Introduction: A Rhythmanalysis of Art

We overlook the hairline fractures in the sheen of an oil painting in order to exchange glances with a long-deceased personage. Inconvenient truths are barely registered: a ridge of impasto collects dust, an uncertain light on the surface moves as we move, briefly exposing the warp and weft of the canvas. To focus on humble materials would only remind us that the silk, hair and flesh, the mind and soul depicted, are bits of stuff slowly decaying. Several centuries of practice have turned this habit of overlooking matter into a fine art: the image prevails over its worthless material substrate.

Why do we overlook matter in this way and what happens when we don't? This is one of the key questions I pursue in this book. An answer to the first part of this question is that for many centuries it seemed a natural function of art to express eternal ideals – the divine, the soul, the mind, order and harmony, and other immutable truths. Making art has long been an exercise, implicit or explicit, in manipulating inanimate matter and controlling the chaos and contingency that undermine these ideals. Yet artists literally hold matter in their hands, replaying these kinds of conflicts at the back of their minds. In contrast, and to answer the second part of the question, in modern abstract art, wild and rude amounts of matter seem to be all there is to look at. Without order, matter comes forth to produce a direct encounter with its rhythms, textures and viscosities, offering no narrative, meaning or form in which to find comfort.

This book studies the kind of engagement that is involved in sifting through the matter in abstract art, an experience that rhythmically switches from order to disorder and back again. In many of the artworks I examine, matter appears unmodelled and in a raw state. Such work offers the tantalising notion that, however much it presents visions of rhythmic strata, dappled shadows and swarming masses, abstract art is simply pigment, oil, sand and dust – a zone, or more particularly a piece of material, left dangling, free of artistic manipulation. When the artist relaxes control of matter, and the viewer follows this relinquishment of control, there may arise a feeling of passive receptivity to the agitated

patterns of matter in the work that seem to gather and disperse of their own accord. How this kind of spontaneous, involuntary and rhythmic connection arises is the stuff of this book.

Involuntary yet structured rhythms in the artist's brain and body arise in the handling of materials in this kind of artistic practice. These internal rhythms are at the same time externalised in abstract art and may be felt as rhythm by the viewer. Rhythm is an essential way in which the brain and body are connected to the world, and this is particularly so in the world of abstract art. The kind of artistic practice that enables these connections resists centuries of philosophical and aesthetic order that has elevated the substance of mind over the substance of matter. But, as I will argue here, such art effectively, and through contact with matter, in fact eliminates this 'substance dualism'.

To understand how the rhythmic entanglement of brain, body and world emerges we must rely on different levels of description: philosophical, psychological and artistic. For a good example of how artists themselves have intuitively attempted to do this, we can look to the Catalan artist Antoni Tàpies who describes his painting as

> organic elements, forms that suggest natural rhythms and the spontaneous movement of matter; a sense of landscape, the suggestion of the primordial unity of all things; generalized matter; affirmation of and esteem for the things of the earth . . . . meditation on a cosmic theme, reflections for contemplation of the earth, of the magma, of lava, of ash . . . . [In] Buddhist meditation, they also seek the support of certain *kasinas* that sometimes consist of earth placed in a frame, in a hole in a wall, in charred matter (Tàpies in Ishaghpour 2006, 117).

Along with post-war European and American abstract art, I focus on examples of 'matter painting', which Laurence Alloway describes as 'a form halfway between painting and sculpture' (Alloway 1960, n.p.). I examine the underlying dynamics of thoughts and feelings involved in viewing this kind of art in the hope of digging deeper into what we mean by 'abstraction'. Art historian David Sylvester suggests that matter painting symbolises the 'massive materiality of the physical world, the relationship between man and the raw materials with which he builds, the inchoate matter which is at once responsive and resistant to his will to impose a form upon it' (Sylvester 1997, 171). But rather than being merely a vehicle for the act of painting, 'the thick opaque matter of these paintings seems not only to have a life but to have lived, to have been weathered and ravaged by time' (171). And for the philosopher Martin Heidegger in *The Origin of the Work of Art*, art 'does not cause the material to disappear, but rather causes it to come forth for the very first time' (Heidegger 2002, 46).

Abstraction is often understood as a place of lucid, conceptual calm but it can also be agitated by 'a swirling viscosity, an oneiric vagueness of forms' (Gooding 2001, 89). In matter painting and other abstract works, the artwork is not entirely a finished product of intentional thought. As art historian Rosalind Krauss writes, '[T]o say that works of art are intentional objects is to say that each bit of them is separately intended' (Krauss 1981b, 6).[1] In examining the sculptures of Auguste Rodin, Krauss shows us the importance of processes of facture and how they are relaxed to allow the textures of matter to emerge, so that these sculptures are poised between organised intention and unorganised matter. It is often by relaxing rational judgement of a painting's 'meaning' that we become sensitive to the rhythms it suggests. For the philosopher Gaston Bachelard in *Earth and Reveries of Will*, artists are 'sensitized to the rhythms of matter' (Bachelard [1948] 2002, 39). In moulding matter, 'there are no more sharp edges, no more breaks. It is a continuing dream ... it is rhythmic, with a heavy rhythm that takes hold of the whole body' (107).

An obvious instance of this rhythmic connectedness is speech. For example, psychologists maintain that

> our speech and our body motions exhibit wave-like characteristics that are both personal and cultural .... [T]he analysis of rhythmic entrainment and music benefits from thinking about the transformations as not happening solely inside a particular body, but happening across several, or many bodies .... The advantages of this approach are that we are discouraged from trying to look inside a particular brain/body to find the answers to the special aura that such events have, but are looking rather at the aura of the whole (Becker 2011, 65–67).[2]

Psychologists study how different brains are coupled through 'neural entrainment', as demonstrated by individuals listening to the same story. Rhythm, interval, voice modulation and story structure help to synchronise brain oscillations that not only follow speech but anticipate what might be coming next (Hasson et al. 2012, 2015). This coupling extends to the visual modality, in interpreting gestures and facial expressions, which also amplify, modulate and entrain brain oscillations so that they synchronise across subjects.

The studies I examine in later pages show that this synchronisation not only occurs between humans but can also happen between humans and films, artworks and music. This interaction and synchrony of brain, body

[1] Compare this with Jasper Johns, who states: 'Intention involves such a small fragment of our consciousness and of our mind and of our life. I think a painting should include more experience than a simply intended statement' (quoted in Sylvester 1997, 465).

[2] See also Thaut, who writes that 'evidence of direct frequency entrainment in rhythmic synchronisation suggests that rhythm in music can have a profound influence on the organisation of movement in time and space ... rhythmic stimulation provides a continuous time reference to the motor system' (Thaut 2005, 43).

and world have been studied in Andy Clark's 'extended mind' theory, where the author states that 'a good deal of actual thinking involves loops and circuits that run outside the head and through the local environment' (Clark 1998, 206).[3] An example of the way in which our brains rely on non-brain things in the world to function is how we use global positioning technology to navigate through the city. In his 'material engagement theory', Malafouris (2013) makes the strong point that this coupling of what is traditionally assumed to be the domain of the mind with the matter outside of it should not be understood simply as a tool for enhancing everyday cognition. This is because the qualities of the matter or material structure cause cognition itself to make new connections and this plasticity emerges from the interconnections of brain, body and world. If art helps to extend the mind in a cooperative feedback process, it is not just for performing calculations or carrying out daily tasks.

Figure 0.1 Louise Bourgeois, *End of Softness* (1967). Bronze, 18.1 × 51.1 × 38.1 cm. The Nelson-Atkins Museum of Art, Kansas City, Missouri. Acquired through the generosity of the William T. Kemper Foundation – Commerce Bank, Trustee, 2004.40. Image: John Lamberton/Nelson-Atkins Museum of Art © Louise Bourgeois/ Licensed by VAGA at Artists Rights Society (ARS), New York, NY/ Copyright Agency, 2020.

[3] Some reservations about extended mind theories and art are discussed in detail in Minissale (2013, 251–276).

Many artistic practices I examine in this book suggest that extended mind is a different kind of mind, a brain made up of matter that is in contact with matter through the hands, skin and body, coupling sensations with memories, dreams and rhythmic kinds of reverie. An example of this is given by the French novelist Pierre Loti:

> Bored and annoyed by the rain, I thought to distract myself by melting a tin plate over the fire and then pouring the scalding hot liquid into a pail of water. The tin formed a sort of twisted block, a fine light silver in colour very like a lump of ore. I stared at it dreamily, for a long while (quoted in Bachelard [1948] 2002, 212).

This reverie sensitises us to the muscular yet liquid allure of Louise Bourgeois's *End of Softness* (1967). For Bachelard, 'matter is a centre of dreaming' ([1942] 1999, 52). Significantly, for him it is 'the dream state which attends the plying of matter' (3). This is an important observation because it suggests that the attraction to matter and its rhythms, which is so important in producing and viewing matter painting and abstract art, has a closer relationship to daydreaming than to detached, rational observation. This engagement with matter in its unsettled and disordered aspect affects the psychology of observation, prompting nonlinear sequences of thought and sensation. The unpredictable rhythms of matter exhaust attempts to take control of it, and instead our mind drifts into a kind of dreaming with eyes wide open, our imagination cued by the granular textures and rhythms, the twists and turns of the matter itself. This suggests that reverie can be extended and situated, that it is not all in the head.

This 'extended reverie' is more forcefully suggested by Bachelard, for whom it is crucial 'to contemplate the universe with an imagination open to the energies of matter' (278). Poetic language, he writes, 'when it is used to translate material images, becomes a veritable incantation to the forces of energy' (6). He cautions against different kinds of phenomenology, which often 'remain too "formal," too intellectual' because they objectify 'forms and not forces' (171). Studies of form, as we see in art and gestalt psychology, are 'condemned to be only psychologies of concept or structure; they are scarcely more than psychologies of the image-filled concept' (85). This 'static realism' is inferior to the 'dynamic nature of the imagination' (85) with its sources in the oneiric.

In *Rhythm, Music and the Brain*, Michael Thaut discusses how it is common for spatial images to arise in the mind while listening to music:

> [S]ound durations can express extensions and distances; rhythmic and melodic contours can express images of lines and geometric figures; vertical stacks of sound can evoke pictures of multidimensional forms and layered objects. One of the most impressive and illustrative ways to study such translations can be found in the writings and works of Paul Klee (Thaut 2005, 16).

We discern rhythm primarily from movement, by recognising repeat structures (periodic structures) and through variation or differentiation. The paradox, of course, is that paintings do not move or make a sound. This is similar to the way in which music is perceived as movement even though nothing in music actually moves. It may be the case that we project motor routines onto sound experienced as pulses or constants. Intervals and changes in volume and tempo may be felt as rhythmic shifts in time and place.

Danijela Kulezic-Wilson discusses the French composer Michel Chion's theory of 'transsensorial perception', which is 'neither specifically auditory nor visual as it becomes decoded in the brain as rhythm after passing the sensory path of the eye or ear' (Kulezic-Wilson 2015, 40). The theory holds that, although the senses pick up rhythm, there is a fundamental interpretative mechanism in the brain that is able to intuit rhythm beneath the senses. What can trigger the feeling of rhythmic processes in the brain and body is an awareness of simultaneity and sequentiality, an understanding of how events or features occur or seem to affect the senses. The impression that something is moving when it is in fact static is not new.[4] There are numerous ways in which it is possible to infer rhythm in a static medium such as painting or drawing. A well-known perceptual principle, the 'law of common fate', holds that two or more lines with similar features placed next to each other will suggest that they are moving together, when compared to other details: the two backslashes in 'http://' appear to switch to the right while the colon remains stationary. This may seem self-evident but is often not made explicit enough in our 'reading' of abstract art, where such lines and patterns are far more complex. Winawer et al. (2010) show that static pictures produce motion effects in the brain, supported by sensory neurons. Summarising many of these principles, Thaut concludes:

> In the broader sense, every work of art possesses rhythm. Because rhythm deals with the discernible structure of temporal organization of an artwork's 'building blocks' into an arrangement of its physical elements into form-building patterns, rhythm is one of the most important components of an artwork . . . . [R]hythm can also be transposed to visual-spatial elements, for example, by organizing patterns of deflections in lines, by patches of distinct coloring, or by arranging similarly shaped objects in spatial configurations. The rhythms of speech and the rhythms of statements and dialogues, in conjunction with movements, can express dramatic rhythms in theatrical plays. The distribution of syllables and inflection

[4] Johann Wolfgang von Goethe suggests that one should close one's eyes before the Laocoön and then open them very briefly to receive the overall impression: 'By this means he will see the whole marble in motion . . . it is a flash of lightning fixed, a wave petrified at the moment it rushes towards the shore' (quoted in Lampert 2012, 95).

points in poetry and the distribution of elements of motion of the human body in dance are examples of rhythms in other art forms (Thaut 2005, 4).

In a painting, a line that is broken or dotted can also be felt as rhythmic, as a pulse, and lines that are repeated alongside each other can be read as vibrations. This was a common Futurist device. In order to suggest motion in a static medium such as painting or sculpture, the Futurists attempted to agitate the psychology of the observer by providing simultaneous contrasts and collocations, and multiple and clashing light sources, and by repeating the lines of objects with emphasis to suggest centrifugal and centripetal forces. The Futurists called these lines in their paintings and drawings 'force lines' (*linee-forza*).

In Umberto Boccioni's high-contrast charcoal drawing on white paper, *Muscular Dynamism* (1913), the black outlines of a nude body walking are repeated, suggesting vibrations, motion, blur and rhythmic momentum. Boccioni read the philosophy of Henri Bergson, who believed that the past, present and future dissolve into each other like musical notes. Boccioni's drawing suggests not only how the past, present and future flow, how it takes time to stretch or to walk, but also how it takes time to rhythmically drag the charcoal across the paper to get from one point of the pictorial space to another and to repeat the process. In Brian Petrie's study of Boccioni, he observes how the artist interpreted Bergson's 'duration', the sense of time flowing, as a muscular and temporal stretching forward. In Boccioni's drawing (Figure 0.2), the implication is that in order to walk with purpose towards some destination there had to have been the initiation of an impulse to extend the leg, bend the knee and push forward the torso, which we see as taking place in the present, while there is also a sense of the future, becoming manifest in muscle readiness for the body to anticipate the next step. For Bergson, the human body is 'like a moving boundary between the future and the past' (quoted in Petrie 1974, 146).

Many writers on art are sensitised to this kind of 'rhythmic seeing'. Clearly inspired by Bachelard, Mel Gooding refers to the modality of abstraction as

a kinetic representation of the world experienced as flux, as a complex of sensations in which it is impossible to hold anything still. In this thrilling place our sensorium is assailed by the teeming facts of the actual, and their poetic realisations have the flickering inconstancy of fire. Painting of this kind revels in the evanescence of the elements, in the ceaseless play of light and shadow, in the intensities of colour, in vivid creatures, in the rhythms of free dance and the dissonances of jazz. If the art of an achieved poise is a function of reverie, of daydream, then this art of the perpetual movement has its equivalence in nighttime dreaming, and is characterised as a swirling viscosity, an oneiric vagueness of forms (Gooding 2001, 88–89).

Figure 0.2 Umberto Boccioni, *Muscular Dynamism* (1913). Pastel and charcoal on paper, 86.3 × 59 cm. Image: The Museum of Modern Art, New York/Scala, Florence. Out of copyright.

Sylvester also understood static images rhythmically. He describes André Masson's paintings as 'the insistent rhyming between shapes close to one another' (Sylvester 1997, 452). A depiction of hands and fingers produces a 'vigorous and systematic rhyming, which gives the picture a very rapid tempo' (452). This is consistent with the finding that, in watching a film, individuals share various synchronies in brain activity while looking at delicate hand movements (Hasson et al. 2004). The rhythmic synchronies in reading hand movements seem important. Tapping the fingers in time to a steady beat or adjusting the rate of breathing to sing along with a song are other examples, besides speech patterns, that demonstrate how the brain, body and external rhythms in the world can synchronise. Current research paradigms balk at the complexity of such a simple

moment. Kelso et al. (2013) show that rhythms can become coordinated or synchronised across multiple levels of organisation from the microbiological to the phenomenal; for example, finger tapping is produced by the brain's own rhythms in synchrony with external beats.

Sylvester may have been inspired to make his observation of the rhythmic qualities of fingers and hands by noting how Jasper Johns described his own painting, *White Flag* (1955) (Figure 0.3), as a change in rhythm: 'The change has two speeds. In the stars it's *allegro vivace*, agitated movement, flickering and exploding. In the stripes it's *andante*' (Sylvester 1997, 464). How can such a remark be understood as more than simply a metaphor, as a phenomenon that is experienced as rhythm, even though the fixed image does not move? Cotter et al. (2017) show how curved shapes provide certain rhythmic pleasures. Kim and Blake (2007) find that motion-sensitive areas of the brain are activated in abstract paintings that suggest motion. This helps to explain how some abstract paintings are often felt to be rhythmic. Bar and Neta (2006) suggest that angular and jagged edges are often associated with threat and agitated rhythms, while rounded edges help to produce comforting feelings and soothing rhythms. These responses have to do with haptic sensibilities, intertwined with rhythmic and emotional registers. There

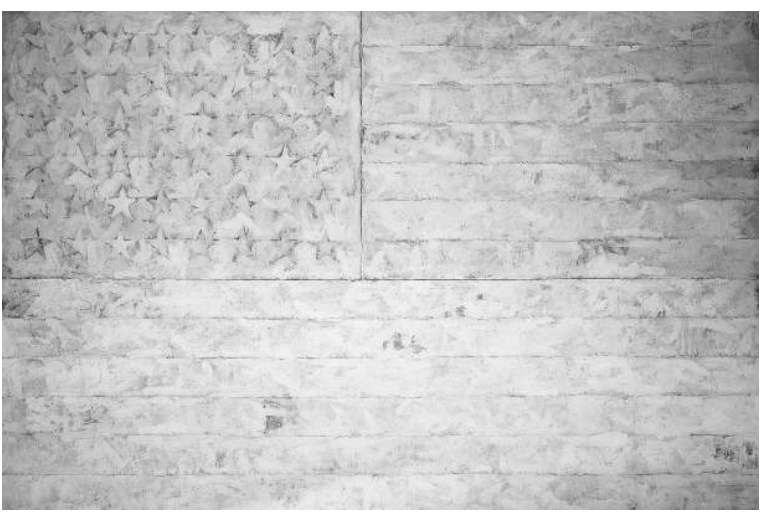

Figure 0.3 Jasper Johns, *White Flag* (1958). Encaustic and mixed media, 198.9 × 306.7 cm. Digital Image © Private Collection/ Christies Images/Bridgeman Images © Jasper Johns/ARS. Copyright Agency, 2020.

are pleasurable sensations to be explored with continuous smooth shapes and intervals, texture and surface. Similarly, the eye tends to stop and sample the edges in irregular 'sharp objects' with jagged edges, creating jerky rhythms. And a group of small stars could be subliminally perceived as little pinpricks or shimmering points of light. Johns's own understanding of the 'two speeds' also switches from the stars to the stripes and back again, which suggests a complex dynamic complicated by the tendency for eyes to search the visual field in iterative, rhythmic movements both for large-scale scenes and in discerning rhythm in the handling of paint. In *White Flag*, the encaustic technique of mixing oil and wax reveals an intricately patterned surface on close inspection.

We engage with the 'higher' conceptual level when we make an analogy with musical terms, but this analogy is felt and experienced and is not just a turn of phrase. The terms describe motor sensations and muscle memory, which are experiential. In addition, the artistic process itself is a way of making explicit the properties of different kinds of matter. The technique of encaustic is painstaking: Johns prepared the ground of three panels with beeswax, building up multiple layers with a collage of newsprint and shreds of fabric cut out for each star and stuck onto the surface. He then dipped the panels into molten beeswax, applying pigments with more quantities of beeswax. The material process creates an overall effect where the flat image is transformed into a textural, sculptural surface. A simple design gives way to a densely patterned complexity, suggesting arrested contingency, change or decay. The fluidity of the medium dries and hardens, capturing the brushstrokes and waxy drips in a frosty white sculptural field. Scraps of newsprint suggest everyday moments and political events caught or suspended in the body of the flag. As one invests time to discover the rich detail, the artwork is transformed from an image (the American flag) into a sculptural and textural phenomenon. This experience also involves appreciating the labour-intensive aspect of the work and the temporally extended nature of perception (rather than instant image recognition). The fine-grained surface of the work is chaotic, exceptionally full of information, with uncountable marks, grooves, blotches and drips. In viewing the surface, which is the result of meticulous activity, one becomes sensitised to this 'material' and technique, and the mental image of the flag is lost. The work flickers between image and matter: it is both a timeless flag and an expressionist painting. The observer uses prior knowledge about the flag to imagine its colours, as if present perception is haunted by a memory of how the flag once was, perhaps even how it will continue to be, as a kind of museum artefact. We are mind wandering: looking back and looking forward, looking at the work