inner healing. After identifying these factors, the elements found will be catalogued to later become tools in the design phase.

When categorising space as sacred it can be problematic to argue for that distinction. Something sacred is relative and objective, therefore it can be problematised. The chosen groups and their rituals for these case studies are oriented towards nature, therefore, “natural” space can theologically be addressed as “sacred” space. However, spaces that are deliberately or “artificially” constructed, for example, living rooms, parks, shelters, and bedrooms, may also potentially classify as sacred spaces depending on the person habiting the space and if they territorialise that space for ritual usage. A sacred space falls underneath situational and relational categories rather than ontologically given ones due to the spaces’ lack of independent ontological status beyond its relation to human activity (Smith, 1987). However, Nikki Bado-Fralick explains a typology of space as a location that implies a static and substantive view that divides space into discreet, objective units (Fralick, 2002). These units are assigned ontological statuses independent of their relation to human activity (Fralick, 2002). Furthermore, when shifting the focus to activity, the space can then embody the sacred. When territorialised, the space directs attention and requires the perception of difference which further activates certain rhythms, behaviours, and emotions to take place (Smith, 1987). An environmental feature or an action used in the ritual becomes sacred by having the attention focused on it in a highly marked way (Smith, 1987).



Fig. 9: Architectural and Ecological
Composition of Affordances By Author

This paper will address sacred spaces purely in landscape ecologies, sites found in nature, due to their unorganised nature, rhythmic forms and patterns, and the psychological effect these features hold. As landscape ecology studies patterns and interactions between ecosystems within a region of interest, landscaping also suggests the act of altering existing natural features through efforts of human will and creativity (Fralick, 2002). This is the act of territorialisation by the people holding rituals in nature. The spaces chosen for the rituals have been considered sacred by its people due to the perceptive and sensorial forms found in the landscape which creates spatial and personal transformations to take place. These transformations are dynamically interrelated and interdependent, which makes the relationship between the sacred landscape ecology and the action and practice have an important role in the overall outcome of the ritual's rhythmic movement and emotional effect on its participants.

Indigenous and animistic people, like the pagans, the Sámi people, and the Celtic people, have a call for knowledge and philosophies and practice these as actions within nature. UN Special Rapporteur, Erica-Irene Daes, said "heritage of an indigenous people is not merely a collection of objects, stories and ceremonies, but a complete knowledge system with concepts of epistemology, philosophy, and scientific and local validity" (Betz-Bornstein & Hengelbrock, 2006). The animistic groups base their philosophic thought and analysis on how the landscape ecology responds to their actions and base their values and perception on the outcomes. Although their philosophies tend to be more holistic than the Western philosophical conventions, Gregory Cajete notes that their philosophies are "not based on rational thought alone but incorporates to the fullest degree all aspects of interactions of 'human in and of nature'" (Cajete, 2000, p. 64). When approaching rituals in nature as human relationships with the landscape ecology, it becomes a set of relationships that carries out and translates into kinship and interdependence. This relationship becomes the epistemology providing the methodological basis for gathering information about landscape ecology.

NEO-PAGANS

INTRODUCTION

The belief system of the Neo-Pagans is referred to as a holistic lifestyle and is based on the belief system of the ‘witches’ traced back in Dutch history (Smit, 2022). The holistic lifestyle encourages a human connection to nature and its rhythms and dynamics, which awakens the instinct and renews the connection with the hidden world behind physical reality (Smit, 2022). The Wiccan practice of the Neo-Pagans does not claim sacred architecture, like churches or temples, but practices its rituals unbounded by walls. Furthermore, they territorialise landscapes that are considered sacred within which they exercise complex multi-directional movements that elicit transformative ritual processes (Fralick, 2002). Although the smaller sets of daily rituals can be held at any place and at any time with the implementation of the four elements (earth, water, air, and fire), the formal group rituals are held in specifically prepared spaces which follow a strict set of rules. The formal group ritual in focus for this paper is called “the Circle”. The Circle has a specific typology of fluidity and boundaries (Grimassi, 2003) and is a temporary territorialisation which means the assemble is deterritorialised, or deconstructed, at the completion of the ritual (Fralick, 2002). The ritual is held in a natural, yet man-made landscape that allows boundaries to shift according to the perspective and rhythms of the participants. The casting of the circle (construction of this sacred space) is a crucial element of the Wiccan practice that must be mastered by all Neo-Pagans (Fralick, 2002). The examination of The Circle will provide insight into the territorial practice, the rhythmic relationships, and the creation of boundaries and fluidity within its landscape ecology. The emphasis will lie on the ritual’s perceptive, orientation, and rhythmic elicitation, and how these interact with the environmental features that establish the sacred landscape.

WHO ARE THEY?

Before embarking on the Neo-Pagans' ritual landscape, a brief explanation of this group of people and their practices might be necessary for a further understanding of their values and mindset. However, their practice is hard to generalise as there is a large diversity of the practices and communities. Therefore, the descriptions given must not be read as definitive.

Neo-Pagans, or Wiccans, describe their practice as a re-creation of Western polytheistic nature religions, an animalistic worldview, whose roots can be traced to the indigenous shamanic and religious practices of the pre-Christians in Europe (Grimassi, 2003). Although the Pagans worship Gods and Goddesses they do not share sacred written words in a holy book compared to more common religious groups. Instead, there are various written materials specifying ritual practices. The practice of Neo-Paganism can be done both individually and in covens, whereas covens are groups of people with different sizes and structures (Fralick, 2002). The Wiccan structure is similar to an organisation in the manner of selecting a nationally recognised spokesperson, yet the central leaders are not responsible for establishing ritual practices (Fralick, 2002). The ritual practices are based on their religious worldview of change and transformation which is of relevance when later discussing the sacred landscape. Their theological and practical insights are drawn from the ongoing cycles of nature. Neo-Pagans' focus lies within processes and actions which are the basis of the religion and rituals. In comparison to other religions such as Christianity or Hindus which are often scholarly categorised through objects and conceals the vast range of processes and practices, the Wiccan emphasis is on how to perceive religion through human activity and expression. With this mindset, the Neo-Pagans alter the perception of ritual, turning the focus from prescriptive dimensions to living and creative dimensions, and static authoritative practices to dynamic and adaptive ones (Fralick, 2002). When doing so, their ritual turns towards a conscious practice that is dedicated to movement, change, and transformative natures within themselves and their immediate localities.



Fig. 10: The Circle By Voiceofnature

IMPLICATING

When choosing a site for the ritual of the Circle to be held, the preferred location is outdoors in a landscape ecology that is large enough to accommodate all human participants as well as gain a level of privacy (Fralick, 2002). Altman (1975) explained privacy through an organising model of environmental phenomena. He attempts to explain territoriality, spatial behaviour, and crowding by arguing that too little privacy results in crowding, while too much leads to isolation (Corsini, 2001). Therefore, behavioural patterns in people always seek to adjust for the optimisation of privacy within environmental surroundings. When there is a large lack of privacy, which might be due to crowding, people lose focus and withdraw from the involvement in the setting (Corsini, 2001). Privacy, without isolation, sharpens focus and engagement within its environmental space which is crucial to the ritual as it needs directed attention and full activation of the sensorimotor cognition. The selected landscape ecology needs the potential for boundaries to be created and for these boundaries to be removed and transformed into a mundane space once the ritual is over.

There are theological and practical justifications for holding the ritual outdoors. The theological reason is that Neo-Pagans view Nature as a member of their community whose presence must be made during the execution of the ritual. The practical reason is the accommodation of all participants and activities that will take place (Fralick, 2002). This is due to the temporal and fluid nature of the Circle with its particular purpose or rite which is performed before the deterritorialization process starts. Its nature also allows its spatial composition to become quite portable. It can be constructed almost anywhere, yet during the ritual, the neo-pagans describe chosen the landscape ecology as a space that shifts towards a place “between the world of humans and the realms of the Gods” (Fralick, 2002). This statement is a way of describing the landscape ecology as a space that is neither entirely mundane nor “otherworldly”. The Circle is located within, but not of this world. With its boundary-based composition, the edge of the Circle marks a boundary between worlds that required different actions and behaviours from the participants (Grimassi, 2003).

The typology of the Circle is surrounded by a grove of thick trees providing privacy and protection (Fralick, 2002). Trees were likely to have been used by early humans to escape from sudden hazards, such as dangerous animals and protection from the sun and rain. In areas lacking topographic relief, a tree could also provide a readily accessible viewing platform for surveying the surrounding environment (Barkow, et al., 1992). In this sense, trees create an intuitive feeling of protection rooted deep within us. The wood is normally not found far from a suburban or urban environment yet is just far enough to avoid distractions or potential disruptions. A study done by Marc Berman found that people placed within a built environment with trees, compared to one without them, impacted a person’s capacity to pay and direct attention and evaluate the



Fig. 11: Neo-Pagans Implicating the Circle
By Author

experiential urban setting (Berman, 2017). Therefore, the placement of the Circle is symbolic of its transformative and reflective purpose, the reason for the rite, and religious liminality. Another study, done by Piff, Dietze, Feinberg, Stancato, and Kelner (2015), showed that a naturalistic induction of awe in which participants stood in a grove of trees enhanced prosocial behaviour and decreased an attitude of entitlement (Compton & Hoffman, 2019). This is an important factor as the participants in the ritual are to become one with the circle of energy and remove any hierarchal positioning.

The casting of the circle is not taken lightly and is an acquired skill that demands a competent and demonstrable level of somatic practice (Grimassi, 2003). It is the actions of the participants during the territorialisation process that invoke the space to become sacred by constructing a place that can only be arrived at through a process of deliberate and practised transformation of space (Fralick, 2002). The four elements- water, earth, fire, and air- has a large part in the territorialisation and the execution of the ritual. The rules and methods of the casting of the Circle will be further explained in the next subchapter. Here, the nature of complicating, or relating, will be analysed through the construction of its boundaries and the relation to the landscape ecology and the territorialisation process.

COMPLICATING

When constructing the Circle in the landscape ecology there is a basic ritual structure to be followed. The structure is outlined as followed:

- Construct the Circle
 - Cut the Circle (Fire)
 - Invoke Air
 - Invoke Earth and Water
 - Invoke the Watchtowers
 - State the purpose of the rite
 - Invoke the Gods
- Conduct work of specific ritual
- Share cakes and wine
- Complete any other ritual work
- Deconstruct the Circle
 - Bid the Gods farewell
 - Bid the Watchtowers farewell
- Break the Circle

(Fralick, 2002).

The construction of the Circle can be interpreted as a form of “metaspatial” marking. Metaspace is a space transcending ordinary physical space, whereas, in the scenario of the Circle, it sets aside a particular spatial quality for ritual from the existing surrounding landscape ecology. The construction of the ritual constitutes a framing or contextualising practice (Fralick, 2002) that draws focus towards the rhythmic practice of the ritual within the landscape ecology. This framing practice constructs a physical and psychological barrier which enables a sensation of space. Goldfinger describes an enclosed space as a space that gives the psychological effect of what he calls “the sensation of space” (Lewittes, 2022). One must be within it to experience the unconscious spacious sensation which includes the visual experience, smell, sound, touch, and memory; senses that are all of high importance during the ritual of the Circle. According

to Goldfinger, spatial sensation done by an artist becomes architecture, which in return creates spatial emotion. Through the practice of the ritual, humans and nature interact through the grounds of the sacred which evoke a change within one another. Therefore, the concentrated Circle is particularly significant in initiation as a rite of transformation and change (Fralick, 2002). The transformation is linked between the human and the special surroundings whereas both transformation processes start during the marking of the sword.

Starting by walking the circumference of the Circle, the landscape gets divided by cutting a boundary through the existing typology (Fralick, 2002). When one draws a circle around themselves, they separate themselves from the outside world, creating a threshold. It reinforces individuality, enhances a sense of privilege, and creates psychological comfort (Unwin, 2022). A circle symbolise wholeness and perfection, abolishing time and space, yet signifying recurrence (Wagner & Marusek, 2021). The circle can generate a feeling of exclusion as one is either within or outside it. When inside the circle, there might be an impulsive draw towards the centre. It does not have a beginning nor an end and suggests a notion of protection from external forces (Wagner & Marusek, 2021). The cutting tool is a sword or athame used specifically for the ritual and symbolises fire as the sword is created from the forging process with fire. This tool is never used to cut anything physical but to bind the space and mark the separation of the sacred and the non-sacred (Grimassi, 2003). Following the fire element comes the element of air. The air is represented by incense that is wafted along the circumference of the Circle (Fralick, 2002). Furthermore, water and earth are simultaneously invoked through salt, as salt is found in water and represents the element of earth (Fralick, 2002).

Orientation is important for the ritual and the four directions- north, east, south, and west- are marked by placements of candles. The relation between eye movement and attentional shifts is functional. The orientation reaction is accompanied by a temporary increase in a phasic arousal reaction. This reaction is likely to be sustained and canalised if orientation leads to exploration, withdrawal, conflict, or approach (Garling & Evans, 1992). This phasic arousal reaction will frequently be accompanied by sensations of curiosity, like, and interest. With an intense orientation reaction, the focus heightens and the width of attention decreases. An altar is placed in the north and a firepit is constructed in the centre (Fralick, 2002). Fire symbolises passion and burning brightly. The light of the fire brings light to the darkness, and the ashes left behind create opportunities for new beginnings. This element takes one on an emotional journey through the meditative state, which disintegrates the individual for an uprising to become stronger and more enthusiastic (Banfalvi, 2014). For centuries, the application of bonfires combined with spiritual movements has endured spiritual gatherings. A fireplace or bonfire is a powerful way of integrating fire into the meditative experience. North, east, south, and west symbolise the four Guardians of the Watchtowers who rules the four directions. They are invoked through physical gestures, intonations, and prayer. North is associated with earth, east with the element of air, south with fire, and west with water. The Guardians are called upon to protect from harm and are important figures in the ritual initiation.



Fig. 12: Neo-Pagans Complicating the Circle
By Author

Interdependence and dynamics are mutually related during the transformation of space and practitioner. The transformation of space is dependent on the humans territorialising the space for the execution of the ritual, and the transformation of the participants is dependent on the typology of the space that holds a larger private space in the landscape ecology. Boundaries reinforce a focus and have various effects on people's movement and behaviour. When experiencing boundaries in architecture, it changes the perception of the environment. When overstepping the boundary, it elicits a sense of trepidation, either at entering a territory which already has asserted ownership or leaving the territory to face other troubles of the "outside world" (Unwin, 2020). A built boundary can protect from intruders, whereas a marked boundary guide movement and orchestrate relation. The four elements implemented also play a large role in the ritual as they not only purify and concentrate the Circle but also purify and concentrate the participants. During the process of transforming the participants, the Neo-Pagans banish old ways of perceiving reality through the bodily senses which are affected by and correspond to the directions and their representing elements within the Circle (Fralick, 2002). One difference between the transformation of space and the transformation of humans is though the human exits the ritual feeling healed and whole, the creation of the Circle is broken and deterritorialised to leave the landscape ecology to its original state.

EXPLICATING

The behavioural transformations start in advance of the territorialisation process. The new participants are instructed to spend the day in silent meditation whilst the experienced participants tease them to both relieve and heighten the tension (Fralick, 2002). The new participants will undergo the biggest transformation and are therefore left out of the territorialisation process and instructed to spend the time meditating out of site. Once the Circle is prepared, the Neo-Pagans gather around the fire pit for a silent meditation for grounding before the ritual starts (Fralick, 2002).

A Circle is a symbol of the divine feminine, the womb of creation, and infinity. But when entering the Circle during the ritual process, it no longer is a symbol. At that moment it becomes an act of invocation (How to Cast a Circle | Wicca, 2013). When working in a Circle, the energy is equally distributed. However, when constructed, an energy boundary is created. If broken by the leave of a participant, the energy waves shifts and leave the remaining participants cold (How to Cast a Circle | Wicca, 2013). The circle creates a boundary, or "container", for the energies that will be raised within it. This gathering of energies evokes healing and transformations, whereas the centre of the Circle is where the human and the sacred are conjoined (How to Cast a Circle | Wicca, 2013). The centre of the Circle is described as the centre of the universe and the participant is the tree of life and the human spine is the axis mundi (How to Cast a Circle | Wicca, 2013). The cast becomes a space where ordinary reality and non-ordinary reality are combined and where the participants are at the centre of the sacred, and the centre of the sacred is within them (How to Cast a Circle | Wicca, 2013).

Once the Neo-Pagans cross the boundary of the circle all worries and anxieties of everyday life are left behind. The attention is shifted to the work done in the ritual and the part they play within it. The participants take on a persona that reflects what they as individuals believe to be most sacred, authentic, and desirable about themselves. When doing so, the Neo-Pagans transform themselves from mundane to sacred beings (Fralick, 2002). The next step of the ritual is the death and binding actions which symbolise the death of the new participant's old way of life and the start of their new one. Furthermore, the participant is led counter-clockwise around the outside of the Circle and stops at the four different directions- north, east, south, and west- to express where they come from, where they are going, and what their intentions are. The new participant, which is blinded, tied loosely, and led around the circle, needs to use all bodily senses during the purification process. As the different directions represent different elements, they ask for different senses to be used for the identification and concentration of the element (Fralick, 2002). For example, north, which represents earth, asks the participant to taste the salt, and east, the element of air, asks them to smell the incense. This way, the participant orients themselves blindly and activates conscious awareness of their surroundings and position. When compassed

the Circle, the ropes and blindfold come off and the new participant is led back clockwise whilst receiving gifts representing the elements.

Now, all tension and anxiety have deflated. Reflection and refreshments are shared before the deconstruction process. This process symbolises thanks and farewell. The last Neo-Pagan to give their thanks walks purposefully over the boundary to formally break the Circle and exit the sacred landscape. This action is the end of the ritual.



Fig. 13: Neo-Pagans Explicating the Circle
By Author

CATALOGUING

When breaking down the implicating, complicating, and explicating process there are several features found to be of much value in the territorialisation process. The elements or spatial atmospheres with importance will be addressed here as a conclusion of the analysis of the ritual and how they take part in the territorialisation process. In the last chapter of this paper, these elements will be found in a catalogue and further explained through a more psychological and neurological approach.

As the milieu is the exterior factor formed by the relevant components within the immediate material surrounding (Kleinherenbrink, 2015), these are environmental features or objects that are used during the ritual ceremony. When the sword draws out the circle in the ground it creates boundaries. The boundaries affect the rhythms within the open space by indicating that no movement have allowed them to step over the boundary and therefore guides the Neo-pagans' around it. The boundary itself and the movement around it created a style which also leads to expression. This style now creates affordances which makes the Neo-pagans position themselves around the circle rather than within it to explicate their gestures. The boundary is therefore an important factor of the milieu in the territorialisation process.

Other milieus during their ritual are earth, fire, air, and water. These elements are represented within the four directions and plays a large part in ritual. These has to be recognised by the use of the participant's senses. These elements are often used in meditational ceremonies for their healing powers, yet here represented through smell, objects, and sound. It can also be said that these are part of the expression process, but because these elements are used to alter the rhythmic movements, creating direction and movement and pause, which makes up the path and encounters for the ritual without being the rhythmic force itself, these play a role as milieus in ritual. During the ritual of the Circle, fire, water, air, and earth centres focus towards the actions that take place.

The indication of the orientation affects the rotation of movement around the circle and alters the rhythmic movement that happens around it by creating moments of pause to state gestures. The movement of the people around the boundaries are not based on regularity, but the comings and goings of the people that follows the boundaries according to orientation. The Neo-pagans move around the boundaries of the sacred ground in rhythmic circular movements. The surrounding grove of trees are a counterpoint which limits the rhythms to only take place within the opening in the woods. The grove of trees is not part of the ritualistic ground of territory or actions, but creates privacy for the ritual to be held, grounds the people, and indicates an area for rhythms to take place. The orientation, grove of trees, and privacy are therefore important rhythmic factors of the territorialisation.

As already mentioned, the boundary is drawn out in a circle. This circle is a part of the expression process. As the expression is signatures which formats a domain, these can be done by marking the ground. It draws the attention inwards and gathers the participants to stand around it. By drawing the attention inwards, the expression of the outlined circle creates a calm and stable centre within the heart of chaos. This allows for the organisation of space. When expression constitutes a territory, it marks where the territory begins and ends. This is exactly what the circle does. The Neo-pagan ritual of the Circle begins by the marking of the circle and ends by the demolishment of it. Another way of using expression is through sound. During the Neo-pagan ritual, silence is an important factor. Although silence is the opposite of sound, it allows all the attention to be on the person stating their reasons when explicating the ritual. The sound of them walking around blindfolded in the woods, the sound of the wind between the trees, and the sound of their inwards breath when smelling and identifying the elements are in the end no silence but sounds of all external forces that allows the ritual to take place. The uneven surfaces of the representation of the elements invites touch and memory for them to be identified. As the person who needs to identify them are blind, the uneven surfaces heighten the sense of touch for an experiential expression. The circle, uneven surfaces, and silence are therefore important elements of expression during the territorialisation.

SÁMI PEOPLE

INTRODUCTION

The Sámi people are indigenous people of the north of Europe, located in Norway, Sweden, Finland, and Russia (Northern Norway, N/D). Historically, this group of indigenous people lived within and amongst nature, and used resources found in their immediate surroundings to create shelter, food, and capital which was measured in the number of reindeer owned. Although the current Sámi people have become partly modernised, some of their ritualistic procedures are still being practised. Their religion is based on an animistic ideology, meaning that everything – natural phenomena, inanimate nature, animals, and plants – has a spirit (Nationalparks, n.d.). By worshipping nature and executing rituals in a territorialised space within their landscape ecology they connect themselves to the earth for grounding and guidance. The space used for the rituals is called Sieidi and is carefully chosen following principles of certain characteristic environmental features sought in nature. Families do in many cases have their own Sieidi, whilst some Sieidis are used by the whole Sámi society (Nationalparks, n.d.). The rituals held at the Sieidis worship nature and are a natural part of their everyday life. Sieidis were often located and territorialised in spaces with specific stones or wood, whereas size, form and colours were of importance (Nationalparks, n.d.). When the location was set, the territorialisation process started whereas the Sámi people would alter the stones or wood into an imposing position (Nationalparks, n.d.). In this case study, the characteristics and rhythms of the Sieidi will be analysed alongside the peculiarities of the sought formations and patterns in the environmental landscape ecology to discover the behavioural and psychological effects they may hold.

WHO ARE THEY?

The Sámi people are nomadic indigenous people who, as mentioned, live in the north of Europe. Currently, the population is approximately 80,000 and about half of them still speak the Sámi language. In Norway, a copious amount of the Sámi people moved from the traditional Sámi areas and into the towns of Northern Norway or to the Oslo area. When moved, they continue to settle in traditional Sami settlement areas but earn their living in the modern service sector, industry, travel, and the public sector (Northern Norway, N/D). The language consists of nine different languages or dialects. These languages can be understood by the nearest Sámi societal neighbours but not by those who live even further up north (Northern Norway, N/D). However, what they all have in common is their behavioural language towards nature which treats the elements with care and appreciation. Furthermore, as well as a long list of deities, a large part of the Sámi people's worldview is based on their belief of the living and departed are regarded as two halves of the same family. During larger rituals, a Noaidi is therefore often present. A Noaidi is a mediator between the living and the underworld who, through the use of a Sámi drum or domestic flute, reconciles the ancestors with the living (Botz-Bornstein & Hengelbrock, 2006). Their belief system is based on animism, polytheism, and shamanism. Traditions may vary but the place for worship, external implementation for the execution of the ritual, the goal for the ritual, and the environmental features sought when choosing the space, all fall under the same core values and territorialistic and rhythmic behaviours.

The Sámi people designate a space in nature for their rituals. The carefully chosen sacred site is called Sieidi and is often located in a secret location not too far from the Sámi settlement. Sieidis are still used today by the Sámi people and new rituals have emerged around it. One of these rituals is Isogaisa which is an annual ritualistic ceremony with the motivation of uniting pre-Christian Sámi culture with the more modernised worldview. During this ritual, the Sieidi is used as a spiritual meeting place where different cultures are fused (Karl & Leskovar, 2018). The ritual is based on sensory experiences which are supposed to create inner transformations. By attending and engaging, Isogaisa becomes a learning arena where those with inquiring minds may acquire the values which are felt to be lacking in Western culture (Karl & Leskovar, 2018).



Fig. 14: The Sámi
By Hurtigruten

IMPLICATING

The size and location of the Sieidi are dependent on its user. A Sieidi can either be owned by the whole Sámi community or by a family or individual (Heinämäki & Herrmann, 2017). Traditionally, each family has their own Sieidi which is located within the land they own for reindeer herding. On the contrary, the Sieidis owned by several households or the whole community is viewed as the collective property of the Sámi within a certain geographical region (Heinämäki & Herrmann, 2017). Furthermore, Sieidis are used for rituals to give thanks for the abundance of the land and guarding spirits. When establishing the site of the Sieidi, rocks of unusual shapes and colours are commonly sought. These are often large blocks which have been split by ice or lightning (Fonneland & Äikäs, 2021), or other unusual rock formations with peculiar features on the surface such as depressions or bulges (Karl & Leskovar, 2018) which stand out in the landscape ecology. Uneven surfaces stimulate fantasy and catch attention. When natural light shines on rough and uneven surfaces it creates shadows and depth which stimulates the eye and, if used in architecture, recalls natural environmental features (Steffy, 2002). Deep shadows and darkness dim the sharpness of vision and therefore provoke and stimulate fantasy (Shirazi, 2014).

Within the Sámi culture, Sieidis are considered alive and if treated appropriately they reward their owners with fish, deer, and other game. They are protectors of the Sámi and look after them and their reindeer (Botz-Bornstein & Hengelbrock, 2006). The abundance of the land and its gifts were recognised by sharing a part of the catch with the Sieidi, and in return, the indigenous people received health, safe travels and overall well-being (Botz-Bornstein & Hengelbrock, 2006). However, the Sieidis required regular attention, often daily. If neglected, drastic consequences like the loss of luck, illness, and death could be waiting for the people. Therefore, ritual ceremonies, often during autumn, were an important event that took place to give thanks for the summer and the reindeer luck. If the Sieidi did not fulfil their obligations, it had either been abandoned or chastised. Gifts were removed if the Sámi community were forced to move due to poor hunting or fishing. If so, the Sámi would chastise the Sieidi by chipping a silver off from it and continue to grant it gifts (Botz-Bornstein & Hengelbrock, 2006).



Fig. 15: The Sámi Implicating Isogaisa
By Author

COMPLICATING

The Sámi people would territorialise the sacred area of the Sieidi by removing the lowest branches of the surrounding trees and carving the stumps (Betz-Bornstein & Hengelbrock, 2006). Objects and the surrounding environmental features are in focus during the process of developing and shaping the cultural heritage. Isogaisa is a multisensory embodied practice where sounds, sense of touch, social relations, and memories partake an important role in the ritual (Karl & Leskovar, 2018). Pallasmaa proposes that architecture is multisensory and therefore not only measured through perception. He states that materiality, scale, and space are also measured through the ear, nose, tongue, skin, skeleton, and muscle (Pallasmaa, 2005). Through Pallasmaa's theory, which uses the skin to measure texture and weight, a rough surface, like the surface of the Sieidi stone, would therefore be considered heavy and powerful (Shao, et al., 2012). Surface textures and details invite the sense of touch and give warmth and intimacy to the environmental space (Shirazi, 2014). The landscape ecology of the Sieidi holds both trees and stones, in contrast to the Neo-pagans who only are surrounded by wood and the Celtic people who, to later be addressed, are surrounded by stone. The incorporation of both within its environment enhances the sense of appreciation and awe for nature which heightens holistic wellness (Smith & Puczkó, 2016).

The Sieidi is often large of size in contrary to the surrounding trees. Integration of different scales creates aesthetic balance and redirects focus towards the intended focus which the territorialiser might had in mind (Hernandez & Brebbia, 2012). This can contribute to unconscious movement patterns, a feeling of being small or, on the contrary, being of high importance, and how long one might stay within the space. In prehistoric times, landscape ecology was an architectural laboratory (Unwin, 2016). The single stone of the Sieidi creates a relationship with the space and affects the relationship and experience within its landscape ecology. A single stone, like the Sieidi, generates a circle of presence – a space – about itself. With no clear boundary, one still encounters the stone's presence. When within it, a static relationship is made between the human and the stone. As the Sámi people believe the stone to be sacred, they intuitively try to commune with it as a focus for ritual and prayer (Unwin, 2016). The single stone can also prompt circular movements which compact a circle of place.

Sámi drums, the Sámi Sieidi, and yoik (Sámi singing) are used as the basis for new constructs. These are traditions of the past used as tools that translate into symbols of continuity and enable a dialogue between the past and present (Fonneland, 2017). The performance of yoik is historically described as a source of communication with the Sieidis. The sound of water, echoes, and drumming are also tools used for communication which are integrated into the performance at the Isogaisa. Running water is regarded as a restorative environmental feature which has stimulus characteristics and may permit the recovery of directed attention (Garling &



Fig. 16: The Sámi Complicating Isogaisa
By Author

Evans, 1992). When struggling to flow with commenced situations, the incorporation of water in the mediative practice will release the tensions and allow for growth. Water is essential to moisten the soil, so the seeds planted within it can grow. Correspondingly, patience and continuation are essential in certain situations for results to show and finalise. Water activates cleansing and encourages stepping back, reflecting, and letting go. Equally, as the body uses water for sustaining and cleansing, the mind and soul use water for the same purpose (Banfalvi, 2014). The sensory experience extends from the offering ceremony to the Sieidi, where offerings include caressing the stone by smearing fat or blood on the stone's surface (Karl & Leskovar, 2018). The stone's peculiar formation offers further sensory experiences in this process which give transcendence. When immersed in nature, many people can feel a sense of transcendence which evoke 'peak experiences' (Smith & Puczkó, 2016). Furthermore, embodied ritual practices included memories of ancestors of the past Sámi people who had formerly practised their rituals at the Sieidi. They would be represented through the sense of smell through the incorporation of rotted meat (Karl & Leskovar, 2018).

The four elements are present and cherished during the Isogaisa festival. Water is present, as mentioned earlier, as the audiological sense through the sound of dripping water. Earth plays a role through the landscape ecology and the physical connections with the Sieidi. The wind would lure in the ancestors and fire is represented through the firepit created in the main lavvu (Sámi tent) which is central throughout the ritual (Karl & Leskovar, 2018). Most of the ceremonies take place around the fire which is a place for personal offerings made in solitude. The offerings to the fire have been evident in the Sámi history. They shared their food with the fire, offering pieces of their catch to the fire for the purpose of giving back to the spirits and ancestors. Part of the honouring process of the creation of the fire was to decorate the fireplace with small statuettes and surround the fireplace with flowers (Karl & Leskovar, 2018). The firepit has great social value within the Sámi community as it is a place for storytelling, disconnect, and healing (Karl & Leskovar, 2018). In contemporary practices, the value and importance of fire have increased.

EXPLICATING

The festive ritual begins with a half-day hike made to a Sieidi within the vicinity of the chosen landscape ecology. The organised hike, which lasts for several hours, encourages its participants to use the walk to enable a meditative mindset which would turn the focus towards leaving the past behind and deciding what to offer the Sieidi (Karl & Leskovar, 2018). The hike can be compared to a religious journey or pilgrim walk where the characteristic of contemporary pilgrim walks is that the road is made as you walk. This can also be translated to the road of your mental state and how the rhythmic behaviours practised during the walk are used as a tool for mental transformation and decluttering of thoughts. The core values of the process of the hike are individual experiences, freedom, a break from everyday routines, and grounding with the help of nature (Karl & Leskovar, 2018). The participants become travellers crossing boundaries between past and present, and between the city and landscape ecology. It also encompasses the inner and outer world of the individual and becomes an advocate for insight.

The inner transformation starts during the hike, yet continues during the sensory performances of drums and yoiking. The rhythmic behavioural change, therefore, continues from the entering process into the ritual process (Karl & Leskovar, 2018). The natural environments which are embarked on the hike and further continued throughout the ritual enhance the social connections and remove any feeling of isolation (Smith & Puczkó, 2016). Furthermore, dance is used to worship the surrounding landscape ecology and embrace transformation. When dancing, the movement in the presence of the Sieidi invites the entities of earth, sun, and ancestors to be greeted (Karl & Leskovar, 2018). The landscape ecology naturally allows for certain movements to take place, and trees and stones in the surrounding locality are not seen as obstacles that interrupt the dance but rather used as dance partners. The Sámi send out their pure energy with an abundance of gratitude to the Sieidi and expects good things in return. Meditative practices are central during the Isogaisa. As well as incorporating the meditative walk, the fire is also used as an arena for meditation during the ritual. However, meditation, here, is a still practice where the sensory experience extends to the whole body which lays on reindeer skins placed on the ground and listens to drumming to bridge the inner and outer world and gain insight (Karl & Leskovar, 2018).

Decoration and aesthetics within the indigenous communities hold an important function of protecting the people from bad spirits (Deusen, 2001). The gifts given to the Sieidi, and the fire, hold an aspect of sacrifice yet should not be regarded solely as such. When parts of the catch are given back to the guardians and spirits it is an expression of gratitude that would further ensure abundance in the future (Botz-Bornstein & Hengelbrock, 2006). It becomes an inseparable part of the Sámi's social order and therefore a collective responsibility to look after the Sieidis. It provides security for the individual and community through the intimate relationship with

the land. Like many other gift practices, this Sámi practice contributes to the well-being of the community through relation and engagement with the landscape ecology and living world. The offering ceremony can be interpreted as an action executing a manifestation ritual with a higher level of presence.

The study of contemporary rituals held within landscape ecologies provides a window into the process of ritual creativity. Isogaisa is an example of how religious labels are formed in ever-changing contexts which root back to historical processes. With the emergence of cultures and past and present, Isogaisa operates as a hub for human innovation and renewal (Karl & Leskovar, 2018). The participants travel far and with an open mind to gain inspiration and a connection to the landscape in the north of Norway. Local nature, roots, ancestors, mindset, and climate are the key elements of Isogaisa which are all traditions retained in the landscape, old burial places, and archaeological sites (Karl & Leskovar, 2018). These sites are all located within the landscape ecology of the ritual and are accessible to the participants. With the ritual’s deep connection to the ancestors, its crossover between time and space allows a mystic scene to be created at the Sieidi. As Dr Anne Eriksen points out in her book *History, Memory, and Myth*: “The past ceases to be a bygone age; it can be perceived as now because it is related to a here – a here that is also a part of contemporary people’s own direct experiences” (Eriksen, 1999, p. 92). Isogaisa is a social ritual where the local and global are merged. A ritual where power relationships come into play, cultural identities are tested, and new visions take shape.



Fig. 17: The Sámi Explicating Isogaisa
By Author

CATALOGUING

The territorialisation process of the Sámi people is constructed slightly different to the Neo-pagans. However, some elements are similar yet used differently to construct their territory. Here, for example, the stone of the Sieidi are the most important milieu. Without this stone, the ritual of Isogaisa cannot take place. The stone also is picked due to its exceptional colour, scale, shape, or bulges. The Sieidi is often large of scale which indicate its power and sacredness. Finding the right stone to use as a Sieidi therefore becomes a part of the selection and elimination process when territorialising. All rhythmic movements lead up to (like the meditative hike) or surround (during the Sámi dance) the Sieidi stone. This also includes the territorialisation part of expressing, as one type of expression is smudging your hand against the stone with blood. Therefore, stone, scale, and uneven surfaces are important factors of territorialisation for the Sámi people. However, the stone is the object of milieu, and the scale and uneven surfaces ways of expressing.

The location of the Sieidi is often, due to the northern landscape, placed in a semi-open landscape which creates for semi transparency. It is privately owned and holds its sense of privacy very high. However, due to counterpoint of semi transparency their rituals have a higher risk of being seen by by-passers than the Neo-pagan ritual. Another counterpoint is the surrounding trees and stones. These both act as counterpoints and milieus as they are not part of the ceremony, yet within the territory and used as dance partners when the Sámi people perform their dance. They are obstacles which alters the rhythmic behaviours. Privacy, semi transparency, and trees and stones are therefore important factors which constitutes the rhythms of the territory.

The four elements of fire, water, earth, and air are also integrated in the Isogaisa ritual. Here, fire is used as a gathering point which centres the focus and draws the attention towards its calming feature. The fire is often placed within a lavvu which, again, creates privacy. This lavvu facilitates a place for silence where people can gather around the firepit creating a circle and to individual reflections. Water is also used as a feature to create the sound of falling or dripping water. Earth as the physical touch towards the stone and ground when smudging blood, and air as the smell of rotten meat that symbolise their ancestors. In contrast to the Neo-pagans, the elements are here used as expressions and not milieus, as these facilitate attention and use of the senses through being present rather than interacting objects that call for actions and that determines the rhythms. They create expression through sound, smell, touch, and change of temperature. Therefore, silence, fire, earth, air, and water are used for expressing territory. Although the area of sacred ground at the Sieidi is less distinctive than the ritual of the Circle, the territory is not just a demarcation of a certain place, but an intense centre where living beings act out interrelated patterns of behaviour (Kleinherenbrink, 2015).

CELTIC PEOPLE

INTRODUCTION

Celtic people lived in the Iron Age from 700 BCE to 400 CE and performed rituals in both the natural and purpose-built temples. As this group of people no longer exist, the research will be based on contemporary Celts and historical findings. The Celts, like the Sámi people, were animistic people and therefore believed certain natural sites were of spiritual importance. These sites included hills and mountain tops, bodies of water, and abnormally sized and shaped trees (Cartwright, 2021). Points, where the movement of water joined, were sanctuaries and used for social gatherings, whilst trees like oak and beech were used as places for rituals (Cartwright, 2021). Additionally, Celts used megalithic structures as sacred spaces for their rituals, such as Stonehenge in southern Britain. In comparison to the Sámi people, the Celts built their sacred spaces close to or within urban sites (Cartwright, 2021). They combined architectural methods, like stone construction and wood poles, with earthworks. This case study will focus on the megalithic structures and analyse how the Celtic culture combined architecture, natural environmental features and the landscape, to construct sacred spaces for rituals that might hold important values of rhythms.

WHO ARE THEY?

The Celtic people lived in western and central Europe from the 1st millennium BCE into the 1st millennium CE (Cartwright, 2021). In contrast to many other cultures, the Celts did not have a distinct start and end date as they did not have an event, such as a fall of a city or the rise of a new society, which could be pegged as the start or end of an era (Dougherty, 2016). The Celts were marginalised or subsumed in certain areas, however, most Celtic people gradually evolved into new cultures. Yet, elements of the culture, such as their language and folklore, still exist today and are being repeated (Dougherty, 2016). The Celtic people did not come to an end but evolved with society.

The Celtic people had quite different religious beliefs than the rest of the European religious culture. Celts, in accordance with the Sami and Neo-pagans, had an animistic faith where they practised rituals within nature. The religious leaders in Celtic communities were called druids and were known for their great knowledge and wisdom. The religious rituals were managed by the druids who, during the rituals, used their wisdom to interpret events of nature and the divine of the future (Cartwright, 2021). In the modern era, there is a movement known as Neo-Druidism or contemporary Celts, which seeks to reclaim and reconstruct the spiritual practices of the ancient Druids. ‘Celtic Spirituality’ is a term used in contemporary parlance which covers a variety of beliefs and praxis. The term involves a wide range of spiritual seekers which include neo-pagans, Christians and druids. Formerly, the term was used to broadly describe the pre-Christian Celtic religion, however now used upon the image of the ‘spiritual Celt’ which describes a person who is inherently intuitive and spiritual, and who is in touch with nature and the hidden realms (Koch, 2006). Celtic neo-paganism includes assorted forms of neo-druidism, aspects of Western occult traditions, and Wicca. It is akin to that of contemporary indigenous or tribal groups, yet is based on Celtic myth, art, and literature for its ritual practice (Koch, 2006). In what is regarded as the continuance or revival of ancient Celtic tradition, rituals are frequently held at archaeological sites such as megalithic structures and natural features like springs and trees.

The Celtic ritual practices have long been associated with trees, groves, and springs rather than stone circles (Cooper, 2010). This might be due to the highly localised divinities which inhabited the animistic worldview of the ancient Celts such as the spring and river deities. These were identified with the constructive forces of water which were associated with healing powers (Koch, 2006). Individual trees, such as beech and oak, were also held sacred by the local Celtic communities. Here, under their shade, rituals were practised and inscriptions on the trees were made to territorialise the immediate landscape ecology (Cartwright, 2021). In addition, groves of trees could also be considered sacred. At these sites, called a nemeton, inscriptions and votive plaques have been found dating back to the Gallo-Roman period (Cartwright, 2021). Ancient

ritual sites within landscape ecologies would have left very few archaeological remains, and therefore hard to identify in current times. In contrast, the megalithic structures remain to this day and are still used for rituals by the contemporary Celts. Therefore, this sacred space is of higher interest regarding this study as it is still of high relevance today.

There is a constant discussion regarding who constructed the megalithic structures dating back to ancient times. However, Stonehenge in England is often alleged to be a pre-Celtic monument that was used by the ancient Celts as a place for rituals. Stonehenge is archaeologically documented as a construction developed with an earthwork enclosure which began around 3000 BC (Koch, 2006). There are several megalithic structures around Europe which all are thought to be used by the Celtic people although constructed during the Neolithic era. The reason for this is that these monuments often are found close to Celtic urban development and would have added a certain mystique and gravitas to their rituals (Cartwright, 2021). The druids were so connected to the megalithic sites that, in medieval times, they were considered their architects. As a result, the Neo-Druids conduct rituals within the megalithic cromlechs as a means of connecting with their spiritual ancestors and the natural world.

Fig. 18: The Contemporary Celts
By Celtic Life International



IMPLICATING

The sacred site used by the ancient Celts, which still can be visited today within the natural landscape, is the megalithic structures. Megalithic structures were constructed to create semi-transparency and were often located on a more open landscape ecology near or within urban sites (Cartwright, 2021) which allowed for large-scale assemblies. Semi-transparency creates an understanding of space, materialisation, and articulation of perceptual experiences. It vanishes out spatial boundaries and allows for communication across them. It allows for light to travel further which enhances intuitive movement (Richards & Dennis, 2006). Although the megalithic structure was to be located within an open landscape with the use of semi-transparency, the Celtic people remained at their sites for worship in quiet areas within the circle (Ettington, 2022). The nature of silence in architecture is described by Pallasmaa as the spontaneity and authenticity of the individual experience (Pallasmaa, 2005). By stating architecture is the art of reconciliation between ourselves and the world, he continues to explain architecture as a meditation which takes place through the senses. Silence is a core element of meditation which allows one to fully sense oneself. It can also be said about a space; when a space is silent one can fully sense the space. Architecture must maintain and defend silence for differentiation and qualitative articulation of existential space (Shirazi, 2014). The architecture of silence is contemplative, concentrative, and ascetic (Pallasmaa, 2005). The Celts typically assembled an area for silence by creating a single chamber within the cromlech which was used for a variety of purposes, including as a place of burial, a place of worship, and a place of meditation. The performance of rituals within the cromlechs may have created a sense of sacredness and transcendence for those who participated in them, and its circular formation is thought to be symbolic of unity, continuity, and cyclical time (Ettington, 2022).

One common type of megalithic structure used by the ancient Celtic people was the dolmen, which was a type of tomb made up of large stones arranged in a circular or oval shape. These structures were often used for burial ceremonies, as the Celts believed that the spirits of the deceased needed to be guided to the otherworld (Cooper, 2010). Another type of megalithic structure was the menhir, which was a single standing stone that was often erected in a sacred place or along a boundary line. These stones were believed to have spiritual significance and were often used in rituals or ceremonies related to fertility, protection, and communication with the gods (Ettington, 2022). In addition to these structures, the Celts also used cromlechs, which were circular arrangements of stones that were often used for astronomical observations or for a place for holding rituals or ceremonies. These structures were often aligned with the movements of the sun and moon, and the Celts believed that they had the power to connect them with the spiritual world (Koch, 2006). The cromlechs will be the focus of this case study as this type of megalithic structure uses the relationship between orientation, boundaries, and transparency with its users and the existing landscape ecology to establish a place for ritual.

The megalithic cromlechs consist of a series of upright stones, typically arranged in a circular or oval shape, supporting a large, flat capstone. The use of upright stones in this way is a characteristic feature of megalithic architecture and is found in several different types of structures, including dolmens and burial mounds. They can be seen as a means of creating a sense of awe and mystery, and of establishing a connection with the spiritual or supernatural realm and symbolising a type of time measurement which represented great death, birth, and power of growth (Cooper, 2010). One aspect of the cromlechs that may contribute to this sense of awe is their size and grandeur. Placing stones in circles has been done for years and in different varieties and sizes. By doing so, they create powers to define, orientate, protect, gather, exclude, and measure time (Unwin, 2016). These are features which are psychological and scientific. The time was measured through the placement of the stones which coincided with the rising and setting of the sun and moon at different times during the astronomical calendar (Cooper, 2010). The large stones used in their construction, and the impressive feat of engineering required to create these structures, may have lent them a sense of power and majesty. Additionally, the cromlechs' isolation and remote locations may have added to their sense of mystery and otherworldliness (Cooper, 2010). The megalith orchestrated the experience of space which created a syntax of a defined area of ground, threshold, focus, doorway, pathway, and hierarchy. By defining these elements, the unconscious mind behaved and moved in accordance with these boundaries and created a spatial sensation of sacredness. Therefore, these forms have later influenced other sacred architecture like temples, churches, and mosques (Unwin, 2016).

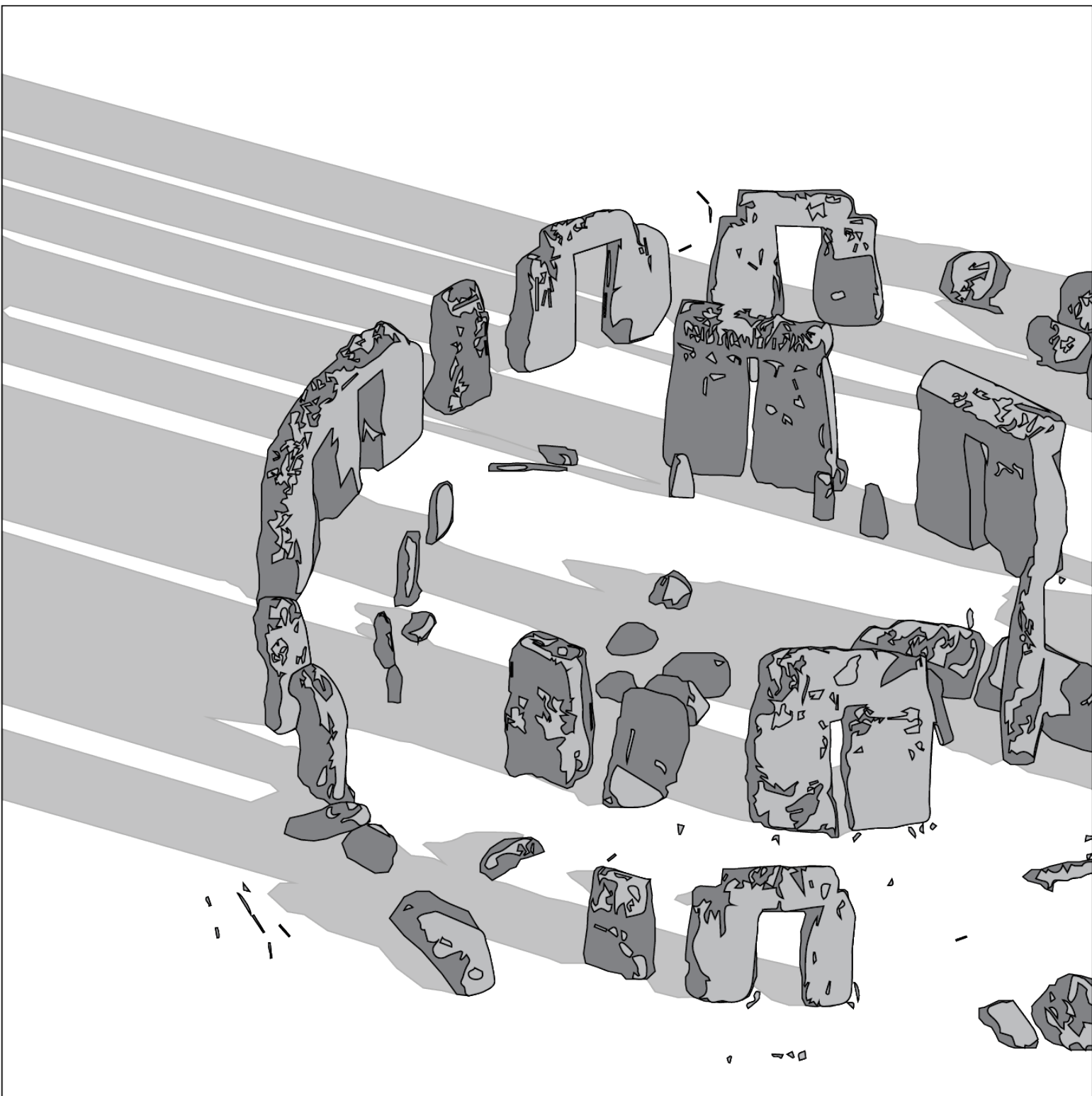


Fig. 19: The Celts Implicating the Megalithic Circle
By Author

COMPLICATING

Although a range of megalithic structures seems to be dated before the Celtic time, some might have been constructed by the Celts. It conspires that the Celts used a variety of techniques to transport and place these stones, including the use of levers, rollers, and human muscle power (Cartwright, 2021). The large stones used in these structures were typically chosen for their size, shape, and durability, and were often carefully shaped and finished to fit into place. In addition to these architectural features, the monolithic structures used by the Celts for rituals and ceremonies often feature additional elements, such as entrance stones, blocking stones, and decorative carvings (Cooper, 2010). These additional elements may have served to enhance the spiritual or ceremonial significance of the structure or to protect the structure from the elements. Overall, the components of the megalithic cromlech reflect the complex and multifaceted nature of this type of monument. While the specific function of each component may vary depending on the location and period, it is clear that the cromlech played a central role in the culture and spirituality of the Celtic people.

Cromlechs are often referred to as a 'henge'. Their circular ditch and an external bank are notable for their symmetry and their use of earthworks and were often used for public gatherings and festivals (Koch, 2006). Their large open space can seem visually dramatic. However, when empty, an open space can provide few inherent indicators of expected behaviour, limit interaction and initiation, and possibly create a sense of disorientation (Bille & Sorensen, 2016). Stonehenge is a good example to use when addressing megalithic structures, as this is one of the most significant ritual centres for the neo-druids which also was used by the ancient Celts. This ritual site was developed with an earthwork enclosure which began around 3000 BC and is a centre of large-scale assemblies in the immediate locality to other ritual monuments dated back to approximately the same period (Koch, 2006). The inner circle is made up of blue stones and the outer stones are larger sarsen stones (Koch, 2006). This relationship creates a hierarchy where the larger stones by the entrance might make the ritual practitioner experience stepping into something of greater importance, yet when inside, the inner circle is less intimidating and might enhance confidence in the practitioner which makes them feel that their actions and role in the circle is of high importance. Furthermore, Carr-Gomm, a contemporary druid, extends the importance of Stonehenge by seeing the phallic nature of the site. He explains how the rays of the sun penetrate the inner horseshoe-placed stones of the megalithic circle at the rising of the summer solstice creating a 'rebirth' of the individual (Cooper, 2010). Although there is uncertainty as to what exactly occurred on site in ancient times, the significance of Stonehenge seems to be related to the sacredness of its surroundings and itself.

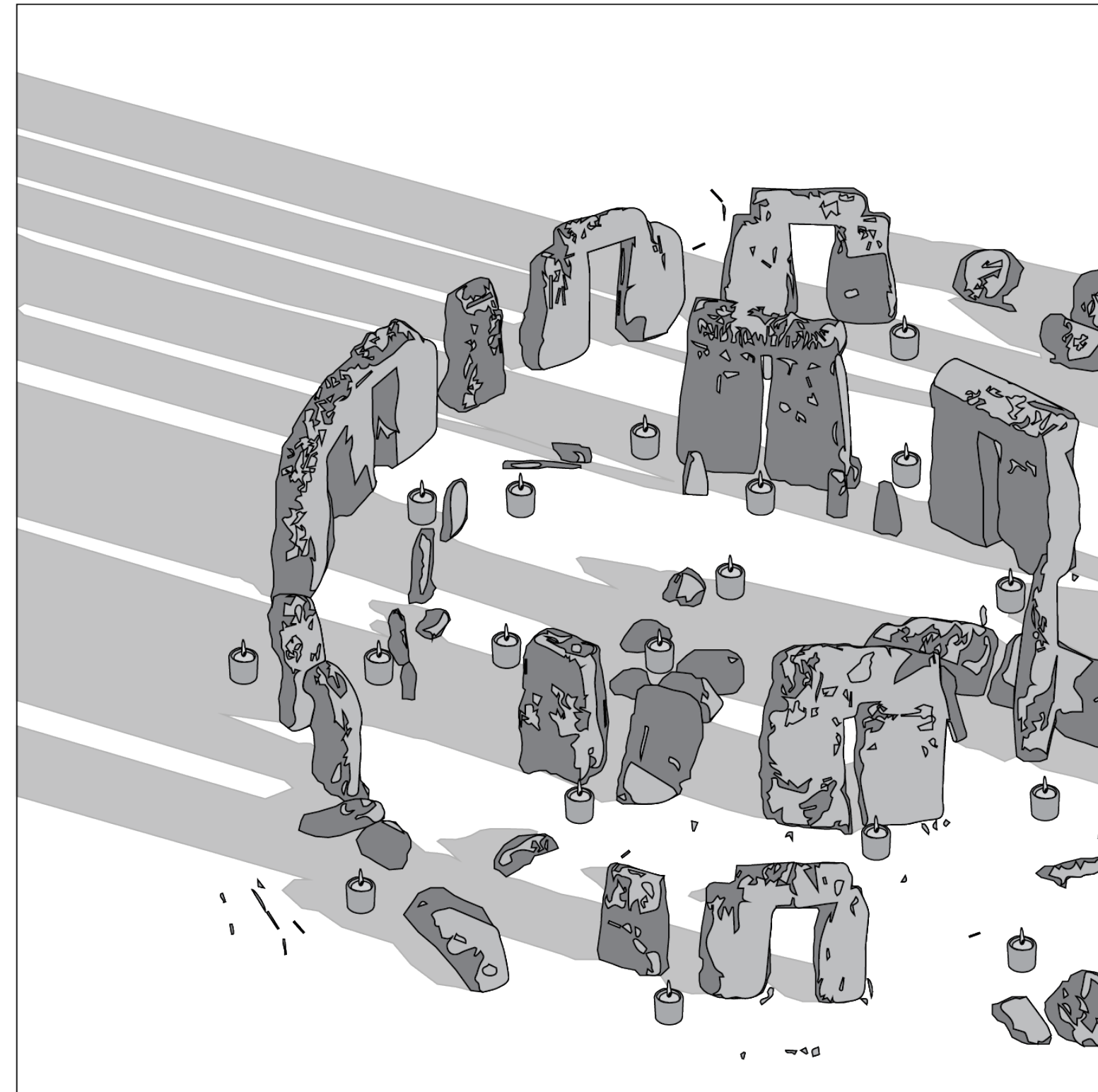


Fig. 20: The Celts Complicating the Megalithic Circle
By Author

When a megalithic circle only consists of four stones, they generate axes in themselves or through the gap between them. By defining the ground, they establish a centre and a framework for rituals to relate to the four directions. When defined by a ring of stones, the area of defined ground becomes incontrovertible (Unwin, 2016). The many doorways make the trepidation of entry to become greater and create a feeling of intrusion when on the outside. However, when crossing the boundary, the circle converts into an instrument of inclusion. It unifies the people within and acts as an advocate for belonging.

EXPLICATING

The practice of the ritual in Celtic culture was held at times of stress within the community, yet most likely scheduled to partake based on astronomy and the phases of the moon (Cartwright, 2021). It is important to note that the rituals conducted by Neo-Druids within the cromlechs are likely to be very different from those conducted by the ancient Druids. The ancient Druids did not leave behind any written records of their practices, and much of what is known about them comes from the writings of outsiders, such as the Romans, who often had a biased perspective. As a result, it is difficult to accurately reconstruct the specifics of the rituals held within the cromlechs by the ancient Druids. However, it said that votive offerings, prayers and incantations were offered to the gods to bring favourable outcomes to future events (Cartwright, 2021). The offerings could take the form of food, jewellery, weapons, or pots. In case of illness, the Celts would offer a small model of the sufferer to expect recovery. In the case of jewellery and weapons, these items were often bent or broken in advance and buried in a shallow pit for the offering ritual. Sacrifices of animals were also buried and remains of these sacrifices have been found by archaeologists (Cartwright, 2021).

The Neo-Druid movement is a modern, reconstructive movement, and as such, the rituals conducted by Neo-Druids are likely to be based on a combination of historical research and personal interpretation. These rituals may include elements such as chanting, meditation, and the use of natural elements, such as herbs and crystals. The rituals conducted by the contemporary Celts are for some practitioners viewed upon as a 'revival' of pre-Christian Pagan practices when held at ancient megalithic structures. This reformulation of religious observance at existing and established sacred sites within the landscape ecology is a significant factor in the modern Druid fundamental values and tradition (Strmiska, 2005). Overall, it is clear that the megalithic cromlechs continue to hold significance for modern spiritual seekers, including those within the Neo-Druid movement. These structures serve as a link to the past, and as a place for contemporary practitioners to connect with the natural world and their spiritual ancestors. When practising the rituals in a megalithic structure, the contemporary Celts meet in the middle of the stone circle which they call 'the eye of the sun'. When entering, they all wear long white robes of Druidic tradition which was developed in the 18th and 19th centuries (Koch, 2006). A general outline of the steps that may be involved in a ritual practice conducted by Neo-Druids within a cromlech can be the following:

1. Preparation: The first step in any ritual practice is often preparation. This may include setting up any necessary tools or materials, such as candles, crystals, or incense. It may also involve setting an intention for the ritual and creating a sense of sacred space within the cromlech.

2. Invocation: The next step may involve invoking the presence of deities, ancestors, or other spiritual beings. This may be done through chanting, singing, or the use of incense or other offerings.

3. Meditation: After the invocation, the Neo-Druids may enter a state of meditation or contemplation within the cromlech. This may involve sitting or lying down in a comfortable position and focusing the mind on a particular intention or concept.

4. Offerings: Depending on the specific ritual being conducted, the Neo-Druids may make offerings to the deities or ancestors being invoked. These offerings may include food, drink, or other items of significance.

5. Closing: After the main portion of the ritual has been completed, the Neo-Druids may close the ritual by thanking the deities or ancestors for their presence and guidance, and by releasing any energy that has been built up during the ritual. This may be done through chanting, singing, or the use of incense or other offerings.

Overall, the steps involved in a ritual practice conducted by Neo-Druids within a cromlech will depend on the specific intentions and goals of the practitioners, as well as the specific beliefs and traditions of the group or individual. Some regard druidism as the native spirituality of the British Isles which makes it logical to incorporate elements from other indigenous traditions. Druid sweat lodges might be one of these exterior implementations. Druids are also commonly equated with Shamans' which allows them to enter a trance state during the ritual and to give advice and heal their fellow contemporary Celts (Koch, 2006). However, the main purpose of the ritual practices conducted by the contemporary Celts is to create links between the Druidry and the land, people, spirits, and religious practices of the place where they now reside (Koch, 2006).

Modern Druids and other Celtic spiritualities still use landscape ecologies as sacred sites for rituals with an intent to be close to nature and distance themselves from and reflect on choices made in the current fast-moving technological world of today (Strmiska, 2005). With that in mind, the concern of this group, just as other animistic groups, is our modern age in which people have little contact with the natural world in comparison to their forebears in the distant past. The Neo-Druids' reverential attitude towards nature is prevalent within earth-based traditions from the ancient Celts. This creates emotive connections with the ancient animistic religions of the past. Furthermore, the ancient Druids' way of expressing these beliefs has become a part of a modern way of thinking. Michael Strmiska made an example pointing out that "the ritual to protect the sacred site of Tara in the face of destruction by road building is a response to a modern problem" (Strmiska, 2005, p. 96). However, the ancient Celts territorialised the landscape ecology with no intention to heal the planet but to give to it with the expectation of gifts in return that would contribute to their survival. In contrast, contemporary Druids have no expectations to gain physical gifts for survival from nature when practising their rituals, but rather to help heal the planet and get mental healing in exchange (Stewart, 2002).

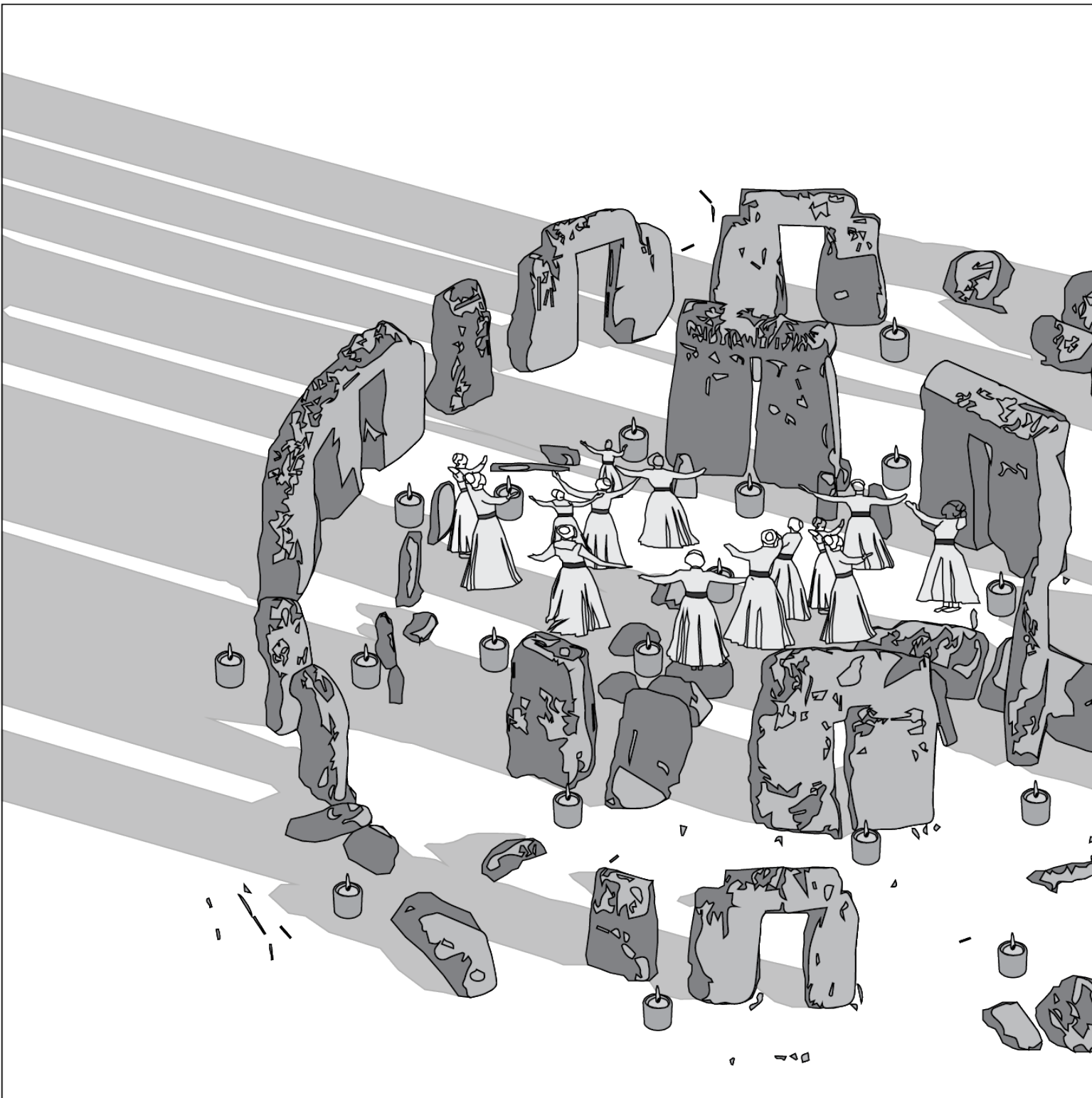


Fig. 21: The Celts Explicating the Megalithic Circle
By Author

CATALOGUING

In accordance with the previous rituals, the Celts also claimed territory for their rituals to be held. However, their ritualistic territory was open placed within an open landscape and close to their urban development. In a way, they created an escape within their existing environmental features or chose to settle next to an existing megalithic circle. Their ground for ritual was made up by stones placed in a circle. These stones are the objects of the milieu, as these are the exterior factors that are formed by relevant components in the immediate material surrounding of a thing. The megalithic circle defines the ground and orients, gather, and protect the people. These stones are also of different scales, whereas the smaller stones become inviting, and the larger stones makes the Celt feel like they are a part of something bigger. The stones itself are therefore the objects of milieu and the scales are expressions. The selected stone objects used to create the megalithic circle becomes directional and functional, which then, through expression of scale, becomes dimensional and expressive. The combination of these two creates a style which allows the people to move inside the megalithic circle and to dodge obstacles that may come up in their path. As the scale of the milieus alters perception, the combination of the stone and scale of it alters the rhythms happening within. The potential detours between different stones reinforces the practitioner's milieu against chaos.

As the stones are placed in a circle, it draws the attention inwards and to the centre where the people gather. This allows for organisation of the space. The placement of the stones also creates a sense of boundary between the urban environment and the sacred ground. However, this boundary is not seen but felt. It affected the rhythmic movement of the Celts making them walk around the territory unless having ritualistic reasons to enter. Due to the placement of the stones, people could partly observe the circle to see if any activity was happening. This semi transparency created a sense of inclusion and exclusion through watching and being watched. The megalithic circle was also in many cases placed, if not within the urban site, in an open landscape. This open landscape created a lack of privacy. The combination of these makes people not want to enter the ritualistic ground unless they have clear intentions. The use of a circle, semi transparency, and boundary therefore alters the rhythms through perception and expression.

Orientation is also a very important factor in the territorialisation process of the Celts. However, in contrast to the Neo-pagans, the sun is an important counterpoint for their ritual. The sun is not a part of the territory and operates autonomously which, with the help of the placement of the stones, indicates orientation. The indication of orientation affects and alters the rotation and paths of rhythms within the megalithic circle. The rhythms are, therefore, are formed by the comings and goings of the people according to orientation. However, the territory of the Celts are not solely constructed or claimed through the rhythms and objects as these factors alone does not mark the routes and destinations. The expression part of the territorialisation process marks

the beginning and the end of the territory as well as developing it into territorial landscapes and motifs. The Celts used chanting and incense as a way of expression. The chanting, for example, expresses a safe zone or a sonorous shelter that announce the beginning of the ritual. This action precedes language and culture which formats a domain. The combination of milieus, rhythms, and expression constructs a sense of belonging for the Celts which also enhances their wellbeing.

CONSTRUCTING RITUALISTIC BEHAVIOURS THROUGH ENVIRONMENTAL FEATURES

To understand the significance of the ritual sites found, territorialised, and used by the Neo-Pagans, the Sámi people, and the Celts, the environmental features need to further be broken down and understood on a psychological, behavioural, and architectural plane. As the implicating, complicating, and explicating process broke down the multiple systems of interacting relationships, it is to be continued through the social, perceptual, and neural factors that affect the cognitive performance of an environment. Sensory events, like noise, temperature, colour and texture, may affect the situated atmosphere which further affects the individual's intentions or emotional response (Mallgrave, 2018). However, environmental features hold positive behavioural values which, if only used alone, might not have a significant impact, but if combined with other environmental features with similar behavioural benefits may determine one's actions, routes, duration, and emotions. The great complexity of the human organism in its interactions with the social and physical environments needs to be recognised. As humans are biological organisms, the natural and built environments can affect changes in humans' organismic systems at neurological, cellular, emotional, cognitive, and perceptual levels (Mallgrave, 2018). Therefore, the complexities of design multiply. To break down the environmental features of importance in the rituals earlier discussed, a catalogue was made to highlight psychological values if used in design.

CATALOGUE









ENVIRONMENTAL FEATURE	FEELING	CASE STUDY	BENEFIT
PRIVACY		Neo-Pagans, Sami People	Sharpens focus, Encourages engagement
GROVE OF TREES		Neo-Pagans	Feeling of protection, Enhance prosocial behaviour, Attention and evaluation
ORIENTATION		Neo-Pagans, Celtic People	Phasic arousal, Curiosity and interest, Heightened focus
CIRCLE		Neo-Pagans, Sami People, Celtic People	Reinforces individuality, Drawn to the centre, Notion of protection
FIRE		Neo-Pagans, Sami People, Celtic People	Enthusiasm, Strength, Gathering
WATER		Neo-Pagans, Sami People, Celtic People	Recovery, Directed attention, Release tension, Reflection
BOUNDARIES		Neo-Pagans, Celtic People	Reinforce focus, Changes the perception of the environment, Cautiousness
STONE AND WOOD		Neo-Pagans, Sami People, Celtic People	Heighten holistic wellness, Increase empathy, social connections, generosity

Fig. 22: Catalogue part 1
By Author 71

Enclosed space: Goldfinger describes an enclosed space as a space that gives the psychological effect of what he calls “the sensation of space” (Lewittes, 2022). One must be within it to experience the unconscious spacious sensation which includes the visual experience, smell, sound, touch, and memory. According to Goldfinger, spatial sensation done by an artist becomes architecture, which in return creates spatial emotion.

Privacy: Altman (1975) explained privacy through an organising model of environmental phenomena. He attempts to explain territoriality, spatial behaviour, and crowding by arguing that too little privacy results in crowding, while too much leads to isolation (Corsini, 2001). Therefore, behavioural patterns in people always seek to adjust for the optimisation of privacy within environmental surroundings. When there is a large lack of privacy, which might be due to crowding, people lose focus and withdraw from the involvement in the setting (Corsini, 2001). Privacy, without isolation, sharpens focus and engagement within its environmental space.

Grove of trees: Trees were likely to have been used by early humans to escape from sudden hazards, such as dangerous animals and protection from the sun and rain. In areas lacking topographic relief, a tree could also provide a readily accessible viewing platform for surveying the surrounding environment (Barkow, et al., 1992). In this sense, trees create an intuitive feeling of protection rooted deep within us. A study done by Piff, Dietze, Feinberg, Stancato, and Kelner (2015) showed that a naturalistic induction of awe in which participants stood in a grove of trees enhanced prosocial behaviour and decreased an attitude of entitlement (Compton & Hoffman, 2019). A study done by Marc Berman showed that when

people were placed in a built environment with trees, compared to one without them, impacted a person’s capacity to pay and direct attention and evaluate the experiential urban setting (Berman, 2017).

Orientation: The relation between eye movement and attentional shifts is functional. The orientation reaction is accompanied by a temporary increase in a phasic arousal reaction. This reaction is likely to be sustained and canalised if orientation leads to exploration, withdrawal, conflict, or approach (Garling & Evans, 1992). This phasic arousal reaction will frequently be accompanied by sensations of curiosity, like, and interest. With an intense orientation reaction, the focus heightens and the width of attention decreases.

Circle: When one draws a circle around themselves, they separate themselves from the outside world, creating a threshold. It reinforces individuality, enhances a sense of privilege, and creates psychological comfort (Unwin, 2022). A circle of wholeness and perfection, abolishing time and space, yet signifying recurrence (Wagner & Marusek, 2021). The circle can generate a feeling of exclusion as one is either within or outside it. When inside the circle, there might be an impulsive draw towards the centre. It also does not have a beginning or an end and suggests a notion of protection from external forces (Wagner & Marusek, 2021).

Fire: Fire symbolises passion and burning brightly. The light of the fire brings light to the darkness, and the ashes left behind create opportunities for new beginnings. This element takes one on an emotional journey through the meditative state, which disintegrates the individual for their uprising to become stronger and more enthusiastic

(Banfalvi, 2014). For centuries, the application of bonfires combined with spiritual movements has endured spiritual gatherings. A fireplace or bonfire is a powerful way of integrating fire into the meditative experience. However, incorporating fire through candles and incense can also be effective.

Water: Running water is regarded as a restorative environmental feature which has stimulus characteristics and may permit the recovery of directed attention (Garling & Evans, 1992). When struggling to flow with commenced situations, the incorporation of water in the mediative practice will release the tensions and allow for growth. Water is essential to moisten the soil, so the seeds planted within it can grow. Correspondingly, patience and continuation are essential in certain situations for results to show and finalise. Water activates cleansing and encourages stepping back, reflecting, and letting go. Equally, as the body uses water for sustaining and cleansing, the mind and soul use water for the same purpose (Banfalvi, 2014).

Boundaries: Boundaries reinforce a focus and have various effects on people’s movement and behaviour. When experiencing boundaries in architecture, it changes the perception of the environment. When overstepping the boundary, it elicits a sense of trepidation, either at entering a territory which already has asserted ownership or leaving the territory to face other troubles of the “outside world” (Unwin, 2020). A built boundary can also protect from intruders, guide movement, and orchestrate relations.

Stone and wood: Nature in healing and wellness is an important factor which is often represented in architecture through natural raw materials such as wood and stone. They are also

used to recall natural environmental features in the interior design of architecture. It is used to create a sense of appreciation and awe for nature that enhances a sense of connectedness with the natural environment and heightens holistic wellness (Smith & Puczkó, 2016). There are three dimensions to ecowellness. The first is access to nature which, in the case of good overall quality of the environment and lack of pollution, has a great positive impact on health. The second is to create a strong positive environmental identity which strengthens the connection to the natural environment and therefore enhances well-being and health. The third dimension is transcendence. When immersed in nature, many people can feel a sense of transcendence which evoke ‘peak experiences’ (Smith & Puczkó, 2016). Natural environmental settings can increase generosity, empathy, and social connections, and make the person feel safer and less isolated (Smith & Puczkó, 2016).









ENVIRONMENTAL FEATURE	FEELING	CASE STUDY	BENEFIT
SCALE		Sami People, Celtic People	Balance, Redirects focus, Change movement, Duration of stay, Feeling of importance
UNEVEN SURFACES		Neo-Pagans, Sami People, Celtic People	Stimulates fantasy, Seem heavy and powerful, Warmth and intimacy
SILENCE		Neo-Pagans, Sami People, Celtic People	Allows to fully sense oneself and the space, Contemplative, Concentrative, Ascetic
SEMI TRANSPA- RANCY		Sami People, Celtic People	Communication, Intuitive movement, Light travel further
EARTH		Neo-Pagans, Sami People, Celtic People	Grounding, Humbleness, Brings worries to a solid footing
AIR		Neo-Pagans, Sami People, Celtic People	Embodies the complexity of the mind and mental health
OPENNESS		Celtic People	Limit interaction and initiation, Might create a feeling of disorientation
MEGALITHIC CIRCLE		Celtic people	Define, orientate, protect, gather, exclude, and measure time

Fig. 23: Catalogue part 2
By Author

Scale: Integration of different scales in architecture creates aesthetic balance and redirects focus towards the intended focus which the creator might had in mind (Hernandez & Brebbia, 2012). This can contribute to unconscious movement patterns, a feeling of being small or, on the contrary, being of high importance, and how long one might stay within the space.

Uneven surfaces: When natural light shines on rough and uneven surfaces it creates shadows and depth which stimulates the eye and recalls natural environmental features (Steffy, 2002). Deep shadows and darkness dim the sharpness of vision and therefore provoke and stimulate fantasy (Shirazi, 2014). Pallasmaa proposes that architecture is multisensory and therefore not only measured through perception. He states that materiality, scale, and space are also measured through the ear, nose, tongue, skin, skeleton, and muscle (Pallasmaa, 2005). Through Pallasmaa's theory, which uses the skin to measure texture and weight, a rough surface would therefore be considered heavy and powerful (Shao, et al., 2012). Surface textures and details invite the sense of touch and give warmth and intimacy to the space (Shirazi, 2014).

Quiet area: The nature of silence in architecture is described by Pallasmaa as the spontaneity and authenticity of the individual experience (Pallasmaa, 2005). By stating architecture is the art of reconciliation between ourselves and the world, he continues to explain architecture as a meditation which takes place through the senses. Silence is a core element of meditation which allows one to fully sense oneself. It can also be said about a space; when a space is silent one can fully sense the space. Architecture must maintain and defend silence for differentiation and qualitative

articulation of existential space (Shirazi, 2014). The architecture of silence is contemplative, concentrative, and ascetic (Pallasmaa, 2005).

Semi-transparency: Semi-transparency creates an understanding of space, materialisation, and articulation of perceptual experiences. It vanishes out spatial boundaries and allows for communication across them. It allows for light to travel further which enhances intuitive movement (Richards & Dennis, 2006).

Earth: The element of earth symbolises humbleness, demureness, and having solid ground beneath us through life changes. With its symbolism of being down-to-earth and solid, contrastingly, the earth also is about being soft, gentle, and full of life. During meditation or mindfulness, the application of the element of earth brings worries and expectations to a solid footing and ends certain projects for enablement to begin again (Banfalvi, 2014). Creating a space for meditation to enhance the distinctiveness of earth, design strategies like locating the complex in woods with windows and open spaces, allowing views to plantations, can enhance the experience through the design strategy of perceptual space. With close contact with the woods, the physical space withholds scents of earth and moist bark that will further trigger the sensory experience to enhance the grounding process activated by the element. Applying materials like rammed earth walls and wood surfaces could heighten the visitor's sensory experience acoustically, visually, and tactilely (Golenda, N/A).

Air: The natural element of air symbolises the mentality of the individual and freeing one from constraints not yet able to overcome. Just like its invisibility, yet

strength, the element of air embodies the complexity of the mind and mental health. When incorporating air in the meditative process, it releases the toxicity of old thoughts and clears the mind to see and reach out for new opportunities. With air comes light, like the spark of lightning carried for miles through the power of the wind. It creates a feeling of lightness and pushes for the next step toward freedom (Banfalvi, 2014).

Openness: A large open space can seem visually dramatic. When empty, an open space can provide few inherent indicators of expected behaviour, limit interaction and initiation, and possibly create a sense of disorientation (Bille & Sorensen, 2016).

Megalithic Circle: Placing stones in circles has been done for years and in different varieties and sizes. By doing so, they create powers to define, orientate, protect, gather, exclude, and measure time (Unwin, 2016). These are features which are psychological and scientific. The megalith orchestrated the experience of space which created a syntax of a defined area of ground, threshold, focus, doorway, pathway, and hierarchy. By defining these elements, the unconscious mind behaved and moved in accordance with these boundaries and created a spatial sensation of sacredness. Therefore, these forms have later influenced other sacred architecture like temples, churches, and mosques (Unwin, 2016).

The catalogue is categorised by the environmental feature, an image of the feeling this feature holds, what ritualistic case study it can be found within, and the psychological benefits and behavioural impact it holds. Overall, the environmental features hold great social, meditative, attentive, and protective features which are highly important in a ritual setting. However, humans' behaviour is led by the environmental impact on cognition, hence why it is important to touch upon the findings through a neuroaesthetical approach. Neuroaesthetics is a sub-discipline of empirical aesthetics with a scientific approach to the study of aesthetic perception. If neuroaesthetics is to be conceived as the study of psychological preferences rooted in neuronal systems, the architectural experience needs to be conceived as the constant interaction of an organism with its current environment (Djebbara & Gramann, 2022). However, this may face a methodological challenge as addressing architectural experience must also investigate the dynamic interaction with the environment. That is why the explicating phase of the rituals is just as important as the implicating and complicating stages. The explication not only addressed the activities happening within the ritual but analysed how these activities interacted with the environmental features. The aesthetic in environmental experiences must be addressed beyond static stimuli and rather tackled through an ecologically appropriate method that reflects the physical experience in the territorialised environment.

The body and the use of the environment need to be respected to address the aesthetic experience. There are two ways of referring to experience. "Embodied property" is the activity being anchored in the properties of human's physical structures, while the "enacted property" is the active interaction with the environment by human's perceptual organs (Djebbara & Gramann, 2022). For instance, humans know how to act to bring up a specific perception rather than consulting an internal model of the environment. As an example, boundaries are found to reinforce focus, change the perception of the environment, and increase cautiousness. However, during the Neo-Pagans ritual, the Circle, the boundary is made by marking the soil, which is an act of enacted property. Although the boundary is not physical in comparison to a wall or solid structure, the marking generates the same behaviour within its participants through the embodied property. Experience, therefore, originates in the active change in sensory feedback caused by a set of actions which is the sensorimotor dynamics (Djebbara & Gramann, 2022). Similarly, O'Regan and Noë (2001) theorise that the qualitative character of experience, like aesthetic experience, is not a state. Experiences are not states but ways of acting. They attempt to explain an organism's cognitive and perceptual capacity as grounded in the individual through their theory on sensorimotor contingency (SMC) (Djebbara & Gramann, 2022). People learn to sense by moving in the environment. Each move leads to a sensory change and, over time, to the acquisition of general rules regulating how actions generate sensory changes.

People are constantly and automatically adapting their behaviour according to the environmental features that evoke exogenous attention during their daily interaction with the environment. Exogenous attention is an automatic, involuntary, and stimulus-driven component of spatial attention (Carrasco, 2011). As an example, the megalithic stone circle holds behavioural effects such as the feeling of protection and orientation. However, other automated behaviours might overpower or interfere with the behaviour depending on the surrounding environment of

where it is placed. If placed in an open landscape, one might be drawn towards it with a desire to enter, whereas if, on the contrary, located within an urban environment one might shy away from it or just walk around. The urban built environment also holds many other environmental features which distract attention and change the perception. Visual attention corresponds to the gain of specific visual signals (McAdams, C.J. & Maunsell, 1999) (Martinez-Trujillo & Treue, 2002). These visual signals can be achieved through two attentional orientation types: covert and overt attention (Djebbara, et al., 2022). Covert attention is the shift of attention without moving the eyes, and overt attention is moving the eyes onto the object of interest. An exogenous shift from overt to covert is a voluntary reorientation, whereas an endogenous shift from overt to covert is involuntary (Djebbara, et al., 2022). The distinction between awareness and attention should be noted; one can be attentive to specific environmental features without being aware of them, however, one cannot be aware of specific environmental features without paying attention to them (Dehaene, et al., 2006).

Typically, a specific environmental feature is associated with a preferential sensorimotor response (behavioural reaction or action) which is seen under the category of “Benefits” within the catalogue. This distinction is practical as it allows the agent and environment to be distinguished. Furthermore, environmental modulation is based on feature changes that either are man-made or occur naturally to automatically continue the sensorimotor responses to invoke a specific behaviour. This is part of a network of possible actions through active predictions (Djebbara, et al., 2022). These can be referred to as affordances, which are the possibilities for acting in and interacting with our environment given specific capabilities and a specific body (Djebbara & Gramann, 2022). The function of cognition is not bound by the physical boundary of the body but extends to the interaction with the environment. In other words, affordances are predictions that constantly are being processed and anticipations of upcoming perceptions are created based on the choice of action. Sensorimotor responses refer to a particular dynamic response which happens within an environmental feature and not just the extensive environment (Djebbara, et al., 2022). As an example, this is seen in the Sámi’s interaction with the Sieidi. The affordances are predicted actions based on their perception and intention toward the Sieidi and not the extensive environment. The dance that is practised during the Isogaisa festival uses other environmental features, like immediate trees and stones, as dance partners which alters the rhythmic practice through sensorimotor coordination. As sensorimotor coordination refers to the ongoing coupling between motor behaviours and sensations in the environment, it is temporally extended in contrast to an automatic adaptation, that is, essentially, a sensorimotor response. Sensorimotor responses refer thus to somewhat preferential resonances with the environment as opposed to ongoing and non-specific coordination (Djebbara, et al., 2022).

The built or territorialised environment can be thought of as the terrain on which the cognitive acts and an important constitutive component of action and processes. When seeing the environment through action and processes it becomes a more biogenic and contextualised view which holds dynamic and interactive relationships in the given environment (Djebbara, et al., 2022). This view emerges from the 4E- cognition perspective. The 4E-cognition is the combination of the extended, enactive, embodied, and embedded perspective which is understood

to not function separately from the bodies and the environments they inhabit (Barsalou, 2008). Therefore, action-perception, or affordances, can be understood under the umbrella term of cognition as it is a direct product of the dynamic interaction between the body/brain/environment system (Djebbara, et al., 2022). Critically considering this insight, behaviour and human cognition are embedded and embodied processes produced by, and producing, movement (Varela, et al., 2016). Sensorimotor coordination claims that perception emerges from “knowing-how” rather than “knowing-that” (Ryle, 1945) which creates assumptions that one knows how actions would change sensations for a specific perception to emerge. In this context, perception is considered as an active resonance with the surroundings, in contrast to senses as physiological processes (Djebbara, et al., 2022). Exercising the ritual, for example, through knowing the action and therefore moving the body and eyes to reveal the predictable contextual sensory information constitutes the wholesome grip on the environment. This corresponds to the capacity to increase sensory precision by moving in predicted ways. An example of this might be explained through the composition of stones in a stone circle.



Fig. 24: Representation of Megalithic Circle
By Author

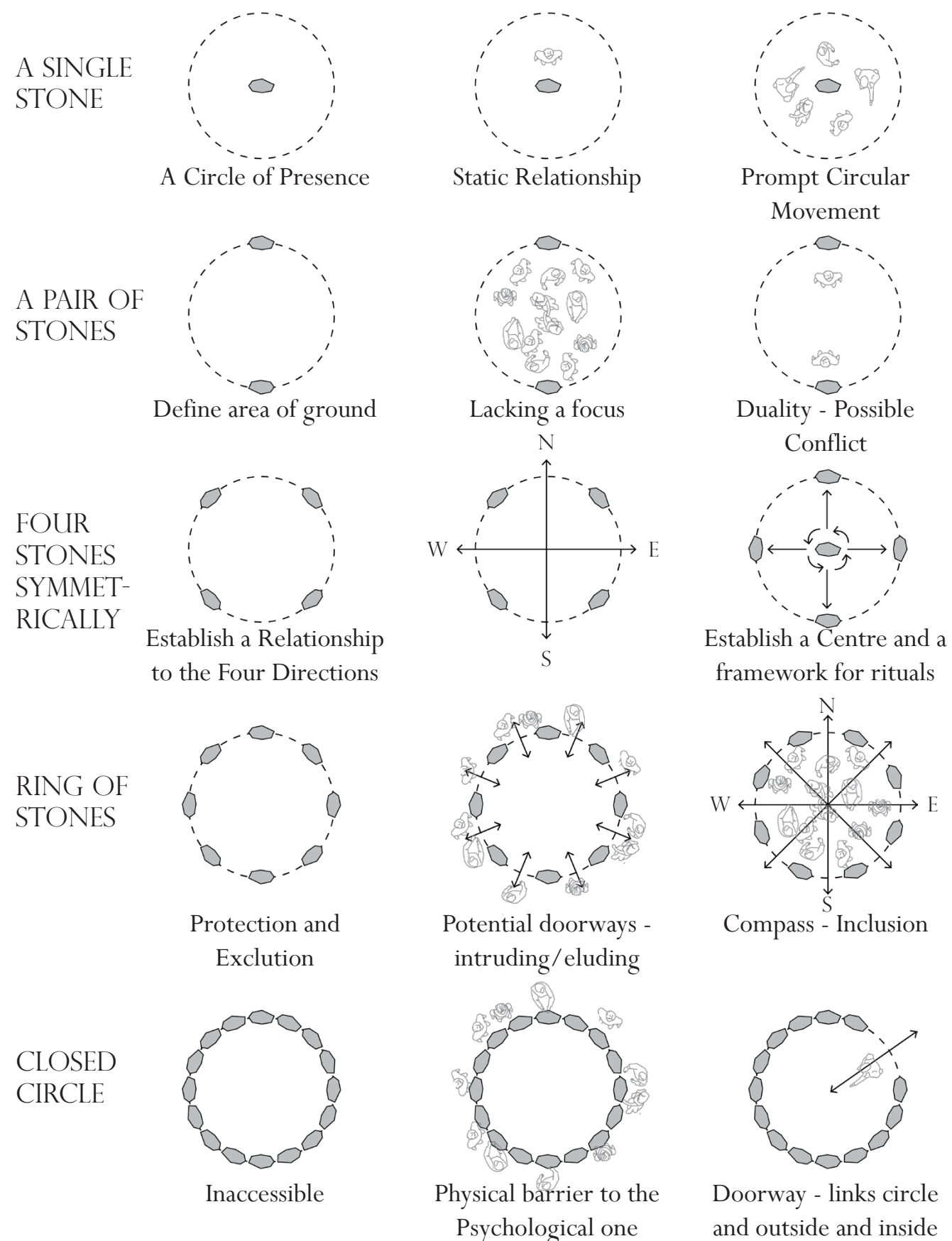


Fig. 25: Relational Diagramme of the Circle
By Author

Conceptually, the stone circle originates from a single standing stone, such as the Sieidi, which creates a circle of presence. It does not hold a boundary around itself but creates a place about itself and a static relationship between the human body and the stone (Unwin, 2016). The single stone can produce circular movements around it, compacting a circle of place. Two stones a few meters apart define an area of ground better than a single stone as the pair creates edges. Here, the relation is no longer to the centre and therefore seems unconvincing for gathering as it lacks a focus. The process of movement becomes indecisive as the area of the ground seems more like an in-between state (Unwin, 2016). The setup of the pair also suggests opposition and possible conflict. Four stones establish a relationship with each other, the centre, and the four directions. They establish a framework where rituals can be held. When the circle is defined by a ring of stone, like the Celtic megalithic circles, the area of the ground becomes incontrovertible. The trepidation of entry becomes greater, and the sense of protection and exclusion becomes more powerful (Unwin, 2016). In contrast, a ring of stones can also be a circle of inclusion where people will gather as a cohesive group unified by the architecture of the stones. All openings between the stones become a doorway. This may lead to an emotional effect of intruding or eluding, escaping or finding refuge (Unwin, 2016). The circle of stones may also be placed in relation to the four directions or oriented to the solstices which sparks curiosity and interest and heighten focus. A closed circle becomes inaccessible. The Neo-Pagans created a closed circle, however not bound by walls but an engraving in the ground. It creates a fear of stepping over the boundary and directs human movements around it rather than inside it. However, if overstepped, the circle draws one to the centre and reinforces individuality. The closed circle adds a physical barrier to the psychological one of the implied thresholds (Unwin, 2016). However, if creating a doorway, the closed circle reintroduces the threshold and introduces an axis of predicted directional movement. The doorway links the circle, the centre, and the inside and outside of the threshold. The sensory responses of the doorway of the circle have implicitly affected the composition of the environment expressed in behaviour (Fich, et al., 2022).

With the use of sensorimotor schemes, while moving around, the perception of the external environment changed. The possibility for action relies on several processes, from past experiences to immediate sensations, to make informed behavioural decisions (Pezzulo & Cisek, 2016). The change of sensory information in the visual system during motion (Gibson, 1986) is processed as “direction and distance between an object and in the organism by accounting for self-motion” (Djebbara, et al., 2022, p. 6). Designing a space with high levels of visual flow increases the environmental sensory information which makes it appear as if one is speeding up. Depending on the prior experiences and current state of the person in motion, this may either solicit the act of slowing down or speeding up (Djebbara, et al., 2022). Francisco Varela, Evan Thompson, and Eleanor Rosch explained this as enactivism in their book *The Embodied Mind* (1992), stating that “perception is not only embedded within and constrained by the surrounding world; it also contributes to the enactment of this surrounding world” (Varela, et al., 1992, p. 32). Namely, humans both shape the environmental field and are continually being shaped by it (Mallgrave, 2018).

Sensorimotor responses initiate and relate soliciting actions which are continued as

predicted confidence about that specific environmental feature. As a result, this may lead to biased behaviours as certain features carry relatively high confidence (Djebbara, et al., 2022). To predict the behaviours, the sensorimotor responses effectively amount to the error dynamics in the sensory channels. This has been linked with both well-being (Miller, et al., 2021) and the appreciation of visual art (Van de Cruys, 2017). The predictability of sensory information is characterised by the error dynamics which is further based upon actions and prior experiences given the current circumstances. Action can be modulated by the error dynamics in the sensory channels with high confidence in sensory predictions (Djebbara, et al., 2022). For instance, the calm atmosphere that one might find within landscape ecologies can automatically give rise to the deceleration of actions that are associated with that environment, like rituals. Correspondingly, urban environments in the city hold rich sensory information which can automatically give rise to accelerated actions, also associated with that environment. As some encounters emphasise the internal physiological changes reflected as emotions, others emphasise the movement (Fich, et al., 2022). However, both processes are constantly unfolding.

Concluding, this framework suggests that there is a hierarchy which is bidirectional. These are made of numerous small predictive processes which gradually form bigger contextual predictions and, continuously, bigger predictive processes that shape the smaller processes (Fich, et al., 2022). The contextual predictions direct humans' actions and emotions so that contextual cues, e.g. stepping inside a megalithic circle, are continuously anticipated to guide behaviour, e.g. moving in accordance with the boundaries. Stimuli are further considered as an array of energy with overlapping responses and stimuli occluding one another. Accordingly, any stimulus, at any moment, cannot be considered in isolation as it never detached from its prior nor incoming stimulus and response (Fich, et al., 2022). The sensation, which can come at any moment, is interrelated with what has immediately passed and what is immediately incoming. Therefore, one environmental feature cannot be considered a behavioural and stimulating tool by itself but needs to be considered as a component within its larger compositional environment. There is a flowing trajectory which reflects the behavioural actions partially consequential of environmental instances constituted by objects, events, and other human beings (Fich, et al., 2022). In this manner, sensations and the processing thereof are directly related to affordances.

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