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Porous Skins and Tactile Bodies: Juxtaposition of the Affective and Sentimental Ideas of the Subject

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Abstract: This article brings together two ideas that authors in theoretical humanities tend to consider in isolation—of affect and of sentiment—and investigates what conceptions or imaginaries of the subject these ideas have historically relied on and reproduced. When viewed from the lens of the theory of subjectivation, the contemporary notions of affect and the modern sentiment tradition not only reveal significant conceptual, epistemic and ideational overlaps, but they are both kinds of *critique* of the liberal individualistic subject. Engaging the methodology of juxtaposition, I bring together the affective porous subject (drawing on the work of Teresa Brennan) with the modern sentiment idea of the sensible body, focusing in particular on the 17th- and 18th-century neurological discourses of sensibility in the work of Albrecht von Haller, Georg Ernst Stahl and others. I argue that the modern sentiment tradition forms part of the genealogy of affect in that its ideas of sensibility and sympathy foreground one of the tenets of affective subjectivity: namely, that the subject emerges through (rather than predates) ecological exposure, membranous permeability and nervous responsiveness. In this sense, both the sentimental and affective notions of the subject operate as forms of critique of the idea of Cartesian self and of the disavowal of relational and/or dialogical subject in Western philosophy.

Keywords: affect; sentiment; porous subject; sensible body; ecological embodiment; responsiveness; viscosity; attunement; contagion

1. Introduction

In Roberto Garzelli's film *The Sentiment of the Flesh*, a female student of anatomical design, Helena, meets Benoît, a radiologist, and they start a passionate affair [1]. Helena redefines their space of sexual intimacy by drawing Benoît deeper into her body, not only through her fascination with penetration of bodily orifices and the permeability of cutaneous boundaries, but also through the use of imaging technologies, which subject Helena's organs, muscles and bones to Benoît's desiring gaze. "You are so used to x-rays, you've forgotten what they mean," she says to Benoît. "It is a privilege to see inside of someone, isn't it?" Then she elaborates: "You have seen me naked, right? You are not the first [one]. But no one knows what I look like inside. The size of my organs, their shape, the path of my blood vessels. If I have extra bones, fewer muscles...No man has ever looked at me like you have."

This obsession with cutaneous openings and with corporeal porousness and tactility that foregrounds the mapping of intimate spaces of Helena's body is figured in the film as a quest to access the secret hidden in the depths of her physical interiority. While at the physiological level the radiographic examination concerns an unidentified cause of Helena's possibly imagined back pain (a somatoform disorder?), it can also be read as a search for an invisible soul within the dark cosmos of her viscera. As such, the film frames gendered and sexed corporeality as *a site of a sentiment*, where the distinction between the subject's interiority and her various sociophysical ecologies breaks down, revealing a relationship of mutuality and interpenetrability.

The captivating imagery of sentiment in Garzelli's film as the opening and porousness of the flesh is a starting-point for this article's proposed conceptual inquiry into theories of the subject and of subjectivation within two historically and philosophically distinct fields of thought: the modern sentiment tradition and the contemporary literature on affect. Linking emotionality with a transmittable and uncontainable *force of aliveness*, or *anima* (the vitalist term for the "animating principle" but also a signifier of the "soul"), affect theory proposes a notion of the subject that is porous and permeable in various modalities of ecological exposure. In affect theory, the process of subject formation is located in the crossing of the cutaneous boundary. In this article, I juxtapose the affective subject with the 18th-century sentiment tradition and the modern medical and physiological discourses of the sensible, irritable and enervated body. By juxtaposing these philosophically and historically different constructions of the subject, I show that sentimental subjectivity—defined in terms of responsiveness to and receptivity of environmental stimuli—constitutes the (largely unrecognised) part of the genealogy of affect theory. I argue that the connection between the "sensible subject" in the sentiment tradition and the "permeable subject" in affect theory lies in their critique of the idea of Cartesian self, which has been central to the disavowal of relational and/or dialogical subjects in Western philosophy [2].

The method of juxtaposition seems particularly pertinent to the task at hand: first, because it is distinguished from a comparative approach—indeed I do not *compare* the concepts of affect and of sentiment, as much as I posit the latter to have a largely unrecognised or disavowed genealogical connection to the affective theory of subjectivity; and, second, because it investigates the relationship between two conditions or fields of knowledge that are "apparently unlike" [3]. As Bent M. Sørensen notes, "juxtaposition analyses...material...through the double lenses of aesthetics: two different experiences and two different habits of viewing collide and conjoin into a new experience" ([4], p. 49). Sørensen also provides fascinating examples of the practice of juxtaposition, such as between the iconic image of a nameless Jewish boy with arms raised in a Warsaw ghetto in 1943 and Paul Klee's 1920 print *Angelus Novus* of (what Walter Benjamin calls) the angel of history (with wings raised): "[a]s the angel is caught in a storm...[t]he little boy is also caught in a wreckage" ([4], p. 59). George L. Dillon speaks of "the juxtaposition effect," which—in the analysis of Benjamin Arcade Project—he in turn links to artistic and scholarly practices of montage, layering, decontextualisation and fragmentation [5]. For Dillon, juxtaposition requires the placement of two things "side by side or one after the other" with the precondition that there is "no connecting matter or continuing thread or common topic" between them [5]. Similarly, in the proposed juxtaposition of the affective subject and the sentimental subject, I start from the assumption that these two traditions of thought are philosophically, conceptually and historically distinct, but I also propose that putting them together reveals surprising connections and affinities, specifically in regard to their complex view of subjectivity and self/other distinction.

The contemporary thinkers of affect studies (in both the psychoanalytic and the material-vitalist schools of thought) have not considered the sentiment tradition as a source of inspiration and affinity for theorising affect today. (Instead, there is a frequent connection made to Spinoza, as well as to the early 20th-century vitalists, including Henri-Louis Bergson and Gilbert Simondon.) This is partly because sentiment has been defined as a sub-category of social emotions, spurring critiques of its alleged endogenous origins and self-containment, and of its purported didacticism and solipsism [6]. What is not recognised, then, is the genealogical connection of affect to the materialist and vitalist discourses of the body produced in the early modern period. The idea of sentiment is foregrounded by the development of physiological, aesthetic and cognitive-epistemic discourses of the sensory experience, and in what is described as the movement of passions within and across the body [7,8]. The sentiment tradition emerges at the interstices of the biological explanations of the subjective experience in reference to, in particular, the nascent understanding of the nervous system, and the preoccupation with moral sympathetic experience. As Elizabeth Maddock Dillon ([9], p. 499) argues, the concept of sentiment connotes physicality and materiality of affective experience. Further, "sentimental writing aims to promote the voice of 'embodied, affective personhood' over and against

disembodied, abstract, legal account of subjectivity” ([9], p. 500). Not unlike the contemporary theory of affect, sentiment presupposed an ecologically situated subject, where sociophysical contents traverse between the body and its surroundings. Without collapsing together the histories of affect and sentiment, I argue that these two registers of emotive intensity repudiate the idea of the self-contained and atomistic subject. I first focus on Teresa Brennan’s work on the transmission of affect,¹ and next, I discuss the material-vitalist corporeality discourses developed by the 18th-century medical scholars, including Albrecht von Haller, Georg Ernst Stahl, and the Montpellier doctors, who, irrespectively of their differences, critique the Cartesian idea of the self.

2. Affect and the Porous Subject

Related to, but distinct from, the rubric of emotionality, affect has been theorised in both new materialism and in psychoanalysis in terms of energy fluctuations [10]. Corresponding to moments of increasing and decreasing intensity of feeling, and to the dynamics of viscerality and arousal, affect has been recognised as a kind of “force” or “energy movement” that is independent of its various manifestations on/within the body. Within the psychoanalytic discourse, affect connotes “the subjective transposition of the quantity of instinctual energy” ([11], p. 14). It is thus distinguished from emotions as “the raw material of our internal life,” including “anxiety, rage, and euphoria, in their pure, essential form,” whereas emotions constitute a more complex psychic experience, consisting of affects but also of “ideas, memories, unconscious perceptions, derivatives of somatic states, and other mental ingredients” ([12], p. 26). In contrast to the psychoanalytic tradition, the materialist discourse has developed a “pre-individual” conception of affect: unconfined by the boundaries of a singular body, affect is taken to be always traversing and connecting different—and not only human—embodiments and corporealities [13,14].

The concept of affect sheds a critical light on the ideas of a cohesive, self-contained and atomistic subject, partly because it emphasises the impact of new technologies—such as medical imaging—on the emergence of “disembodied forms of subjectivity,” and partly because of the accompanying fascination with “virtualization and objectification of corporeality” [15]. The many writings on affect in the last decade or so have depicted a distinctive imagery of the subject, articulating concerns about forms of emotional connectivity between the body and the environment, and the corporeal tactility and porousness as bases for different kinds of sociality [13,16]. In *The Transmission of Affect*, Teresa Brennan postulates that affects are formative of the inner life of the subject, specifically in their composition of the ego, in so far as they are *transmittable*—sent, conveyed, communicated across bodily boundaries—rather than regarded as a property and a product of subjective life [17]. Affective transmissions are taken to be constitutive of the subject, in that they draw our attention to, for example, the contagious character of humors, moods and dispositions. These gestural and sensory intercorporeal exchanges mean that subjects need to be re-imagined as permeable, absorptive of and responsive to their ecologies, but also vulnerable to different kinds of affective exposures.

Brennan frames the theory of affect as a critique of the individualist notion of the subject, which overlaps with the chronology of Western modernity, and has produced the idea of affective self-containment—“a residual bastion of Eurocentrism in critical thinking, the last outpost of the subject’s belief in the superiority of its own worldview over that of other cultures”—in so far as beliefs in and social practices of affective and energetic diffusion across bodily boundaries tend to be associated with “non-Western as well as premodern, preindustrial cultures” ([17], p. 2). The individualist view that “emotions and energies are naturally contained, going no further than the skin,” which denies

¹ The field of affect studies is diverse and consists of different schools of thought. My choice to focus on Teresa Brennan’s writings is not an attempt to reduce that diversity or to suggest that Brennan’s work is representative of other modes of theorising the subject within affect studies. Rather, I focus on Brennan’s work because she offers an elaborated and sophisticated view of some of the key themes also found in the sentiment tradition: corporeal porousness, contagion, attunement and transmission.

“the affective impact of the (social and maternal) environment” ([17], pp. 2, 73), in turn relies on, and produces, strong dichotomies of subject and object, individual and the environment, and, Brennan posits ([17], p. 7), “the related opposition between the biological and the social.”

The claim of subjective self-containment and atomism—the fantasy of mastery of one’s emotions, impulses and affects—finds its expression in the scene of infantile–maternal relation that Brennan, in *Exhausting Modernity*, defines in psychoanalytic terms as “the foundational fantasy” [18]. It describes the infantile process of repelling unwanted affects—“our helpless and unbearable passivity, our lack of agency,” Brennan specifies ([17], p. 3)—and of projecting them on to the mother and other “feminine beings,” who are thereby seen as their origin, not the repository ([17], p. 13). In the foundational fantasy of self-containment, “‘we’, the passive infant, [appear as] the true fountain of energy and life, and the mother [as] a hapless, witless receptacle” ([17], p. 13).

Sketching a parallel “between Augustine’s account of the Fall and the [psychoanalytic] Kleinian account of infant’s early life”—Brennan suggests that omnipotence and envy are pivotal for their analyses, respectively, of evil and paranoia—she ([18], pp. 6, 43) proposes that the notion of psychic and energetic containment is “historically and culturally specific to modern West.” The idea of an energetic connection between the subject, others and the environment dims the subject’s pre-eminence. The subject is probably not the source of all agency if it is energetically connected to, and hence affected by, its context. “The hubris of the modern subject finds this notion unpalatable; this subject clings to the notion that humans are energetically separate; that they are born this way, within a kind of shell that protects and separates them from this world...[At the heart of the] paranoid fantasy about autonomous beginning [lies] the denial of dependence...on life and the capacity to generate life...[Within this foundational fantasy of affective self-containment,] *each person becomes a closed space in relation to their fantasmagoria*” ([18], pp. 11, 48, *emphasis mine*).

Drawing on diverse examples from clinical psychoanalysis and group psychology—including the social mechanisms by which “people become alike [or when] they take up opposing positions in relation to a common affective thread,” mimesis and hysterical contagion in crowds; the maternal–foetal relationship; and psychosomatic conditions such as chronic fatigue syndrome and attention deficit hyperactivity disorder—Brennan captures within the affective rubric processes that are, as she puts it ([17], p. 3), “social in origin but biological and physical in effect.” As such, the claim of affective transmission requires a recognition that “the emotions or affects of one person, and the enhancing or depressing energies that affects entail, can enter into another” ([17], p. 3). Brennan means this not as a form of empathetic identification, but, literally, as a *penetration of cutaneous surfaces of the body by particles*. The outer cutaneous layer, epidermis, “shields...from environmental oxidants and heat, while it also resists water, abrasion, stains, microbes, and many chemicals,” but—even in mammals characterised by relatively strong cutaneous coverings—is also subject to diffusive forces, mostly due to the connective tissue fibres located in the dermis, which regulate excretion, absorption and somatosensory reception ([19], p. 16). It is precisely this membranous image of the skin as a subjective boundary that allows for the transmission of certain constituents and for retention of other constituents, that lies at the heart of the socio-biological imaginary of the subject produced within affect theory. It is critical of the founding assumption in the cultural productions of the modern individualist subject, namely that skin designates “a bodily interior [by] bounding a space inhabited by the individual” [18]. In contrast, in the affective imaginary of the subject, skin remains “[a] place of tension and flux,...caught between states of containment and revelation as the boundaries of the lived body as continually challenged and redefined” [20].

Brennan emphasises the distinctiveness of affect within historical taxonomies of feeling—including sentiment—by identifying its conceptual emergence within three different traditions of thought. In the ancient Greek and Hebrew belief systems, affect has been figured as demonic beings. This imaginary is subsequently incorporated into the Christian doctrine of the deadly sins, almost all of which are *affects*, rather than *deeds* or *actions* ([17], pp. 3–4, 97–101). Even in the modern era, when the connection between affectivity and demonic figures or iniquitous urges is

gradually undone, affects continue to denote “entities opposed to the integrity of the organism’s expression of its true nature” ([17], p. 98). The second tradition foregrounding the contemporary notion of affect is, according to Brennan, the Darwinian account of emotionality, which links affect to facial, vocal and gestural expressivity as a marker of registering on the bodily surface of an involuntary physiological change. And the third tradition in the so-called James and Lange theory, which proposes that an affective state is instigated by a physiological arousal, thus granting the primacy to bodily change in the theorising of emotionality in modern psychology ([17], pp. 4–5). William James’s theory of emotions was, Brennan argues, “strongly based in physiology, focussing on bodily changes in the muscles and viscera as causing the feeling component of the overall emotional experience rather than being a result or concomitant of it,” thus linking affect closely to the concept of *interoception*, or visceral sensation ([21], p. 11). In Brennan’s account, affects and sentiments are differentiated historically (the 18th-century emergence of the sentimental discourse is identified by Brennan as precisely the historical moment when affective imaginary lost its cultural purchase), conceptually contrasted in so far as sentiments and sentimentality do not require the notion of energetic transmission, but, rather, posit the endogenous origins of emotionality.

Differentiating affect from “surges of emotion or passion [or sentiment],” Brennan defines it as “the physiological shift accompanying a judgment...[or] an attitude” ([17], p. 5). The difference between “feelings” and “sentiments” on the one hand, and “affects” on the other, is thus that the former denote the “proprioceptive capacities of any living organism—its own (*proprius*) system of reception,” where the stimuli originate either within or outside of the organism, but are internally registered and endogenously generated—“feelings are sensations that have found the right match in words.” Sentiments are connotative of “longer-lasting affective constellations” ([17], p. 6), which emerge as part of the anti-Hobbesian theory of the subject “to secure benevolence, sympathy, and other disinterested attitudes as counterbalances of self-interest...with motivational power” ([22], p. 105).

Affects are a register of the material and physiological changes of the body, and have an “energetic dimension” ([17]; cf. [23–25]).

[Because affects are energetic] they can enhance and deplete. They enhance when they are projected outward, when one is relieved of them; in popular parlance, this is called ‘dumping’. Frequently, affects deplete when they are introjected, when one carries the affective burden of another, either by a straightforward transfer or because the other’s anger becomes your depression ([17], p. 6).

Brennan’s explanation of affective transmission concerns the level of nervous and hormonal functioning of the human body, with a specific focus on the phenomenon of “entrainment,” of either chemical or electrical character. For the purposes of this article, entrainment is defined as synchronisation of organisms within their ecologies. While the 20th-century sociological literature has used the notion of entrainment to describe group modalities of emotional attunement or contagion [26], Brennan, rather markedly, overlooks this tradition in order to draw from neuroscientific and psychological accounts of entrainment. This includes the work of Benjamin Rusak on how the environmental circadian oscillation affects rhythmic behaviour and physiology of organisms. Brennan is interested in the effect that “one nervous system has on another” through the sensory apparatuses, “body movements and gestures, particularly through the imitation of rhythms” ([17], p. 70).

In contrast to the attention currently paid to intergenerational transmission of affect—in particular, traumatic affect, including work on traumatic inheritance and epigenetics—Brennan focuses on the horizontal dynamics of sociophysical transmission. The emphasis on the olfactory sense, and its association with positive and negative affective response, is underpinned, partly, by Brennan’s ambition to produce a theory of the sensing and porous subject *outside of* the dominant reliance on visuality and oculo-centrism in the modern articulations of sensible subjectivity [27], and partly by her purchase of the “affective primacy hypothesis,” which postulates a precognitive character of affect [28]. An example of the mechanism by which this affective entrainment between bodies and their social and physical environment takes place is the hormonal and pheromonal activation. (However, this is not to

suggest that olfaction is the sole sensory perception that allows affective transmission—for example, sight can also have physical effects, as in the ocular theory of extramission [29]). Hormones are “secreted into the blood stream, [while] pheromones are substances secreted by an animal externally with specific effects on the behaviour or physiology of another individual of the same species” (Zillmann quoted in [17], p. 69). Human and animal physiology provides examples of a wide spectrum of pheromones, including alarm pheromones, territorial pheromones, food trail pheromones, attraction pheromones, appeasement pheromones (produced, for example, by nursing canines in order to make their offspring feel calm and secure), and so-called “necromones,” given off by dead organisms to trigger ecological facilitation of decomposition and nutrient absorption. A pheromone differs from a hormone in that “a hormone is an internal molecule, while the pheromone serves to communicate among members of a species externally; its existence is shown or interfered because of behavioural and affective changes in other members of the species” ([17], p. 72). What is at hand in the investigation of the emergence of precognitive affective is the “effect of pheromones on the hormones of the hypothalamic–pituitary–gonadal axis—an unconscious affect” ([30], p. 310). Brennan takes the operation of pheromones, and the affective responses to olfactory and other sensory stimuli more generally, to suggest that “the environment...changes human endocrinology, not the other way round” ([17], p. 73).

This take on olfaction research on hormones and pheromones invokes a cultural imaginary of skin that contrasts with the definition of the cutaneous as a bounding, protective and isolating covering (a “shell”) of a subject. Instead, Brennan suggests, rather provocatively, that “intentionality [is not] restricted by the skin,” and that “intentionality of a given subject can be influenced or shaped by factors originating outside [the] subject” ([17], p. 75). Here, pheromones act as “direction-givers which, as molecules, traverse the physical space between one subject and another, and factor in or determine the direction taken by the subject who inhales or absorbs them” ([17], p. 75). This further supports Brennan’s proposition that “the environment, especially the environment in the form of others,” through “anxiety-provoking pheromones,” or “human chemosignals,” is constitutive of “intentional and affective connections” between subjects and their ecologies ([17], p. 78).

Another example of the horizontal affective transmittability is the physiological diffusion of affect from the maternal organism to the foetus *in utero*. Here, Brennan’s elaboration of the affective subject needs to be read in the context of the Aristotelian proposition about the “passivity of the maternal organism in relation to the germinating seed implanted in the womb,” and its resonances with both the biologist ideologies that oppose male productivity to female re-productivity, and with the assertions of foetal autonomy as that which “carries its own genetic blueprint [which] is [taken to be] somehow sufficient in explaining the growth of its form” ([17], pp. 89, 193). In so far as the Aristotelian proposition draws out the opposition of activity and passivity, individual and the environment, and the subject and object (as well as bespeaks the highly gendered nature of these dichotomisations), in its contemporary articulations it relates back to the foundational fantasy of the self-contained and atomistic subject. This universalised male subject is imagined as being surrounded by—but fundamentally autonomous of and shielded from—its various ecologies (uterine, maternal or nonhuman). In fact, Brennan proposes, the fantasy of the self-contained subject has to do with the “*reversal of positions*: the projection onto the mother of one’s infantile passivity and dependence; [and] the arrogation to oneself of the imaginary maternal ability to meet one’s needs instantly” ([17], p. 37, *emphasis mine*).

In contrast, Brennan argues for the recognition that the “maternal environment is active in forming the embryo and the [foetus]” in the interaction between “the zygote’s genetic coding and the RNA memory proteins in the endometrial lining at the moment of the blastocyst’s implantation in the womb,” which establishes “a link between genetic instructions and the means to fulfil them through cell differentiation, and that this link is in some way expressed in patterns or rhythms of blood flow” ([17], p. 91). This is to say that the maternal environment cannot be seen as separate from or simply enveloping, or enfolding, the foetal genetic blueprint, but that it actively interacts with it. At the level of the affective imaginary of the subject, this draws out a vision of what Brennan ([17], p. 135)

calls, rather poignantly, the “the living logic of the mother’s flesh,” which provides “a shield against negative affects,” similarly (though not identically) to the way in which the postnatal maternal care and attention constitute a holding environment for the baby.

Whether Brennan’s attempt at drawing from neurobiological and endocrinological knowledge about intercorporeal communication to provide a social account of affective transmission ultimately succeeds (cf. [31], pp. 145–46), I suggest that the significance of her intervention lies in its delineation of cutaneous permeability and perviousness as a grounding-point for the proposed affective theory of the subject. In her effort to undermine the binary constructs of subject/object and subject/environment, and the “foundational fantasy” of emotional self-containment, Brennan outlines an affective conception of a subject that is receptive and porous.

3. Sentiment and the Sensible Subject: Becoming “Affectively Responsive Animals”

The affective conception of a receptive, porous and ecologically situated subjectivity is contrasted with the idea of a self-contained subject, associated with Western modernity, and, in particular, with the liberal discourse of individuality, emotional autonomy and rational thought. The philosophical, epistemic and aesthetic traditions of sentiment offer a good example of how nuanced and multifaceted was the thinking about feeling and subjective sensibility within the discourse of modernity. The separation between affect and sentiment is foregrounded, historically, as Brennan implies, by the assumption that the decline of scholarly interest in affect and emotive transmission overlaps with the emergence of the 18th-century concept of sentiment, and that the spiritual figurations of affect (as demons or sins) are countered by secular(ised) imaginaries of interiority, including “feeling, the human psyche...the creative imagination” ([32], p. 21). This view, however, is based on, first, a particular reading of the sentiment tradition as the anti-Hobbesian accounts of moral agency in the work of Hutcheson, Hume and Smith (or in its modified contemporary versions); and, second, on the association of the sentimental aesthetics with the innate character of sensibility, and the depiction of sentiment as an intrinsic, rather than ecologically situated, property of the subject ([33], pp. 3–10). The neglect, or pejoration, of sentiment for the reasons of its alleged insufficient attention to the intersubjective *carrying* or *passing* of the emotive content, and for its purported acceptance of the model of emotive endogeneity and subjective atomism, is a result of misrecognition of the intricate nexus of feeling, sensation and perception with the sentiment discourse. In what follows, I consider the articulations of sentiment in the medical science and physiology of the late 17th- and 18th-century, and argue that the affective subject—open, porous, sensitive and responsive—is in fact conceptually connected to the sentimental notion of the sensible body, and the ideas of ecological exposure and receptive self.

Rousseau argues [34,35] that the 18th-century philosophical and literary ideas of sentiment are underpinned by the modern physiological, neurological and scientific inquiry into the functioning of organisms’ responsiveness to environmental stimulation, and their respective repudiation of the Cartesian dualist and mechanist models of bodily functioning. The emergence of what R. S. Crane has famously called the “cult of sensibility” has framed the development of the modern discourse of the “science of man,” and, more specifically, the revolutionary advances in the study the nervous system ([34], pp. 166, 172). By localising sentience in cerebrum and cerebellum, it declared the brain to be “the seat of the soul”—the theory of human nervousness depicted “the self as a creature of sensibility...whose feelings were transmitted through fibres or nerves to the mind or soul” ([32], p. 24). Accordingly, the sentiment subject becomes underwritten by the modern scientific imagery of a sensing, responsive and enervated body, which is situated within, and exposed to, various sociophysical surroundings [36–39].

It is *not* the ambition of this article to offer a systematic and all-encompassing discussion of the physiological and medical accounts of sentiment and sensibility in the 17th century. Rather, it takes the liberty of being selective in its presentation, so as to point to three distinct aspects of sentiment thinking that resonate with and impact on the affective articulations of subjectivity. These are, first,

Albrecht von Haller's distinction between irritability and sensibility, where the latter becomes the locus of psychosomatic aliveness and scripts the body as irreducible to its mechanistic understanding; second, Georg Ernst Stahl's animistic radicalisation of Haller's principle of aliveness in the body's ongoing responsiveness to ecological contents as that which calls for an account of permeability and penetrability of corporeal surfaces; and, third, Théophile de Bordeu's focus on the exchanges between the self and the surroundings in his account of organic sympathy and the relationship between naturals and non-naturals.

My argument that the sensible subject articulated within the sentiment tradition foregrounds and fuels the affective preoccupations with subjectivity as a locus of emotional connection through transmission, entrainment and impressionability, and rests on the assumption that the modern discourses of feeling coincide with the differentiation between the material and immaterial interiorities of the body, and the environment. The 18th-century medicalisation of the physical surroundings of the body, including the weather conditions, draws out the inside/outside distinction, according to Jankovic ([40], p. 5), and assigns "agency to nature" not only in its ability to affect bodily disposition, but also in shaping "social affairs." At stake is a *normative*, and not solely a spatial, inside/outside distinction [40]. The emergence of the discursive categories of "milieu" and the "environment," in terms of their impact on the human body, meant that the ideas of exposure impacted on the doctrine of nervous sensibility as the primary schema for economising the exchange between the body and its surroundings.

Raymond Williams ([41], p. 281) relates the genealogy of sentiment to a meaning of a "physical feeling," or "the capability of being perceived by the senses," and its modern meaning of "emotional consciousness, capacity for higher feelings or refined emotion" [42], which subsequently acquired pejorative connotations of emotional self-indulgence and feeling "too much" ([41], p. 282), or "too deeply" ([9], p. 500). The Latin root of the word "sentiment" (*sent-*) links the figures of feeling and perception with the action of "finding one's way" [42]. In the 18th century, the terms "sentiment" and "sensibility" become synonymous; they are "a complex field of meanings and connotations...overlapping and coinciding...not because they share a single unitary meaning, but rather [because] they amalgamate and mix freely a large number of varied discourses" [43,44].

The French *Encyclopédie* includes two definitions of sentiment/sensibility. The first definition is written by Louis de Jaucourt. It elaborates 'sensibility' as a moral faculty:

[d]elicate and tender disposition of the soul that makes it easily moved, touched. The sensibility of the soul...imparts a kind of wisdom about propriety, and it goes farther than the penetration of the mind alone. Exuberance may prompt sensitive souls to make mistakes that men of reason would never commit; but they gain so much through the abundance of goodness they generate. Sensible souls get more out of life than others; good and bad multiply to their benefit. Reflection can make a man of honor; but sensibility makes a man virtuous. Sensibility is the mother of humanity and of generosity; it increases worth, it helps the spirit, and it incites persuasion [45].

The second (and lengthier) definition of "sensibility" is medical. Its author, Henri Fouquet, one of the Montpellier doctors (*les montpellierains*), defines the term as a quality of somatic aliveness "that has certain aspects for perceiving the impressions of external objects and others for producing, as a result, movements proportionate to the intensity of those perceptions" (quoted in [45], p. 44). The sentiment is considered to be one of such aspects of sensibility as it demarcates "purely animal intelligence," which is to say a form of judgement concerning the "physical objects encountered through sensation" ([45], p. 44). As Anik Waldow suggests ([46], p. 1), in the characterisation of sensibility as "the basis and conserving agent of life' and as 'animality per excellence'," the subjects of sentiment become "embodied beings," whose quality of aliveness connotes their sentience; they are "affectively responsive animal[s]" ([46], p. 1).

The question of how sentiment and sensibility come to form the modern registers of sensory receptivity requires that one contrast them with the Cartesian mind-body dualism, as well as with

the 17th-century theories of anthropic mechanism and corpuscularianism [47–49]. The mechanist philosophy—inspired, partly, by the early modern innovations in mechanical crafts and arts—regarded the functioning of a living organism as a clockwork movement; “a perfectly constructed machine whose basic motions would be enacted whether or not the soul willed them voluntarily” ([35], p. 167). A crucial figure here was the 17th-century natural philosopher Robert Boyle, who opposed the Aristotelian notion of classical elements by positing the corpuscularian theory of matter. Related to atomism, corpuscularianism claimed that “everything was composed of minute (but not indivisible) particles of a single universal matter and that these particles were only differentiable by shape and motion” [50]. The aim was to provide “a single, unified, comprehensive account of natural phenomena in terms of their underlying corpuscular micro-structure: all macroscopic physical processes were to be accounted for in terms of mechanically described interactions between micro-corpuscles” ([47], p. 6). The corpuscularian hypothesis ruled out the “appeal[s] to mysterious entities which clearly conflict with mechanist assumptions, such as...the soul of the world, [and] the archeus” [51].

The Swiss anatomist and naturalist Albrecht von Haller (1708–1777) used methods of experimental physiology to study somatic irritability—distinguished from sensibility—and to account for the irreducibility of life to the mechanic principle. Haller connected the phenomenon of muscle-fibre responsiveness of animal bodies to a vitalist notion of bodily animation. In *A Treatise on the Sensible and Irritable Parts of Animals*, Haller charted the human subject as that which possesses sensory receptivity. He studied nervous excitability of animal tissue, which was closely related to sensibility, and developed “an empirically grounded understanding of organic structures and their functions” ([48], p. 6), popularising the “concept of fibres to link the nerve endings to the commune sensorium” ([52], p. 87).

Haller drew upon Aristotle’s idea of the “soul” to theorize the notion of *anima*—the principle of animation of organic bodies. Aristotle elaborates that the soul is inseparable from the body. As such, it is subject to a tripartite gradation—or what contemporary cultural critique would call anthropocentric differentiation of the category of the “soul”—into nutritive soul (specific to plants), sensitive soul (specific to animals) and rational soul (specific to humans). The gradation within the Aristotelian category of the immaterial soul underwrites Haller’s dualist distinction between irritability and sensibility. Here “irritability” (a phenomenon first mapped and named by Francis Glisson in 1672) comes to demarcate *the realm of bodily tactility*—that is, a reaction to stimuli when an animal or a human body part contracts upon touch. Irritability connotes thus contractility common to muscular fibres of both living and dead organisms (and has been also called by Haller the “dead force”). In an entry on “irritability” for the *Supplément* to the *Encyclopédie*, Haller asserted that it occurred under the impact of *une violence extérieure* (“an external force”). He also hoped to have demonstrated that “irritated did not betray any natural perceptivity, any inner life, any *sentiment intérieur*” ([53], p. 490). In other words, it is quite clear that Haller’s concept of irritability could very well function within the philosophic matrix of the atomistic self, in that it did not require a conception of permeable boundary, or of cutaneous membrane as a site for the sentiment formation.

In contrast to the notion of irritability, sensibility (a “nervous force” distinguished from a “dead force”) was for Haller specific to living (animal) organisms and was linked to the *activity of the soul* (*anima*, the source of life), which could not be mechanistically explained:

I call that part of the human body irritable, which becomes shorter upon being touched; very irritable if it contracts upon a slight touch, and the contrary if by a violent touch it contracts but little. I call that a sensible part of the human body, which upon being touched transmits the impression of it to the soul (Haller quoted in [54], p. 150).

Following Thomas Willis’s paradigmatic stipulation of the centrality of the brain for nervous activity, in the 17th century, Haller identified the brain as the site of the soul’s location. Haller’s work does not represent a break with mechanism; rather, he “built up from the basic mechanistic property of irritability to the higher-level property of sensibility associated with the soul” ([48], p. 17). As Wolfe argues ([54], p. 152), Haller’s key goal in his dualistic conceptualisation of irritability as a muscular

property, and sensibility as that which “report[s] to the soul,” reserved “an independent ‘arena’ or space of existence for the soul.” The soul, for Haller, was “a being which is conscious of itself, [which] represents to itself the body to which it longs, and by means of that body the whole universe” (Haller quoted in [53], p. 478).

Another break with mechanism and corpuscularianism came from 18th-century animism, in the work of Georg Ernst Stahl (1659–1734). In his 1684 thesis, Stahl described “the living body in terms of an innate or internal force” by theorising “individual organic beings” as “organisms,” which are heterogeneous assortments of functionally differentiated and self-regulating parts, organs ([48], pp. 6–7). Their “regulating properties...integrate all actions into a common network that maintains a balance of forces in a closed energetic system” ([55], p. 496). That systemic communicability and exchange depended for Stahl on tonic motions: the organic system was imagined as being full of leaks and pores, and subject to constant muscular forces of contraction and relaxation. Stahl postulated the existence of an *anima* behind these diverse manifestations of aliveness, which included “circulation, secretion, and excretion of humours” ([47], p. 394). In particular, he considered blood to constitute an “autonomous agent [operating as] a Hippocratic *vis mediatrix*,” and the manifestation of life and *principum movens*, “the moving principle” ([55], pp. 498–99). The processes of transformation, tonicity and self-regulation of tissues were subject to nerve stimulation, and depended on the sensibility of nerve surfaces on and within the body—what Cheung ([55], p. 499) calls the “stimulus-reaction-scheme.”

The importance of Stahl’s notion of the sensible body in its foregrounding of the theory of affective transmission and corporeal permeability is furthermore related to his critique of mechanic chemistry ([47], p. 351). Stahl drew from, and reformulated, the theory of humours, by postulating the humoral fluidity and circulation, and the humoral permeation of bodily boundaries. For example, Stahl depicted epilepsy as an “affection deriving from an altered functioning of bodily motions, caused by abnormal blood flow, intestinal worms, anatomical defects, foreign bodies, and the passions of the soul” ([56], p. 1).

Stahl was a major inspiration for the French medical school of Montpellier Vitalism [57,58]. The *montpellierains* adopted Stahl’s differentiation between organism and mechanism, even though they distanced themselves from his animism; they also departed from Haller’s distinction between irritability and sensibility, and from Haller’s and Stahl’s shared metaphysics of the soul. Instead, they proposed the theory of a “vital principle” of sentient fibres [59,60]. One of the *montpellierains*, Théophile de Bordeu, developed the modern definition of nerves as that which is “animated by a...vital tension which enables them to prepare themselves to perceive the stimulation which is specific to them and so transform this material movement ... into a sensation transmitted to the brain...” ([57], p. 527). The function of the nerves was to transmit pain, to regulate organ activity, and to perceive the state of the organs ([57], p. 528). Bordeu focused on the functioning of glands, and their capacity to register alterations and influences in other organs, which he called “manifestation of sensibility” ([57], p. 528). Each organ had displayed its own sensibility, “its ‘particular life’,” and the life of an organism, or “animal economy,” was an accumulation or an assortment of the organ vitality ([58], p. 617).

The notion of sentient fibres as the “vital principle” meant that sensibility became venerated as a universal material characteristic of all living beings, which, in turn, underwrote an understanding of sympathy not as a moral attitude, or the “innate capacity to feel the pleasures and pains of others” ([52], p. 91), but in terms of *nervous responsiveness*, “organismic unity” and a *bodily economy* ([54], p. 158).

4. Conclusions

I have juxtaposed the affective porous and responsive subject with the modern concept of the sentiment subject, focusing in particular on the medical-physiological discourses of the sensible and enervated body. I have suggested that the sentimental imagery of embodied responsiveness to the ecological other should be regarded as part of the Western genealogy of affect, as it foregrounds some

of the key characteristics of the contemporary theorising of the affective subject: it defines the subject through the idioms of ecological exposure, membranous permeability and nervous responsiveness. Both the sentimental and affective notions of the subject operate as critique of what Charles Taylor calls the *desire for invulnerability*—the desire for the autonomous and atomistic subjectivity [61].

One question that emerges from the juxtaposition of the affective and the sentimental notions of the self is whether the current theorists of affect (such as Teresa Brennan)—in their effort to emphasise the discontinuities and differences between affects and sentiments (or emotions more broadly)—miss the opportunity to situate affect in relation to a rich tradition of thought that predates Western modernity, and inadvertently employ a rather traditional conception of modernity and the Enlightenment. As I have argued, the lack of attention to the idea of sentiment—because it allegedly offers no insight into the processes of intersubjective transmission of the emotive contents—results from the misrecognition of the intricate nexus of feeling, sensation and perception within the sentiment tradition. In taking as one of its aims a strategy to complicate the genealogy of affect, this article proposes that Teresa Brennan’s thematisation of corporeal porousness and tactility, contagion and attunement, relates to the philosophies of the enervated and responsive body within the sentiment tradition. If, as Brennan postulates, affects are indeed to be recognised as formative of the inner life of the subject by the virtue of their transmittability—which thereby makes us rethink any strong separation between the corporeality and energies of the self and the other—then it cannot go unnoticed that the conception of the organismic responsiveness to environmental stimulation and the imagery of a sensing and enervated body arise as the early modern response to the Cartesian self. While Brennan argues that the subject needs to be seen as not the source of life energy but, rather, as being indebted in this regard to the maternal other, the insights that emerge from the work of von Haller and Stahl are that the properties of sensibility (as distinct from irritability) are about *responsiveness to the touch of the other*. For Brennan, energetic transmission is closely related to the idea of a skin as membranous and porous, and thereby open to the flow of affective contents, partly through the cutaneous properties of tactility.

The juxtaposition of the affective and sentimental notions of the subject presents both theories of affect and of sentiment as, potentially, counter-logics or “counter-measures” (cf. [2]) to the Cartesian philosophy of an autonomous and atomistic subject. This is not only philosophically significant, but also raises political questions, given the historical importance of the conception of the atomistic, autonomous and energetically separate self (from other humans and nonhumans alike) for the development of liberal capitalism. Some scholars of affect present it as being instrumental for the critique of the liberal capitalist model of subjectivity [62], while others express more scepticism in this regard [63]. This article suggests that the binary distinction between affect and sentiment—which foregrounds the inattention of the affect scholars to the historical moment when the idea of Cartesian self was first articulated—might have in turn resulted in affect’s diminished critical potential.

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References

1. *Le sentiment de la chair*. Directed by Roberto Garzelli. New York: Stella Films, 2011.
2. Andrew Benjamin. *Towards a Relational Ontology: Philosophy’s Other Possibility*. New York: State University of New York Press, 2015.
3. Suzanne M. Hall. “Picturing Difference: Juxtaposition, Collage and Layering of a Multi-Ethnic Street.” *Anthropology Matters*, 2010. Available online: http://www.anthropologymatters.com/index.php/anth_matters/article/view/187/308 (accessed on 4 August 2016).

4. Bent M. Sørensen. "The Method of Juxtaposition. Unfolding the Visual Turn in Organization Studies." In *The Routledge Companion to Visual Organization*. Edited by Emma Bell, Samantha Warren and Jonathan E. Schroeder. Abingdon: Routledge, 2013, pp. 46–63.
5. George L. Dillon. "Montage/Critique: Another Way of Writing Social History." *Postmodern Culture*, 2004. Available online: <http://muse.jhu.edu/article/55201> (accessed on 6 September 2016).
6. Michael Bell. "Sentiment." In *Continuum Encyclopedia of British Literature*. Edited by Steven R. Serafin and Valerie Grosvenor Myer. New York: Continuum, 2006.
7. Michael Bell. *Sentimentalism, Ethics, and the Culture of Feeling*. Basingstoke: Palgrave, 2000.
8. G. Gabrielle Starr. "Sensibility." In *The Princeton Encyclopedia of Poetry*. Edited by Roland Greene and Stephen Cushman. Princeton: Princeton University Press, 2012, pp. 1290–92.
9. Elizabeth Maddock Dillon. "Sentimental Aesthetics." *American Literature* 76 (2004): 495–523. [CrossRef]
10. Anu Koivunen. "An Affective Turn? Reimagining the Subject of Feminist Theory." In *Disturbing Differences: Working with Affect in Feminist Readings*. Edited by Marianne Liljeström and Susanna Paasonen. London: Routledge, 2010, pp. 8–27.
11. Jean Laplanche, and Jean-Bertrand Pontalis. *The Language of Psychoanalysis*. London: Karnac, 1973.
12. Christopher Bollas. *The Evocative Object World*. London: Routledge, 2008.
13. Lisa Blackman, and Venn Couze. "Affect." *Body & Society* 16 (2010): 7–28. [CrossRef]
14. Melissa Gregg, and Gregory J. Seigworth. "An Inventory of Shimmers." In *The Affect Theory Reader*. Edited by Melissa Gregg and Gregory J. Seigworth. Durham: Duke University Press, 2010, pp. 1–28.
15. Francisco Javier Ortega Guerrero. "Phenomenology of Viscerality: The Impact of Medical Imaging Technologies on Corporeality." *Cad Saude Publica* 21 (2005): 1875–83.
16. Gerda Roelving, and Magdalena Zolkos. "Posthumanist Perspectives on Affect." *Angelaki* 20 (2015): 1–20. [CrossRef]
17. Teresa Brennan. *The Transmission of Affect*. New York: Cornell University Press, 2004.
18. Teresa Brennan. *Exhausting Modernity*. London: Routledge, 2000.
19. Nina G. Jablonski. *Skin: A Natural History*. Berkeley: University of California Press, 2013.
20. Tarryn Handcock. "Transgressing Boundaries: Skin in the Construction of Bodily Interior." Paper presented at the 2012 IDEA Symposium: Interior: A State of Becoming, Perth, Australia, September 2012. Available online: <http://idea-edu.com/wp-content/uploads/2013/05/P28.pdf> (accessed on 21 October 2014).
21. Oliver G. Cameron. *Visceral Sensory Neuroscience*. Oxford: Oxford University Press, 2001.
22. Amélie Oksenberg Rorty. "Explaining Emotions." In *Explaining Emotions*. Edited by Amélie Oksenberg Rorty. Berkeley: University of California Press, 1980, pp. 103–26.
23. Brian Massumi. *Parables for the Virtual*. Durham: Duke University Press, 2002.
24. Erin Manning. "Always More than One: The Collectivity of a Life." *Body & Society* 16 (2010): 117–27. [CrossRef]
25. Patricia Ticineto Clough. "Introduction." In *The Affective Turn: Theorizing the Social*. Edited by Patricia Ticineto Clough. Durham: Duke University Press, 2007, pp. 1–33.
26. Theodore D. Kemper. *Status, Power and Ritual Interaction*. Farnham: Ashgate, 2011.
27. Martin Jay. *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*. Berkeley: University of California Press, 1993.
28. Robert Bolesław Zajonc. "Feelings and Thinking: Preferences Need No Inferences." *American Psychologist* 35 (1980): 151–75. [CrossRef]
29. Teresa Brennan. "'The Contexts of Vision' from a Standpoint Perspective." In *Vision in Context: Historical and Contemporary Perspectives on Sight*. Edited by Martin Jay. London: Routledge, 2013.
30. James V. Kohl, Michaela Atzmueller, Bernhard Fink, and Karl Grammer. "Human Pheromones: Integrating Neuroendocrinology and Ethology." *Neuroendocrinology Letters* 22 (2001): 309–21. [PubMed]
31. Margaret Wetherell. *Affect and Emotion*. London: Sage, 2012.
32. John Brewer. "Sentiment and Sensibility." In *The Cambridge History of English Romantic Literature*. Edited by James Chandler. Cambridge: Cambridge University Press, 2012, pp. 19–44.
33. Fred Kaplan. *Sacred Tears: Sentimentality in Victorian Literature*. New York: Open Road Media, 2013.
34. George S. Rousseau. "Nerves, Spirits and Fibres: Toward the Origins of Sensibility [1975]." In *Nervous Acts*. Edited by George S. Rousseau. Basingstoke: Palgrave, 2004, pp. 157–84.

35. George S. Rousseau. "'Originated Neurology': Nerves, Spirits and Fibres, 1969–2004." In *Nervous Acts*. Edited by George S. Rousseau. Basingstoke: Palgrave, 2004, pp. 3–80.
36. R. Jay Wallace. *Responsibility and the Moral Sentiments*. Cambridge: Harvard University Press, 1998.
37. Robert Francis Brissenden. *Virtue in Distress*. London: Harper & Row, 1974.
38. Michael Bell. "The Cult of Sentiment and the Culture of Feeling." In *Representations of Emotions*. Edited by Jürgen Schlaeger and Gesa Stedman. Tübingen: Gunter Narr Verlag, 1999, pp. 87–98.
39. Tobias Meneley. "Zoöphilpsychosis: Why Animals Are What's Wrong with Sentimentality." *Symploke* 15 (2007): 244–67. [CrossRef]
40. Vladimir Jankovic. *Confronting the Climate: British Airs and the Making of Environmental Medicine*. Basingstoke: Palgrave, 2010.
41. Raymond Williams. *Keywords*. Oxford: Oxford University Press, 1983.
42. Online Etymology Dictionary. "Sentiment." Available online: http://www.etymonline.com/index.php?term=sentiment&allowed_in_frame=0 (accessed on 21 October 2014).
43. Markman Ellis. *The Politics of Sensibility*. Cambridge: Cambridge University Press, 1996.
44. Janet Todd. *Sensibility*. York: Methuen, 1986.
45. Mary D. Sheriff. *Moved by Love: Inspired Artists and Deviant Women*. Chicago: University of Chicago Press, 2008.
46. Anik Waldow. "Introduction." *Intellectual History Review* 25 (2015): 255–56. [CrossRef]
47. Stephen Gaukroger. *The Collapse of Mechanism and the Rise of Sensibility*. Oxford: Oxford University Press, 2010.
48. Henry Martyn Lloyd. "The Discourse of Sensibility: The Knowing Body in the Enlightenment." In *The Discourse of Sensibility*. Edited by Henry Martyn Lloyd. London: Springer, 2013, pp. 1–24.
49. Henry Martyn Lloyd. "Sensibilité, Embodied Epistemology, and the French Enlightenment." In *The Discourse of Sensibility*. Edited by Henry Martyn Lloyd. London: Springer, 2013, pp. 171–94.
50. Lawrence M. Principe. "Robert Boyle." *Encyclopaedia Britannica*. Available online: <http://www.britannica.com/EBchecked/topic/76496/Robert-Boyle> (accessed on 21 October 2014).
51. Lisa Downing. "Sensible Qualities and Material Bodies in Descartes and Royle." In *Primary and Secondary Qualities*. Edited by Lawrence Nolan. Oxford: Oxford University Press, 2011, pp. 109–35.
52. Alexander Cook. "Feeling Better: Moral Sense and Sensibility in Enlightenment Thoughts." In *The Discourse of Sensibility*. Edited by Henry Martyn Lloyd. London: Springer, 2013, pp. 85–104.
53. Guido Giglioli. "What Ever Happened to Francis Glisson? Albrecht Haller and the Fate of Eighteenth-Century Irritability." *Science in Context* 21 (2008): 465–93. [CrossRef] [PubMed]
54. Charles T. Wolfe. "Sensibility as Vital Force or as Property of Matter in Mid-Eighteenth-Century Debates." In *The Discourse of Sensibility*. Edited by Henry Martyn Lloyd. London: Springer, 2013, pp. 147–70.
55. Tobias Cheung. "Regulating Agents, Functional Interactions, and Stimulus Reaction Schemes." *Science in Context* 21 (2008): 495–519. [CrossRef] [PubMed]
56. Francesco Paolo De Ceglia. "The Blood, the Worm, the Moon, the Witch: Epilepsy in Georg Ernst Stahl's Pathological Architecture." *Perspectives on Science* 12 (2004): 1–28. [CrossRef]
57. Dominique Boury. "Irritability and Sensibility: Key Concepts in Assessing the Medical Doctrines of Haller and Bordeu." *Science in Context* 21 (2008): 521–35. [CrossRef] [PubMed]
58. Philippe Huneman. "Montpellier Vitalism and the Emergence of Alienism in France (1750–1800)." *Science in Context* 21 (2008): 615–47. [CrossRef] [PubMed]
59. Silvia Waisse, Maria Thereza Cera Galvão do Amaral, and Ana M. Alfonso-Goldfarb. "Roots of French Vitalism: Bordeu and Barthez, between Paris and Montpellier." *História, Ciências, Saúde-Manguinhos* 18 (2011): 625–40. [CrossRef] [PubMed]
60. Peter Hanns Reill. *Vitalizing Nature in the Enlightenment*. Berkeley: University of California Press, 2008.
61. Charles Taylor. *A Secular Age*. Cambridge: Harvard University Press, 2007.
62. Gerda Roelvink. *Building Dignified Worlds: Geographies of Collective Action*. Minneapolis: University of Minnesota Press, 2016.
63. Brad Evans, and Julian Reid. *Resilient Life: The Art of Living Dangerously*. Cambridge: Polity Press, 2014.

