Between

‘Il corpo incantato’. Medicine, Magic and Aesthetics of ‘unconscious cerebration’

Alessandra Violi

Abstract

The essay explores the notion of ‘unconscious cerebration’ elaborated by British physiologist William Benjamin Carpenter in the first half of the nineteenth century, foregrounding its hybrid genealogy and its afterlife in both science and magic, as well as its transnational impact on the arts and psychology as an already available alternative to the Freudian unconscious. Carpenter’s idea of a *corporeal* unconscious is traced to the intersections of (occult) science, literature and visual culture, but also comparatively as it rippled off into European, American and Russian cultures, offering a shared notion of a bodily, physiological nonconscious that the Freudian tradition in psychoanalysis has long eclipsed and obscured. Italian Futurism is taken as a test case of the rich, and still underexplored, potentials of Carpenter’s intuition for an archeology both of ‘the unconscious’ and of contemporary returns in the humanities to materiality and embodiment.

Keywords

William Benjamin Carpenter; Unconscious cerebration; Ideo-motor action; Magic; Embodiment; William James; Filippo Tommaso Marinetti.

Between, vol. XI, n. 21 (Maggio/May 2021)
ISSN 2039-6597
DOI: 10.13125/2039-6597/4383

‘Il corpo incantato’. Medicine, Magic and Aesthetics of ‘unconscious cerebration’

Alessandra Violi

History matters

In her recent *Unthought*, Katherine Hayles claims that the latest neuroscientific discoveries confirming the existence of nonconscious cognitive processes point to a «terra incognita» for the humanities (Hayles 2017: 1). Unlike the Freudian unconscious, the ‘nonconscious’ coincides with the materiality of bodily physiology and neuromotor automatisms, with a corporeal unconscious whose processes, though essential for consciousness to function, remain largely unacknowledged and inaccessible to conscious introspection. As well as challenging received notions of how consciousness operates, these recent findings are described by Hayles as striking a final blow to the supremacy of the human over other non-human biological and technical systems, thus working in tandem with contemporary ‘new materialist’ philosophies which, «focussing on the grittiness of actual material processes, […] introduce materiality, along with its complex interactions, into humanities discourses that for too long and too often have been oblivious to the fact that all higher consciousness and linguistic acts […] must in the first instance emerge from underlying material processes» (*ibid*.: 65).

Yet, as Marcel Gauchet and Jonathan Miller, among others, have shown, the category of a corporeal, physiological nonconscious is by no

means a newcomer on the scene, replacing outmoded and archaic forms of belief. What we have is rather a «connu méconnu» (Gauchet 1992: 26), a known disowned which emerged from nineteenth-century psychology and has ended up «regrettably overshadowed» (Miller 1995: 28) by the more widely-recognized Freudian unconscious. The reasons for this cultural neglect are various, and may be partly attributable to the elusiveness of the corporeal nonconscious, whose ambivalent status, «neither eidetic in the mental sense of consciousness nor oneiric in the sense of an irrational unconscious» (Austin 2018: 8), makes it especially resistant to representation. But they certainly have to do with the tangled, 'undisciplined' history of a category miscegenated with the magic of phenomena such as mesmerism and spiritualism, as one of the founders of French 'psychologie nouvelle', Pierre Janet, was ready to admit by devoting a whole chapter of his *Automatisme psychologique* (1889) to the hybrid genealogy of his science in the culture of 'the marvellous' (Plas 2000).

In what follows, I trace this knotted germination, taking as a case in point physiologist William Benjamin Carpenter's notions of 'ideo-motor action' and 'unconscious cerebration', conceived in the 1850s out of an investigation into mesmerism and table turning in spiritualistic séances. Although it set off a materialist trajectory in British, and later European, psycho-physiology, enabling the «imagining of the mind's comprehensive embodiment for the first time in history» (Rylance 2000: 80), Carpenter's work was eclipsed in subsequent histories of the unconscious (Gauchet 1992: 25-6), despite the enormous popularity that the concept of unconscious cerebration enjoyed in the cultural imaginary of the nineteenth century and beyond, travelling across science, medicine, magic, technology and aesthetics. As Jenny Bourne Taylor has pointed out, the state of research into the unconscious was extremely fluid at a time when what are now our disciplinary boundaries between science and the humanities, or indeed between the 'sciences of the mind' and the 'occult sciences', «would have been meaningless» (Bourne Taylor 1997: 142). Thus, the conundrum whether life and mind were mechanical – defined and dominated by neurophysiological operations that appeared involuntary and beyond

rational control – reverberated across the newly-invented laboratories of experimental psychology, the clinical study of neuropathologies, physiological aesthetics, spiritualist mediums and technical media, originating the investigation into the life of matter and the non-anthropocentric outlook that laid the ground for subsequent biophilosophies.

My snapshots from this territory are offered also as a rethinking of the role of the nonconscious in the modernist avantgarde, in particular in the Italian Futurists. The movement's bizarre combination of technophilia and occultism has been commented on before (most eloquently by Chessa 2012), but I take Marinetti's performing art of «fisicofollia» (body-madness; *The Variety Theater*, Rainey 2009: 163) as a creative enactment of the nonconscious energies that had emerged at the intersection of science and magic at the turn of the century.

Indeed, the trajectory that I hope to retrace appears, as it were, sedimented in the Italian language, once we consider its rather peculiar usage of the adjective 'incantato' (enchanted) to indicate a loop in both the human and the motor machines. As we read in the *Battaglia Dictionary of Italian*, while traditionally referred to someone or something undergoing a magic incantation, by the second half of the nineteenth century the Italian adjective 'incantato' had acquired an added self-reflexive meaning ('incantarsi'), denoting the psychophysiological condition of absent-mindedness and transfixed immobility that was typical of the human machine when in trance or in states of distraction; Giovanni Pascoli and Italo Svevo are among the first to be credited with this modern usage, which, significantly, also corresponds to an extension of the adjective 'incantato' to a motor or a mechanism that is blocked and works in a loop. Here, together with D'Annunzio mentioning a 'mitragliatrice incantata' – the raptured blockage of a machine gun – it is Tommaso Marinetti's *Zang Tumb Tuum, Parole in Libertà* (1914) that speaks first of a 'comando incantato' in a motor, setting human and non-human automatic systems in the same entranced condition.

The Carpenter effect

What makes the human machinery work unconsciously? The question gathered momentum for British scientific researchers during the epidemic of electrobiology and table-turning that swept through London in the 1850s. The altered states of mind produced by mesmerism (newly baptized 'hypnosis' in the 1840s by James Braid) had been observed before, but the practice of 'electrobiology', recently exported to London by American showmen, seemed to demonstrate that, once their will was suspended by an operator through a physical stimulus, people could accomplish complex tasks though seeming unconscious of what they were doing. Meanwhile, in spiritualistic séances, people sitting round a circular table, palms facing down, became aware of their fingers throbbing and feeling numb, after which the table began to vibrate, tilt and rotate, as if moved by diabolical airy spirits. The idea of unconscious action during consciousness and the fad for table turning risked reviving magic beliefs in the agency of unknown, invisible forces (Winter 1998: 281-294), and were therefore «quickly seized on by men of science to dramatize the passage from belief in supernatural agents to rational explanation» (Luckhurst 2002: 26).

As a leading physician of the day, Professor of Physiology at the Royal Institution and examiner at the University of London, William Benjamin Carpenter did not cast doubt on the mysterious phenomena, but was rather committed to giving them a naturalistic account building on his studies in comparative physiology and on research conducted in the 1830s by Marshall Hall (Jacyna 1981: 4; Danziger 1982: 124-25). Beginning with the founder of neurology, Thomas Willis, and his *Cerebri Anatome* (1664), the eighteenth-century had seen a flurry of researches into the physiology of the nervous system, prompting the emergence of what Salisbury and Shail (2012) call a typically modern, neurological self, inhabited by the silent pulses and rhythms of physiological processes which, from respiration, heart beats or visceral movements, to walking, gesturing and responding to the outside world, made the bodily machine operate unconsciously. In the works of, to cite a few,

Robert Whytt, John Augustus Unzer and George Prochaska, nerves were ascribed ever more complex physiological functions that progressively dislodged the brain from its ruling position over the body, replacing it with a fully integrated network of reflexes communicating with each other and taking «charge of movements that could also be volitional, could be just as 'conscious' of the outside world as the volitional mind, but operated much of the time without needing to trouble intention» (Salisbury and Shail 2010: 14; see also Canguilhem 1955: 108-131). Although they were automatic, unconscious and unwilled, nervous mechanisms began to be seen operating «as a non-conscious brain diffused throughout the body» (Salisbury and Shail 2010: 15), which actively interpreted stimuli rather than merely receiving them passively.

A further step in the autonomization of the nerves' agency, a sort of Leibnizian 'vis nervosa' discussed in just these terms at the intersection of medicine and philosophy, was Marshall Hall's distinction between two separate nervous systems, the 'Cerebral, or sentient and Voluntary' – the brain – and the 'Spinal, or Excito-motory' – the spinal cord. But although it postulated the existence of sensory-motor acts independent of consciousness, Hall's system still maintained the higher operations of the brain distinguished from «the below-stairs» (Miller 1995: 26) of the lower nervous regions. Carpenter (as well as his 'rival', Thomas Laycock; see Danziger 1982) gave a final touch to this picture, allowing the reflex action to creep up into the machinery of the brain.

This move was the culmination of Carpenter's previous work in comparative physiology. Exploring *The Voluntary and Instinctive Actions of Living Beings* (1837), he had taken the very basis of life itself as its subject. Convinced that reason was no prerogative of the human, Carpenter had searched for germs of intelligence in the simplest non-human things (Jacyna 1981: 113; Danziger 1982), ultimately identifying the reflex function as the basic unit of organic life, conceived of as movement and energy without mental consciousness. His research into the correlation of forces (see Hall 1979) persuaded him, moreover, that vitality could be extended also to a certain state of organization in inorganic matter, leading him to a «version of Leibniz's theory of

sentient material units, be these called monads, atoms, or cells» (Jacyna 1981: 117). But, most of all, magic was the royal road to Carpenter's novel conception of a cerebral 'ideo-motor reflex' and to what he would soon baptize, in the fourth edition of his *Principles of Human Physiology* (1853), 'unconscious cerebration'.

The theory was first sketched in the paper *On the Influence of Suggestion in Modifying and Directing Muscular Movement, Independent of Volition*, delivered at the Royal Institution in 1852 as a report of his findings on the supposed marvel of spiritualism. Here, biologized states were assimilated to hypnosis and artificial somnambulism, and described by Carpenter as «reverie» (Carpenter 1852: 147), «absent-mindedness» (*ibid*.: 149), or «profound abstraction» (*ibid*.: 152), all states in which «the voluntary control over the current of thought is entirely suspended, the individual being for the time (so to speak) a mere thinking automaton, the whole course of whose ideas is determinable by suggestions operating from without» (*ibid*.: 147). Once the will is in abeyance, Carpenter claimed, the nervous machinery is responsive to the suggestion of the operator, who «excites a corresponding idea» (*ibid*.: 148) in the subject's brain inducing a «complete subjection of the muscular power to the dominant idea» (*ibid*.: 149), which is then «automatically performed» (*ibid*.). Although the subject is totally unaware of the unconscious performance, his/her bodily machine doesn't simply mimic the outside world, but rather recreates it by mixing the dominant idea with «emotional states» and «intellectual operations […] diversified by the mental constitution and habits of thought of the individual» (*ibid*.: 153). Carpenter's pathbreaking move was thus to argue that, as the «emotions may act directly upon the muscular system through the motor nerves, […] Ideas may become the sources of muscular movement, independently either of volition or of emotions» (*ibid*.: 151-52). By what he baptized an «ideo-motor form of reflex», ideas were themselves understood as triggering reflex muscular movements that could either remain virtual or be acted out in the real. In Carpenter's view, then, what distinguished 'automatic'' from 'volitional' actions was not the mode of action itself, but the accompanying mental state (Jacyna 1981: 114): such movements, he

claimed, «are as truly automatic, as are those more directly prompted by sensations and impressions, although originating in a more truly psychical source» (Carpenter 1852: 153). The gap between the psychic and the physical was thus bridged.

In addition to external stimuli and suggestions, Carpenter concluded, an idea can attain such a dominant position through the person's own mental processes of «expectant attention» or «anticipation», which «prompt the muscular movement that produces it» (*ibid*.: 153). In other words, as well as undergoing the 'incantation' by an external stimulus, the human machine could also generate its own loops of 'auto-incantation', and act them out unconsciously. As physicist Michael Faraday would demonstrate in a rather spectacular scientific experiment the following year, the mysterious tables tilting and turning in séances were thus not moved by otherworldly spirits (Watt-Smith 2013). Rather, they were an effect of ideo-motor action, the little undetected, nonconscious muscular movements of the participants' hands acting out their expectant idea of magical communication.

Scholars of the unconscious will have certainly recognized in Carpenter's 1852 account some of the issues that would feed into the psycho-physiological debate later in the century, such as that of the human as a 'thinking automaton', radicalized in 1874 by Thomas Huxley; or of the role of suggestionability that would divide opinions between the Salpêtrière and the Bernheim schools in the 1880s, the former taking it as a sign of hysteria – which Carpenter denied (Carpenter 1852: 151) –, the latter as a natural tendency to 'ideodynamism'. But Carpenter's early innovations on the embodied mind took somehow more tortuous, winding paths, which I'll retrace in the remainder of the section before coming back to the aesthetic potentials of Carpenter's thinking machine.

In one direction, 'ideo-motor action' was the springboard for the much broader type of operations given over to brain reflexes that Carpenter elaborated in various editions of his *Principles of Human Physiology* and further expanded in *Principles of Mental Physiology* (1875). The phrase 'unconscious cerebration' itself was coined to account for non-volitional processes that, unlike dreams, characterized waking

states, although their workings bypassed consciousness and could only be known retrospectively from their effects. These states encompassed, for instance, the «sudden flashing into our consciousness» of a name when, failing to remember it spontaneously, we have given up and thought about something else (Carpenter 1875: 519); problem-solving after the question brooded over is «left to settle itself» (*ibid*.: 532), as when we come up with a new approach to a problem through lateral thinking, or after a good night's sleep; and again, occasions in which «two distinct trains of Mental action are carried on simultaneously,—one consciously, the other unconsciously» (*ibid*.: 526). Here Carpenter (quoting Frances Power Cobbe's *Unconscious Cerebration: A Psychological Study*, 1870) offers the example of a performer's hands leafing through the «hieroglyphics» of a musical score while the fingers are also busy playing them out automatically – that is, out of training – on the keyboard (*ibid*.: 527). Along similar lines, writing is characterized as automatic: once the mind becomes «engrossed with the subject», the writer's habits of mental action will take over, and ideas will «follow one another in rapid and continuous succession, clothe themselves in words, and prompt the movements by which those words are expressed in writing» (*ibid*.: 263). Given that «the work of the Imagination [is] itself purely automatic» (*ibid*.: 512), it comes as no surprise that creativity should also be included by Carpenter among the automatisms of the brain (*ibid*.: 269), a point to which I shall return. In brief, a host of mental operations, from analysis and synthesis, to generalization, abstraction and judgement (*ibid*.: 261-62) were seen proceeding automatically by suggestion and association along engrained nervous pathways. Carpenter observed that, because these operations could «scarcely be designated as Reasoning processes, since 'unconscious reasoning' seems a contradiction in terms» (*ibid*.: 517), he had to find a brand new category for them, and «the designation unconscious cerebration is perhaps as unobjectionable as any other» (*ibid*.).

As we can infer even at a cursory glance, hypnosis had prompted Carpenter to a model of the unconscious that was, as Miller puts it, «enabling» rather than «custodial» as in Freud's later version (Miller 1995: 28). Far from being simply 'irrational' or regressive, the

Carpenterian unconscious was an expanded form of thinking, the sign of an intelligent machine «actively generating the processes which are integral to memory, perception and behaviour. Its contents are inaccessible not, as in psychoanalytic theory, because they are held as in strenuously preventive detention but, more interestingly, because the effective implementation of cognition and conduct does not actually require comprehensive awareness» (*ibid*.: 28-29). In other words, the swift, efficient bodily processes of cerebration go on behind the scenes to let consciousness save energy for other tasks. Carpenter's was thus very much «the unconscious of quotidian behaviour» (Austin 2018: 8), what George Eliot called, in *Adam Bede* (1859), the «mental business […] done by agents who are not acknowledged», much like the «small unnoticeable wheel» in a «piece of machinery […] which has a great deal to do with the motion of the large obvious ones» (Eliot 1996: 173). As recently explored by critics such as Matus (2009) Ryan (2012) and Austin (2018), discussions of Carpenter's unconscious cerebration and its further elaborations by G. H. Lewes and Alexander Bain, were pervasive in nineteenth-century literary culture, with novelists accommodating their techniques to the new tacit, pre-linguistic self, or probing, as critic E. S. Dallas recommended in *The Gay Science* (1866), «the hidden thought in the bodily functions» (Dallas, 1866: 245). Oliver Wendell Holmes, American writer, poet and Harvard Professor of Anatomy and Physiology, drew on Carpenter to characterize literary art as automatic cerebration, the effect of «dictation *ab extra*, [… the] strange hysterics of the intelligence […] self-evolved by a hidden organic process» (Wendell Holmes 1871: 51); likewise in France, J. H. Rosny had the writer Servaise, in *Le Termite* (1890), explain how «all forms entered in him without his own collaboration, mixing up with breeding ground, the tissues, the fibres where cerebral germinations engender their metamorphoses» (Rosny 1890: 8, cit. in Enriquez 2018: 110, my trans.). The questions at stake, for many of these thinkers, had to do with the mind's embodiment, the role of the will (vexed also for Carpenter), and the agency of matter, as eloquently dramatized by Wilkie Collins:

> I have a thinking machine about me, commonly called a "brain" — by what process is it set working? What power, when […] my will is entirely inactive, sets this thinking machine going — going as I cannot make it go, when my will is active […]? I know that I have a soul — what is it? where is it? when and how was it breathed into the breath of my life? (Collins 1852: 161).

While certainly generating «anxiety […] about the threat of automatism and the suspension of the will» (Matus 2009: 35), Carpenter's uplifting notion was, after all, that reflexes could be trained and moulded, given that, as he put it, «the nervous system grows-to particular modes of activity» (Carpenter 1875: 182). Habit, that is, the responsive plasticity of the bodily machine to the acquisition of new routines and automatisms, could thus offer «an exciting new and pragmatic way to shape mind and behaviour» (Ryan 2012: 86), foregrounding the roles of education and experience in the human make-up. Given this pragmatist bent, it should come as no surprise that William James (who knew Carpenter's theory well and taught it at Harvard) would take over from Carpenter's unconscious cerebration in *Principles of Psychology* (1890), and adopt his «philosophy of habit in a nutshell» (James 1950: I, 112) to discuss the psychological importance of habit formation and the roles of attention, the will and consciousness in training the reflexive mind (*ibid*.: I, 402-458; II, 486-592).

What is often underestimated, however, is how enmeshed with magic phenomena unconscious cerebration, and ideo-motor action in particular, continued to be in the cultural imaginary of the century. When William James picked up Carpenter's ideo-motor action in *Principles of Psychology*, he both singled it out as a «curiosity» associated with hypnosis (James 1950: II, 522), and at the same time normalized the phenomenon, explaining that the hypnotic state «simply offered the normal process stripped of disguise» (*ibid*.), and was thus «no paradox to be softened or explained away» (*ibid*.: 527). His illustrations of the Carpenter effect – as ideo-motor action is known today – ranged from «the spectator [who] accompanies the throwing of a billiard-ball, or the thrust of the swordsman, with slight movements of his arm; the

untaught narrator [who] tells his story with many gesticulations; the reader [who], while absorbed in the perusal of a battle-scene, feels a slight tension run through his muscular system, keeping time as it were with the actions he is reading of» (*ibid*.: 525). As an instance of the popularity of ideo-motor action, James also mentioned illusionistic entertainments such as «the exhibitions of so-called 'mind-reading,' or more properly muscle-reading, which have lately grown so fashionable», based precisely on the same involuntary, «incipient obedience of muscular contraction to idea» (*ibid*.). James saw how, in watching sports, the practices of storytelling and reading, down to faking telepathy, ideas, as well as emotions or sensations, work as involuntary reflexive gestures, imperceptible muscular movements through which the bodily machine and the environment were linked and co-constituted one another.

At the same time, the connection between the Carpenterian unconscious and 'the marvellous' was less straightforward than James – himself an experimenter with spirit mediums – might lead us to suppose. The other, indeed main, direction taken by unconscious cerebration along the century was as a catchphrase for, or «standard naturalist response» to (Luckhurst 2002: 26), the goings-on of spiritualistic séances, especially after table turning was replaced by the wondrous feats of ouija boards, planchette and automatic writing, used by mediums to communicate with spirits. Carpenter, of course, had taken these as instances of 'ideo-motor action' (Carpenter 1875: 297; 302), but the concept's trajectory was littered with switchpoints and sideways. For one thing, it was inflected with occult significance by one of the founders of the Society for Psychical Research, Frederic Myers, for whom automatic writing became evidence for the message-bearing automatisms of «unconscious mentation», a process that discarded the reflex unconscious of Carpenter to focus on psychic phenomena that might open up to secondary personalities or, more likely for him, to thought-transference, 'telepathy' in Myers' new coinage (Luckhurst 2002: 72-73). For Italian psychiatrist Enrico Morselli, instead, «the peculiar state of the brain described by Carpenter as unconscious cerebration» (Morselli 1886: 308-9; my trans.) was the symptom of an

early evolutionary phase of the brain that could account for «*all* the states » (*ibid*.: 309, my italics) described in his book *Il Magnetismo animale. La Fascinazione e gli stati ipnotici* (*Animal Magnetism. Fascination and Hypnotic States*, 1886); these ranged from hysteria and somnambulism to the public spectacles of hypnotic performers turning people into thinking automata. These fashionable shows of popular magic had been rivalling in fin de siècle entertainments the newly invented performances of 'mind-reading' recalled by William James, in which mentalists baffled their audience by showing, for instance, that if a spectator hid something or fixed his mind on an object in the room, the mind-reader could, blindfolded, find the object simply by holding the person's hand. Though perplexed, men of science were also open to the possibility of telepathy, and in 1881 they requested Carpenter's expertise on what looked like blatant cases of ideo-motor action, as the mentalist was, most likely, getting clues of the spectator's thoughts by reading the imperceptible muscular movements of his body acting out a dominant idea. In fact, a very «'uncarpentarian' Carpenter», as Delorme wryly puts it (Delorme 2014: 62), was surprisingly ready to assent to the reality of thought-transference and, as he had speculated in *Principles of Mental Physiology*, of nerve-force as a «special form of Physical energy» that could exert itself from a distance, bringing «the Brain of one person into direct dynamical communication with that of another, without the intermediation either of verbal language or of movements of expression» (Carpenter 1875: 633). Given that the materiality of unconscious energies was nowhere to be encountered except in their manifest consequences, materialism easily spilled over into the occult, or, in Anson Rabinbach's aptly oxymoronic phrase, «transcendental materialism» (Rabinbach 1990: 92).

By the time Bram Stoker's gothic *Dracula* (1897) mentioned «unconscious cerebration» (Stoker 2011: 67) as the stigma of madmen and vampires living the archaic life of reflex automatisms and blood pulses, the status of Carpenter's thinking machine was wavering, to say the least, between magic and unorthodox science. When behaviourism, with its reductive emphasis on 'the reflex' as a separate unit, rather than as a part in a processual system, began to take over in the early 1910s,

ideo-motor theory itself was ultimately downplayed to ancient fossil-belief: as psychologist Edward Thorndike wondered in a speech delivered in 1912 to the American Psychological Association: «Why [...] did the theory ever gain credence, and why is it still cherished? [...] My answers are that the ideo-motor theory originated some fifty thousand years ago in the form of the primitive doctrine of imitative magic […]» (cit. in Stock & Stock 2004: 183).

Lyrical obsessions with matter

Carpenter's Janus-faced unconscious, curiously hovering between the 'primitive' and the forward-looking, inspired a rich wave of aesthetic theorizing in early modernism, making the automatisms of the body the centre of creative experimentations at the intersection of science, magic and the arts. In what became known, in the wake of Grant Allen's work, as *Physiological Aesthetics* (1877), we have the seeds of Marinetti's dictum that art is an «extension of the jungle of our veins that pours from our bodies» (*Technical Manifesto*, Rainey 2009: 113), as the reflexive gestures, pulses and rhythms of the human machine came to be seen as participating in the creation of artworks and in their material, embodied reception.

Groundbreaking works by Jonathan Crary (1999) and Robert Brain (2015) have explored the crucial role played by physiology laboratories and graphic recording devices in measuring and transcribing the otherwise imperceptible flows of nonconscious bodily energies and muscular micromotions, thus substantiating a model of the embodied subject as «a creative as well as an efficient and productive interface» (Crary 1999: 352) with the modern lifeworld, while offering artists a new idiom of line-forces to foster automatic imitation in viewers or readers. With aesthetics brought back to its materialist, indeed etymological, origins in the sentient body, the Carpenter effect (though often unattributed) rippled across (trans)European experimental laboratories, medical texts, social theory and aesthetic practices.

In France, where Marinetti made his *début* under the *aegis* of the verslibristes, unconscious cerebration had been introduced in the *Revue Scientifique* by Théodule Ribot in the 1870s (Enriquez 2018: 107), prompting Charles Féré, an associate of Charcot at the Salpêtrière, to measure «ideomotor induction» on hysterical patients with the aid of technical instruments such as the dynamometer. He thus obtained confirmation that «the idea of a movement is already an incipient movement», causing neuromotor responses which accounted for the phenomenon of «unconscious imitation» (Féré 1886: 14-16, my trans.; Brain 2015: 105-106). Taken up by physiologist Charles Richet in *L'homme et l'Intelligence* (*Man and Intelligence*, 1884), and by Ribot himself in his *Essai sur l'imagination créatrice* (*Essay on creative imagination*, 1900), ideomotor action famously inspired sociologists like Gabriel Tarde as well as philosophers such as Jean-Marie Guyau, to speculate on the harmonizing social function of 'interbodily' communication, given that, Guyau claimed, «all arts can be reduced to the art of producing or of simulating movement and action, so as to produce in us sympathetic movements, germs of actions» (Guyau 1887: 19-20, my trans.). More importantly for our purposes, as we shall see, ideomotor action was the leading theory behind the experiments in physiological aesthetics conducted from the 1880s at the Sorbonne laboratory by its director Charles Henry, whose influence Marinetti explicitly recognized as late as 1924 in his revised essay on *Tactilism: Toward the Discovery of New Senses* (Berghaus 2006: 382).

But the concept travelled elsewhere. As is now widely recognized (Olenina 2020: 194; Grespi 2020: 139), Ludwig Klages' reference to the Carpenter effect in *Ausdrucksbewegung und Gestaltungskraft* (*Expressive Analysis and Formative Force*, 1913), gave film director Sergei Eisenstein food for thought in elaborating his theory of motor imitation, and of the filmic montage of unconscious movements as a trigger to the spectator's embodied mimesis. Eisenstein's model, as is well known, was Joyce's *Ulysses*, the corporeal book which had attempted to reproduce, in Eisenstein's words, not «the contents of the unconsciousness» but the laws of its «movement» (cit. in Olenina 2020: xxxvi), the material, kinesic processes aimed at a physical incorporation of the text into the reader's

body. As critics are beginning to recognise, Joyce's use of medical terms and his physiological prose should not be taken as mere metaphors. Even discounting Joyce's aborted studies in medicine, his description of, for instance, Dubliners's paralysis as 'hemiplegia of the will', the search for Stephen Dedalus' «individuating rhythm» (Joyce 1950: 60), or Stephen's own search for «an art of gesture […] I mean a rhythm» (Joyce 1963: 184), reveal his involvement in the biomedical debates of the time, and are thus a sign of his «openness to the ways in which the sciences and pseudosciences of his day, seemed to have come together in a common quest to understand the mechanics of human sensation and communication, to explore the possibility of their extension beyond established borders» (Gordon 2004: 67).

Despite their obvious national and idiosyncratic expressions, what was shared by these avant-garde experiments with the corporeal nonconscious was, as Marinetti put it in *Technical Manifesto of Futurist Literature* (1912), the abolition of «the 'I' in literature» (Rainey 2009: 122). To some Italian writers, such as Luigi Capuana, this entailed a theory of impersonality that appealed to the automatisms of unconscious cerebration, leaving the thoughts hidden in «muscular contractions and sensations» (Capuana 1884: 120; my trans.) work themselves out and generate the «organism» of the artwork (*ibid*.: 126): why – he wondered – «should it be impossible to think, let's say, with an arm or with the fingertips?» (*ibid*.: 133.). Marinetti went further, advocating the replacement of «human psychology, now exhausted, [with] the lyrical obsession with matter […] the sensibility, and the instincts, of metals, stones, woods» (Rainey 2009: 122); in this respect, he claimed, the automatisms of film, phonography or radio were best suited to «represent the movements of matter which are beyond the laws of human intelligence, and hence of an essence which is more significant» (*ibid*.: 123).

Marinetti's injunction not to anthropomorphise the non-human – «be careful not to assign human sentiments to matter» (*ibid*.: 122) – and his appeal to the wonders of «molecular life » (*Destruction of Syntax*, Rainey 2009: 147), do not simply respond to Futurist technophilia and antihumanism. Rather, they bring to full completion the Leibnizian

tradition that had set off Carpenter's early research into the nonconscious mechanisms of Life as an inherent performative power which, from cells to atoms, manifested itself in the various natural forces in terms of a single overarching energy (Carpenter 1875: 696). As historian Jessica Riskin has splendidly argued in *The Restless Clock* (2016), this (anti-Cartesian) vision of matter not as «passive and evacuated from agency», but as «containing its own sources of action inside itself: a self-constituting and self-transforming machinery» (Riskin 2016: 7), originated in Leibniz and persisted throughout the eighteenth century, from La Mettrie, Diderot, Goethe and Lamarck down to various strands of panpsychism in Romantic *Naturphilosophie*, before being instantiated in neo-Lamarckian biology and Spencerian or Haeckelian evolutionism. Dubbed as a 'mystical' *bête noire* by modern science, this Leibnizian undercurrent is being revitalized today by new materialisms and their premium on the 'agency of things', what Jane Bennet calls *Vibrant Matter* (2009).

While a discussion of this submerged tradition is well beyond the scope of this article, it may be useful to recall that Carpenter explicitly mentioned Leibniz at the outset of his discussion of unconscious cerebration (Carpenter 1875: 514), while Marinetti's fantasies in *Multiplied Man in the Reign of the Machine* are infused with «the transformational hypothesis of Lamarck» (Rainey 2009: 90). The Futurist love for the «imperceptible, the invisible, the agitation of atoms, Brownian movements […of] infinite molecular life» (*Destruction of Syntax*, Rainey 2009: 147-48) was thus no mere alienation of the human to technology, but the evolutionary recognition that the relation between bodily functions and technicity was but «the stage of an ongoing interrelation» (Brain 2015: xxiii), given that, in the feedback loop of ideomotor action, machines were but an extension of the neurophysiological mechanism, as well as the active propellers of «a complete renewal of human sensibility» (Rainey 2009: 143).

Dictation *ab extra*

Futurism turned unconscious cerebration into a strategy for «art-action» (Rainey 2009: 208), art as a dynamic experience. The motor automatisms of the absent-minded, entranced body were adopted by the movement's physiological aesthetics as a compositional technique without any deep (or 'other') self to probe, while séance-magic became an art-installation of sorts, aimed at conjuring and transmitting the nonconscious movements of matter. The invention of 'vers libre', promoted in France by Marinetti's patron, Gustave Kahn, in accordance with Charles Henry's physiological aesthetics and graphical recording of speech, had provided Marinetti with the notion of verse as a rhythmic organism connected with the functions of voice, a matter of phonetics and of lips, larynx, thoracic cage, air pressure with which the body 'intones' the perceptual, cognitive and emotional rhythms that are performed by the « periodicity of the poet's physiology» (Brain 2015: xxxi), and then materialised in the poem's form. The artist, Henry wrote, «is but an eye, an ear, a nervous system normally organized and developed: he feels rhythm and because he feels it, because the idea is a virtual realisation, he produces it externally» (Henry 1888: 15; my trans.), inducing a sympathetic resonance in the addressee's body. Along with the affective import of vocal performance, Henry's research into the artwork as a product and conduit of undifferentiated perceptual rhythms had also passed on to modernist artists an appeal to synaesthesia and sensory fusion, prompting the adoption of cross-modal techniques that would emulate the abstract, 'amodal sense' of graphic inscriptions (Brain 2011: 95).

This corporeal dynamics of artistic performance gave Carpenterian ideo-motor action a further twist that straddled magic and science. As regular attenders of experimental séances, (Chessa 2012: 43-70), including those organized from the 1890s by scientist Cesare Lombroso with the medium Eusapia Palladino, the Futurists were aware that, in turn-of-the-century mediumship, ideo-motor action had developed into what psychical researchers had baptized 'ideoplasty', namely the actual

projection and materialization of psychological and motor energy from the medium's body, in the shape of formless, synaesthetic ectoplasms often defined as 'extras'. In France, Charles Henry himself, with physiologist Arsène D'Arsonval, had tested a case of externalization of sensibility and motricity during an aesthetic spectacle organized by Colonel Albert de Rochas with the medium Lina, whose entranced limbs would emanate luminous effluvia in response to her gestural poses and rhythms, triggered by musical suggestions (Rochas 1900: 260). While Marinetti enthusiastically recouched these extras as a neo-Lamarckian fantasy of organ extension in *Multiplied Man in the Reign of the Machine* (Rainey 2009: 91), to painter Umberto Boccioni these exosomatic automatisms became a blueprint for the Futurist artwork and its attempt at «creating something similar to what physiologist Richet calls eteroplasty or ideoplasty. For us the biological mystery of mediumist materialization is a certainty, a light in the intuition of physical transcendentalism and plastic states of mind» (cit. in Chessa 2012: 26).

It thus comes as no surprise that Marinetti's *Technical Manifesto of Futurist Literature* (1912) is set up as a séance that turns physiological experiments into literary experimentalism. Having dismissed the organ-based syntax of the Latin period and its «prudent head, […] stomach, two legs, and two flat feet» (Rainey 2009: 119), Marinetti, much like an entranced medium, is dictated to by the swirling propeller of his aeroplane, whose vibrating sounds (noises) intimate a new corporeal art of «words in freedom» (*ibid*.: 124) that outstrips vers libre, leading, as Marinetti puts it in *Destruction of Syntax*, to poetic soundscape as an «onomatopoetic psychic orchestration, the resonant yet abstract expression of an emotion or of pure thought» (Rainey 2009: 151). Marinetti's art as ideoplasty directly emanates from the swift, inchoate rhythms of nonconscious cerebrations to mingle with the energetic movements of vibrating matter:

> Our growing love for matter, the will to penetrate it and to know its vibrations, the physical bonds that tie us to machines, urge us to the use of onomatopoeia. Sound, which results from the rubbing together or the collision of solids, liquids, or gases at speed, requires

> that onomatopoeia, the reproduction of sound, be one of the most dynamic elements in poetry. […] The brevity of the onomatopoeic words […] allows us the use of the most versatile interweaving of rhythms (*Geometrical and Mechanical Splendor*, Rainey 2009: 178-79)

Dubbed as 'gramophonic' by its detractors (Brain 2015: 217), Marinetti's psychic orchestration affects also the materiality of words on the page. In *Zang Tumb Tuum*'s onomatopoetic reportage of the war from the trenches at Adrianopolis, the poet takes on the role of phonographic medium and engages experimental typography, zigzagging visual rhythms and multilineal lyricism – namely the combination of chains of colors, sounds, odours, noises, weights, densities and analogies (Rainey 2009: 150) – to turn reading into hearing, seeing, feeling, smelling and palpating. The poem, declaimed in a Futurist '*serata*' to «bodies inflamed with emotions» (*Dynamic and Synoptic Declamation*, Rainey 2009: 224), is pure performance of neuromotor loops, laying bare the technical and technological devices of a '*corpo/motore incantato*'. In this respect, Marinetti's embodied communication moves beyond the mechanics of language explored, for instance, by Gertrude Stein's grapho-motor experiments. Rather, it foreshadows the 'verbivocovisual' synthesis that Joyce would invent in *Finnegans Wake* (1939), drawing on Marcel Jousse's gestural phonetics and re-enacting his dictum that 'in the beginning was the gesture', life as unconscious reflex movement (see Weir 1977). Significantly, Joyce's séance-text too weaves back together mesmerism, physiology and technology, inscribing the gestures of matter as they are, in Joyce's own pun, unconsciously «remesmered» (Joyce 1975: 360.24, my emphasis) in «verbivocovisual» (*ibid*.: 341.19) rhythmic compounds of word-sound-image that mime gramophonic recording.

Examples from the modernist nonconscious may be multiplied within Italian Futurism, or, as shown by Olenina (2020), considering the Russian Futurists and the genealogy of formalism. But Marinetti's engagement with the Carpenterian nonconscious has a fascinating coda on which I would like to conclude. In the 1920s, Marinetti returned to «the research into touch by Charles Henry» (Berghaus 2006: 382) as an

inspiration for a new kind of art by the name of *Tactilism*. The research Marinetti refers to had concerned the so-called 'sixth sense', namely, those muscular sensations (kinesthesia) that could not be traced accurately to one of the five known sense organs, but coincided with touch as an undifferentiated, primordial sixth sense of the body. Hinged on knowledge through touch/the epidermis, Marinetti's new art of Tactilism thus consisted in the invention of special tactile tables on which the hands of the audience, plunged into darkness, could journey upon, fingering through the qualities of richly textured surfaces to experience a «succession of suggestive sensations» and their «finely tuned rhythms» (*ibid*.: 373). This new art would guarantee, in Marinetti's words, a «physio-psychic-tactile» (*ibid*.: 380) encounter with materialities that ensured embodied, kinesthetic knowledge of them. The table-turning and tilting that had set off Carpenter's research in nonconscious cerebration reappeared in a curious reversal of the order of communication: it was no longer the fingers' nonconscious movements that moved the table, but the table(s) matters that moved the body's muscles in tune with the non-human world.

Works Cited

Austin, Linda, *Automatism and Creative Acts in the Age of New Psychology*, Cambridge, Cambridge University Press, 2018.

Battaglia Dictionary of Italian, http://www.accademiadellacrusca.it/it/scaffali-digitali (last accessed august 10 2020).

Bennet, Jane, *Vibrant Matter*, Durham and London, Duke University Press, 2010.

Bourne Taylor, Jenny, "Obscure recesses: locating the Victorian unconscious", Ed. J. B. Bullen, *Writing and Victorianism*, Routledge, 2014: 145-187.

Brain, Robert, *The Pulse of Modernism: Physiological Aesthetics in Fin-de-Siècle Europe*, University of Washington Press, 2015.

Brain, Robert, "Genealogy of Zang Tumb Tumb: Experimental Phonetics, Vers Libre, and Modernist Sound Art", *Grey Room*, 43 (2011): 88-117.

Canguilhem, Georges, *La formation du concept de réflexe au XVIIe et XVIIIe siècles*, Paris, Presses Universitaires de France, 1955.

Capuana, Luigi, *Spiritismo* (1884), *Mondo Occulto*, Ed. Simona Cigliana, Catania, Edizioni del Prisma, 1995.

Carpenter, William Benjamin, "On the Influence of Suggestion in Modifying Muscular Movement, Without Volition", Royal Institution of Great Britain, 10 (1852): 147-153.

Carpenter, William Benjamin, *Principles of Mental Physiology*, New York, Appleton & Company, 1875.

Chessa, Luciano, *Luigi Russolo, Futurist*, Berkeley, University of California Press, 2012.

Collins, Wilkie, "Magnetic Evenings at Home. Letter II to G.H. Lewis", *The Leader* 14, 99 (1852): 160-61.

Crary, Jonathan, *Suspensions of Perception*, Cambridge (Mass.), The MIT Press, 1999.

Dallas, Eneas Sweetland, *The Gay Science*, London, Chapman and Hall, 1866, 2 vols.

Danziger, "Mid Nineteenth-Century British Psycho-Physiology: a Neglected Chapter in the History of Psychology", *Psychology in Nineteenth Century Thought: International Cross-Disciplinary Perspectives*, Eds. Mitchell Ash – William Ray Woodward, New York, Praeger, 1982: 119-146.

Delorme, Shannon, "Physiology or Psychic Powers? William Carpenter and the Debate over Spiritualism in Britain", *Studies in History and Philosophy of Biological and Biomedical Sciences*, 48 (2014): 57-66.

Eliot, George, *Adam Bede* (1859), Oxford, Oxford University Press, 1996.

Enriquez, Romain, "La 'cérébration inconsciente'. Imagerie et imaginaire du cerveau dans le récit de fiction", *Romantisme*, 4, (2018), 182: 105-117.

Féré, Charles, *Sensation et Mouvement*, Paris, Alcan 1887.

Gauchet, Marcel, *L'inconscient cérébral*, Paris, Seuil, 1992.

Gordon, John, *Joyce and Reality: The Empirical Strikes Back*, Syracuse, Syracuse University Press, 2004.

Grespi, Barbara, *Figure del Corpo. Gesto e immagine in movimento*, Milan, Meltemi, 2019.

Guyau, Jean-Marie, *L'art au point de vue sociologique*, Paris, Alcan, 1887.

Hall, "The Contribution of the Physiologist William Benjamin Carpenter (1813-1885) to the Development of the Principles of the Correlation of Forces and the Conservation of Energy", *Medical History*, 23 (1979): 129-155.

Hayles, Katherine, *Unthought. The Power of the Cognitive Nonconscious*, Chicago and London, The University of Chicago Press, 2017.

Henry, Charles, *Rapporteur esthétique*, Paris, Séguin, 1888.

Jacyna, L. S., "The Physiology of Mind, the Unity of Nature, and the Moral Order in Victorian Thought", *The British Journal for the History of Science* , 14, 2 (Jul., 1981): 109-132.

James, William, *The Principles of Psychology* (1890), London, Dover Publications, 2 vols, 1950.

Joyce, James, *Stephen Hero*, Eds. Theodore Spencer, John J. Slocum, Herbert Cahoon, New York, New Directions Publishing, 1963

Joyce, James, "A Portrait of the Artist, (1904)," *The Workshop of Daedalus. James Joyce and the Raw Materials for A Portrait of the Artist as a Young*

Man, Eds. Robert Scholes and Richard M. Kain, Evanston (IL), Northwestern University Press, 1965.

Joyce, James, *Finnegans Wake* (1939), London, Faber and Faber, 1975

Luckhurst, Roger, *The Invention of Telepathy*, Oxford, Oxford University Press, 2002.

Marinetti, Filippo Tommaso, *Critical Writings*, Ed. Günther Berghaus, New York, Farrar, Straus and Giroux, 2006.

Matus, Jill, *Shock, Memory and the Unconscious in Victorian Fiction*, Cambridge, Cambridge University Press, 2009.

Miller, Jonathan, "Going Unconscious", *Hidden Histories of Science*, Ed. Robert B. Silvers, London, Granta, 1997: 1-35.

Morselli, Enrico, *Il Magnetismo animale. La Fascinazione e gli stati ipnotici*, Torino, Roux e Favale, 1886.

Olenina, Ana Hedberg, *Psychomotor Aesthetics: Movement and Affect in Modern Literature and Film*, Oxford, Oxford University Press, 2020.

Plas, Régine, *Naissance d'une science humaine, la psychologie: les psychologues et le "merveilleux psychique"*, Rennes, Presses Universitaires de Rennes, 2000.

Rabinbach, Anson, *The Human Motor, Energy, Fatigue, and the Origins of Modernity*, Berkeley, University of California Press, 1992.

Rainey, Lawrence, *Futurism: an Anthology*, New Haven & London, Yale University Press, 2009.

Riskin, Jessica, *The Restless Clock: a History of the Centuries-long Argument over what Makes Living Things Tick*, Chicago and London, University of Chicago Press, 2016.

Rochas, Albert de, *Le sentiment, la musique et le geste*, Grenoble, Librairie Dauphinoise, 1900.

Ryan, Vanessa, *Thinking Without Thinking in the Victorian Novel*, Baltimore, the Johns Hopkins University Press, 2012.

Rylance, Rick, *Victorian Psychology and British culture*, Oxford, Oxford University Press, 2000.

Salisbury, Laura and Shail, Andrew (Eds.), *Neurology and Modernity: a Cultural History of Nervous Systems*, 1800–1950, Basingstoke, Palgrave Macmillan, 2010.

Stock, Armin and Stock, Claudia, "A Short History of Ideomotor Action", *Psychological Research*, 68, (2004): 176-188.

Stoker, Bram, *Dracula*, Oxford, Oxford University Press, 2011.

Wendell Holmes, Oliver, *Mechanism in Thought and Morals*, Boston, James R. Osgood & Co., 1871.

Watt-Smith, Tiffany, "Cardboard, Conjuring and 'A Very Curious Experiment'", *Interdisciplinary Science Reviews*, 38,4, (2013): 306-320.

Weir, Lorraine. "The Choreography of Gesture: Marcel Jousse and 'Finnegans Wake'", *James Joyce Quarterly* 14. 3 (1977): 313-325.

Winter, Alison, *Mesmerized*, Chicago, The University of Chicago Press, 1998.

The Author

Alessandra Violi

Alessandra Violi is Full Professor of English Literature and Culture at the University of Bergamo. Her research work has focused on the points of contact among literature, aesthetics and the human sciences, with particular attention to the medical imaginary and, specifically, the sciences of anatomy and neuropathology, on which she has published the volumes *Le cicatrici del testo* (Bergamo, 1998) and *Il teatro dei nervi* (Milan, 2004). In addition, she has written books on the theme of the body as a medium (*Impronte dell'aria*, Bergamo, 2008), as artistic-anthropological material (*Capigliature*, Milan, 2008), and in the cultural imaginary (*Il corpo nell'immaginario letterario*, Milan, 2013; (ed.) *Bodies of Stone in the Media, Visual Culture and the Arts*, Amsterdam, 2020).

Email: alessandra.violi@unibg.it

The Article

Date sent: 15/02/2021
Date accepted: 15/04/2021
Date published: 30/05/2021

How to cite this article

Violi, Alessandra, " 'Il corpo incantato'. Medicine, Magic and Aesthetics of 'unconscious cerebration' ", *Forme e metamorfosi del 'non conscio' prima e dopo Freud: 'ideologie scientifiche' e rappresentazioni letterarie,* Eds. R. Behrens - F. Bouchard - S. Contarini - C. Murru - G. Perosa, *Between*, XI.21 (2021), http://www.betweenjournal.it/