

Article

Neuronal Ideologies:

Catherine Malabou's Explosive Plasticity in Light of the Marxist Psychology of A. R. Luria

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It is thus not only that our brain is socialized, society itself is naturalized in the brain.

— Slavoj Žižek¹

'ANY VISION OF THE BRAIN IS NECESSARILY POLITICAL', Catherine Malabou tersely states in her 2008 book *What Should We Do with Our Brain?*² Our understanding of science, she claims, is refracted through the prism of politics. In Malabou's definition, 'neuronal ideology' refers specifically to the suturing of understandings of neuronal plasticity to definitions of contemporary capitalist society, 'as though neuronal plasticity anchored biologically—and thereby justified—a certain type of political and social organization' (WB 9). Her critique is an attempt to unpick these stitches in order to 'free the freedom' she sees as the true nature of the brain: 'to understand why, given that the brain is plastic, free, we are everywhere "in chains"' (WB 7, 11). Rather than disentangling the identity of the brain from that of society, Malabou is calling for such identifications to take place consciously: 'to place scientific discovery at the service of an emancipatory political understanding' (WB 53).

Malabou distinguishes between flexibility and plasticity as terms for understanding neuronal organization. Although, she argues, 'plasticity is the

dominant concept of the neurosciences’, she claims we are not conscious of this concept’s radical implications for subjectivity and instead ‘substitute for [plasticity] its mistaken cognate, flexibility’. Flexibility, she declares, is ‘plasticity minus its genius’. Where flexibility implies only the capacity to receive form, and therefore neatly maps onto the structures of neo-liberal capitalist society with its ‘part-time jobs, temporary contracts, the demand for absolute mobility and adaptability, the demand for creativity’, plasticity is a more politically radical concept, as it indicates the ability not only to passively adapt to external forces but also to actively create or destroy—to give form, or to annihilate or explode form altogether (WB 4, 12). Our brains are an ‘agency within us’ which can display ‘disobedience to every constituted form, a refusal to submit to a model’ (WB 8, 6). For Malabou, society is not simply composed of docile brains; brains, and consequently society, can be composed actively by us.

But Malabou’s threefold definition of plasticity as a ‘synthetic alliance between the giving and receiving of form and the powerful rupture or annihilation of all form’ does not arise directly from her reading of contemporary neurobiology.³ Plasticity is the uniting theme of all her work, from her doctoral thesis, supervised by Jacques Derrida (later developed into a book on Hegel), through her writings on Heidegger and Freud, to her current preoccupation with the brain. It is, as Alexander Galloway notes, a ‘mannerism that doesn’t go away’.⁴ Her elaboration of this concept is primarily achieved etymologically: the two principal meanings of ‘plastic’ as the giving and receiving of form are available in both English and German, whereas the third (‘explosive’) category is specific to French: *plasticage* literally means ‘bombing’.⁵ Malabou thus approaches the brain already armed with her own theory of plasticity, which, though characterized by mutability, is paradoxically unchanging, universal.

Malabou argues that representations of the brain in the ‘mainstream press’ (she is no more specific) contribute to the condition of the (equally vague) ‘public-at-large’ having a distorted image of the brain’s functioning (WB 3, 2). Yet while she perceives a gap between representation and thing in popular culture, Malabou assumes, with surprising naivety, that science does transparently (if not yet completely) describe the brain’s plasticity; plasticity is the essential nature of the brain, rather than another representation. She self-consciously echoes Jean-Jacques Rousseau’s famous dictum that ‘man is born free, and everywhere is in chains’, implying that brains are free by nature but constrained by society (WB 7). Despite so emphatically stating that ‘every vision of the brain is necessarily political’, she suggests that science has a privileged access to the structures of human consciousness uncontaminated by politics (WB 5). But perhaps Malabou is so keen to naturalize her own political agenda that she forgets to pause to consider the ideological assumptions that might be implicit in the scientific descriptions of the brain she is harnessing.

Malabou is strangely uninterested in examining the contexts in which science is produced. Brains remain cordoned off from society, probed by scientists whose discoveries only encounter ideology when they cross the imagined threshold into the world. This is not to imply that science is a mere social construction with no access to the reality it describes, but rather to

suggest that these descriptions are not themselves immune from the distortions Malabou discerns in popular culture. In a move applauded by Slavoj Žižek, Malabou lumps populist contemporary American neurologist Oliver Sacks together with Soviet neuropsychologist Alexander (A. R.) Luria to attack their ‘romantic’ case histories for being too humanist, for advocating the reintegration of subjects back into society. But what society? Sacks may have been deeply influenced by Luria’s case histories, but his American liberalism is a far cry from the explicitly Marxist ideology that animates Luria’s work.⁶

Aged fifteen at the time of the Russian Revolution of 1917, Luria’s scientific practice was explicitly grounded in Marxist ideology. In the Soviet Union, the link between brain and society was not of the insidious form described by Malabou, but was rather made explicit. Luria, operating under the conditions of ‘really existing socialism’, provides an illuminating counterpoint to that of Malabou, whose particular version of Marxism is immanent in contemporary capitalism. Malabou claims plasticity is characterized by the ability to resist, and she identifies capitalism as the structure to be resisted. But what happens if the existing structure is not capitalism? Despite the stridently Marxist tenor of Malabou’s polemic (and here Žižek goes even further in his vocal advocacy of communism), she is seemingly oblivious or indifferent to the communism inherent in the work of Luria and his Soviet contemporaries, and, by extension, to the ideological assumptions that form the backdrop to contemporary neuroscience.

This essay uses Luria as a counterpoint to Malabou, exploring the implications of his political ideology and the complications wrought by its encounter with the messy realities of scientific practice, as a means of exposing the inadequacies of Malabou’s discussion of the emancipatory potential of neuronal plasticity. Malabou conceives of the place where the neuronal and the mental converge as a ‘blank space that is the meeting point of nature and history’ (WB 72). Territorial analogies pervade *What Should We Do With Our Brain?*, likening the brain to an unmapped continent, and recalling Joseph Conrad’s description in *Heart of Darkness* of central Africa as a ‘white patch’ on a map. The brain is still a blank space ‘of delightful mystery’ in which nature and history, object and subject, individual and environment meet.⁷ But rather than seeking to colonize and subdue this space, perhaps its continued obscurity fundamentally resists all attempts to force it into any kind of ideological straightjacket, Malabou’s included.

Taking Brains Out of Vats: Environment, History, Context

What does man actually know about himself? Is he, indeed, ever able to perceive himself completely, as if laid out in a lighted display case?

— Friedrich Nietzsche⁸

In his foreword to Luria’s celebrated case history *The Man With The Shattered World*, Oliver Sacks describes Luria as ‘the most significant and fertile psychoneurologist of his time’.⁹ Sacks applauds the romantic approach to science taken in this ‘neurological novel’, which he characterizes as ‘deeply

personal [...] centrally concerned with identity' and infused with 'warmth, feeling and moral beauty'.¹⁰ But while Sacks vaguely locates Luria in 'his time', he completely overlooks the specific cultural, social, and political context in which Luria's career unfolded; he acknowledges time but ignores place.

Sacks's treatment of time here recalls a description of the brain in Luria's autobiography, *The Making of a Mind*. Luria exhorts the reader to imagine a brain on a glass table, but explains that the brain's 'uniform and monotonous' appearance belies its 'inconceivable complexity and differentiation'.¹¹ By casually treating any historical moment or period as a single homogeneous lump, Sacks risks eliding differences and contradictions that can exist simultaneously. For Luria, the exercise of imagining a brain on a table is a perverse one, because scientific objects cannot be isolated from their relational contexts: 'the eye of science does not probe a "thing", an event isolated from other things and events. Its real object is to see and understand the way a thing or event relates to other things and events' (MM 120). Appropriately enough, Luria's scientific work did not take place in a vacuum, but was inextricably bound up with the conditions of its production. In failing to mention the context in which Luria was working, a context Luria himself deemed to be of the greatest significance, Sacks distorts Luria's work to fit his own liberal humanist mould. Luria's politics gets lost in translation.

Sacks's disregard for Luria's political convictions may not be surprising given that he is attempting to emphasize his similarities with his Soviet predecessor and appeal to a mainstream Western readership, but Malabou seems similarly indifferent to the ideological underpinnings of science. Malabou mentions that the term 'plasticity' was first used in the discussion of brain functioning by Jerzy Konorski, a neurologist working in Poland and the Soviet Union who was a contemporary of Luria (WB 87). It seems inconsistent with Malabou's status as a self-proclaimed historical materialist aligned with the tradition of Marxism that Konorski is only afforded a cursory glance in a footnote, with no time spent analysing the historical context out of which the theory of plasticity emerged in the neurosciences. While Malabou argues that science is distorted by society, this is conceived of as a one-way street: she is less interested in analysing how science itself is produced by society.

Luria conceived of his own scientific work as irrevocably entangled with the historical situation in which he lived:

My entire generation was infused with the energy of revolutionary change [...] We were swept up in a great historical movement. Our private interests were consumed by the wider social goals of a new, collective society [...] I wanted a psychology that was relevant, that would give some substance to our discussions about building a new life. (MM 7)

Luria's career was defined by politics; it dictated where he worked, what he worked on, and how he interpreted the observations he made.¹² Luria describes his autobiography as an attempt to capture 'the atmosphere of a life, beginning at that unique time that was the start of the Revolution' (MM 38). The 1917 Revolution frames Luria's narrative, which begins by stating that 'this single, momentous event decisively influenced my life' (MM 2). For Luria, the social

and cultural milieu in which his scientific research was carried out was not some neutral backdrop, but a defining feature of his personal and professional development. This interpretation of his own life is consistent with his understanding of the workings of the brain more broadly, which emphasized its materiality and the importance of environmental factors in the development of the human personality, couched in language borrowed from Marx:

the human mind is a product of the brain and in the final analysis, of the effects of the social environment and the class relations and conditions of production underlying it on the brain and on each individual human being.¹³

Indeed, in the very chapter on romantic science to which Sacks refers in his foreword, Luria explicitly situates his work in the context of an attempt to understand psychology in Marxist terms, as a process of ‘ascending to the concrete’ (MM 210).¹⁴

Although *The Man with the Shattered World* is the intimate portrait of an individual and might therefore have affinities with Sacks’s best-selling case histories, the book could be read not only as a continuation of a tradition stretching back to the nineteenth century in which Sacks situates it, but also as part of a Bolshevik tradition in which the mutilated male body was a ‘staple motif’.¹⁵ The similarities of Luria’s case history to Nikolai Ostrovsky’s major Soviet socialist realist novel *How the Steel was Tempered* are striking: both are narratives of men who, after suffering head wounds in battle, attempt to overcome physical and mental infirmity through the sheer force of will, who feel frustrated at their inability to engage usefully with society but eventually find a way to do so through writing the story of their life.¹⁶ Military metaphors abound in *The Man With a Shattered World*, which Luria’s patient Zazetsky wished to entitle *I’ll Fight On!*. Zazetsky’s frustration is not only on a personal level, as Sacks implies; he is also motivated by a deep concern that he can no longer ‘be of some service to my country’ (MSW 35). Eventually it is writing that fulfils this desire, providing him with a ‘link with life’ that is crucially also ‘useful to others’ (MSW 84). All this could be read as consistent with the Bolshevik prioritization of the collective over the individual, of the passionate yearning to work regardless of physical infirmity.¹⁷ This speculative reading points to an alternative reading of Luria of particular relevance to a science itself dedicated to exploring the relationship between environment and individual. The work of contemporary neurobiologists like Sacks and Damasio, whom Malabou summons at the behest of her radical emancipatory polemic, are also not politically neutral, and if these ideological underpinnings were excavated, their vision of plasticity might not fit as comfortably with her agenda as she imagines.

Luria conceives of the brain as an active ‘organ of concrete mental activity’, rather than an entity passively reacting to stimuli. Like Malabou, Luria is critical of metaphors which liken the brain to a centralizing machine. The brain for Luria functions as a ‘complex functional system effected through a combination of concertedly working brain structures’.¹⁸ Functions in the brain may be specialized, but all the parts are linked together in a dynamic and codependent whole. In Malabou’s *What Should We Do With Our Brain?*, the

Soviet system is presented as the antithesis of plasticity; as a centralizing authority more suited to mechanistic understandings of the brain than to models emphasizing the distribution of authority, but here Malabou overlooks the conceptions of the brain such a society nonetheless produced, understandings which continue to influence contemporary neuroscience (WB 53).

American neurologist Michael Cole argues that Luria's conception of the brain stems from a Soviet understanding of the collective functioning of society, as opposed to American models influenced by Frederick Taylor's scientific management, which advocated the specialization of the workforce and division of labour to increase efficiency.¹⁹ But this line of argument should be approached with caution: although apparently inconsistent with Marxist theories, Taylorist models of production were enthusiastically adopted and endorsed in the Soviet Union; there is a gap between Marxist theory and Stalinist praxis.²⁰ The Soviet Union was never a pure embodiment of Marxism, and Luria's philosophy of science was similarly nuanced and multifaceted. For Luria the brain may be capable of 'reflecting the complexities and intricacies of the surrounding world', but there is a veritable hall of mirrors involved when any attempt is made to represent the brain, in which abstract ideology and material reality messily converge.²¹

The Man With a Shattered World ends with a reflection on war in which the voices of Luria and Zazetsky merge in asking why, given the natural riches of the world, 'war, violence, slavery, oppression, murder, executions, poverty, hunger, backbreaking work, or unemployment' continue to exist (MSW 159). Unlike the provincial doctor Astrov in Anton Chekhov's pre-revolutionary play *Uncle Vanya*, who sees that 'the forests are disappearing, the rivers are running dry, the game is exterminated, the climate is spoiled, and the earth becomes poorer and uglier each day', Luria conceives of the earth's resources as plentiful, and bemoans the fact that war has prevented people from enjoying nature's bounty.²² Here, it seems the lofty hopes of Marxist ideology have retreated into the background, confronted as he is with the brutal manifestations of war. As Luria notes in a phrase borrowed from Goethe, 'grey is every theory, but ever green is the tree of life' (MM 57).

Where Luria was attempting to piece back together the fragments of his patients' shattered worlds, Malabou is seeking to create fissures charged with the potential to radically alter society. Resistance, according to Malabou, is life. She claims that 'only in making explosions does life give shape to its own freedom' (WB 73). For Malabou, the brain is characterized by discord rather than harmony—it is a dialectical space pregnant with contradictory possibilities. In order to create, she contends, it is necessary to destroy. Although she states that the explosions she is advocating are not terroristic, she still employs an aggressive and embattled language. But unlike Luria, she is not dealing with individuals who have had bullets lodged in their brains. The exploded brain might serve as a vivid metaphor, but to deal first-hand with the consequences wrought by such injuries is a different matter. Malabou may deride Luria's drive to repair, but her combative position is borne of the frustrations of attempting to resist an apparently indestructible system from the inside.

In Search of Lost Being: Injured Brains, Broken Tools, Shattered Worlds

All traumatic events tend to neutralize their intention and to assume the lack of motivation proper to chance incidents [...] Today, the enemy is hermeneutics.

— Catherine Malabou²³

Luria's psychology was informed by the notion that 'man is not only a product of his environment, he is also an active agent in creating that environment' (MM, p. 24). Although environment exerted a palpable influence on Luria's work, it does not follow that he played no part in shaping that environment. Far from being mere flotsam swept along helplessly by the great tide of history, Luria was more like a surfer riding the waves, occasionally swimming against the current and experimenting in the process—plastic rather than flexible, to borrow Malabou's terms. For Luria, brains and world are engaged in a constant dialogue, they are mutually constituted rather than oppositional. Malabou, on the other hand, moots the possibility that the brain might become completely severed not only from its external environment but from its own internal symbolic identity.

Drawing heavily on Malabou's *Les nouveaux blessés* [*The New Wounded*], Žižek argues that a new form of 'post-traumatic' subjectivity has emerged in the twenty-first century, characterized as detached, 'autistic, indifferent, without affective engagement'. Trauma is a broad category for Žižek, taking in terrorist attacks, war, natural disasters, social exclusion, and brain injuries. The novelty of the present does not reside in the events themselves, he claims, but in their interpretation in a 'post-religious era' as equally meaningless 'intrusions of the real' (D 11). What unites these different forms of trauma, according to Žižek, is that they all result in a radical rupture in subjectivity: 'after the shock, literally a new subject emerges' (D 13).²⁴ The post-traumatic subject emerges as one at 'zero-level', a monstrous 'living-dead' being, form without content, unmoored from meaning, hermeneutics, narrative, and symbolic texture (D 12). As Malabou commented in her lecture 'What Is a Psychic Event?', 'accidents of cerebrality are wounds that just cut the thread of history, place history, the subject's history, outside itself, suspend its force and remain hermeneutically irrecoverable'.²⁵

Žižek is explicitly calling for a resuscitation of communism. He sees the new post-traumatic subject as an embodiment of the Cartesian *cogito*, whose particular mode of being, disconnected as he claims it is from symbolic meaning, might lend itself to the possibility of forming a 'libidinal proletariat' (D 20). Yet Žižek characterizes the post-traumatic subject as 'cold indifferent disengaged', and (literally or metaphorically) damaged (D p. 14). Not only is this an aggressively generalized and reductive characterization of victims of traumatic events (perhaps intended to outrage the imagined politically correct liberal reader Žižek finds so repugnant), but it is also hardly a figure it is easy to envision spearheading an emancipatory movement. The new subjectivity he identifies seems the very embodiment of alienation in marked contrast to

Marx's 'corporeal, living, real, sensuous, objective being full of natural vigour'.²⁶ This is a counterintuitive argument typical of Žižek's work: the process of proletarianization is here predicated on exclusion from the networks of capital, hence disconnection can paradoxically have revolutionary potential. Žižek's portrayal of the post-traumatic 'living-dead' subject recalls George A. Romero's 1978 film *Dawn of the Dead*, in which a group of people are terrorized by once-human zombies in a suburban shopping mall. The living-dead attack the fabric of capitalism not out of any political conviction, but because they are radically disconnected from its cultural meaning. But we are not dealing here with a horror movie, and such a position seems to have little force beyond the confines of the page.

Malabou describes the Alzheimer's patient as the 'nemesis of connectionist society', one who totally fails to integrate, a disconnected node in the network, 'a disaffiliated person; errant, without memory, asocial, without recourse' (WB 51, 52). Like Žižek, she sees this as a potentially disruptive position. Conversely, Michel Serres sees Alzheimer's patients not as the enemy of advanced Western capitalism but as its apotheosis:

In private estates, insulated from barking dogs and the shouts of children, a few rich old people, whose life expectancy is steadily being increased by medical science, vegetate, and shake and get all confused [...] thanks to a medical profession whose efforts are dedicated to keeping useless derelicts alive, at huge expense.²⁷

Serres does not dwell on the subjective experiences of these individuals, but is attacking a society that spends large sums preserving old people with degenerative diseases while extreme poverty and deprivation persists beyond the high security gates containing the privileged few. Indeed, his criticism of the treatment of the elderly in the West agrees with Žižek's description of 'abstract violence', defined as an indirect form of brutality committed by proxy (D 10). Although Serres's provocative statement seems deeply reactionary, it does suggest, that capitalism is defined precisely by its ability to integrate and profit from those whose particular mode of existence may seem antithetical to Western understandings of subjectivity. Plasticity might not be as incompatible with contemporary capitalism as Malabou claims.

Žižek's new detached subject is one 'who is no longer "in-the-world" in the Heideggerian sense of engaged embodied existence' (D 15). Yet Luria's *The Man with a Shattered World* suggests an alternative image. For while Zazetsky may conceive of himself as a 'newborn creature' after his injury, this new identity does not exhibit any of the detachment Žižek sees as characteristic of the post-traumatic subject, but conversely demonstrates a fiery determination to fight 'with the tenacity of the damned to recover the use of his damaged brain' (MSW 9, xx). Furthermore, although the subject's world may be shattered, it is still experienced acutely with precisely the 'being-in-the-world' essential to Heidegger's *Dasein*.²⁸ Indeed, it might be argued that it is only when the brain shatters that the subject becomes aware of its existence. Luria's *The Working Brain* is based on evidence gathered from examining damaged brains; paradoxically, it is only when the brain ceases to work that its workings are

revealed. As Heidegger describes in the oft-repeated example of the broken hammer from *Being and Time*, it is precisely in moments when objects malfunction that their existence is announced.²⁹ A conventional autobiography of a ‘normal’ person would not concern itself with the minutiae that Zazetsky discusses—going to the toilet, eating, drinking, walking, talking—as such things would be merely ready-to-hand, routine, habitual, and thus effectively invisible.

Žižek conceives of the post-traumatic subject as a being reduced to its most essential level: ‘nothing but a form of nothing’. He contends that the post-traumatic subject is ‘living proof’ that the subject cannot be equated with narratives of itself, that the post-traumatic experience is radically inaccessible, utterly incommensurable with the dominant political structure (D 27, 29). Here again Luria’s case history directly contradicts this assertion: for Zazetsky, telling himself stories about himself is his only ‘link with life’—he derives his being precisely from narrative (MSW 84). This ability and drive to narrate may not be characteristic of all so-called post-traumatic subjects, but the impulse of neurologists like Luria and Sacks to write on behalf of their patients demonstrates a belief that something of these conditions can be communicated, however partial and value-laden the result might be. Contemporary capitalism might be characterized as a network society in which power is distributed across numerous nodes, but countering this model by advocating atomization, separation and extrication is surely not a viable political strategy. The process of healing need not equate to a forced reintegration into the existing status quo, but through the process of forging new connections, as the synapses are capable of doing, new languages and subjectivities may emerge that challenge the dominant political structure, creating alternative collective networks rather than leaving individuals stranded in hopeless isolation.

Conclusion

Plasticity designates the form of a world with no exteriority.

— Catherine Malabou³⁰

Malabou states that the question posed in her book’s title—*What Should We do with Our Brain?*—is a ‘question for everyone’ (WB 12). The implication is that if everyone resisted neuronal ideology, enacting the plasticity of the brain on a large enough scale, it would eventually result in the emergence of a plastic society in the place of the current flexible capitalist model. But if that were the case, what then would brains have to resist or disobey? Would this not just supplant one form of ideology with another? And what exactly would a plastic society look like? Malabou’s argument, while claiming to advocate emancipation, can only function negatively; plasticity, it seems, relies on the existence of a form to resist, it is not itself the shape of a viable alternative political structure.

Furthermore, if Malabou’s plastic explosions are always local rather than global, individual rather than collective, surely this conforms precisely to the very image of contemporary capitalism she is seeking to undermine. As Luc Boltanski and Eve Chiapello observe, in a work frequently cited by Malabou,

capitalism's success resides in its ability to subsume forms of resistance: 'it is probably capitalism's amazing ability to survive by means of endogenizing some of the criticisms it faces, that has helped in recent times to disarm the forces of anti-capitalism, giving way to a triumphant version of capitalism.'³¹ Despite all efforts to the contrary, Malabou is at risk of falling into the trap, infamously articulated by Francis Fukuyama in his neoconservative tract *The End of History and the Last Man*, of treating capitalism as the end of history, succumbing to the well-worn phrase 'it is easier to imagine the end of the world than the end of capitalism'.³² In *What Should We Do with Our Brain?*, capitalism appears as a system with no outside, with the possibility of developing small pockets of dissent in the cracks and fissures which not only pose little threat to the overarching structure but might even provide additional nourishment.

As Galloway notes, despite her insistence to the contrary, Malabou's understanding of plasticity is itself an ideology of the mode of production, which, with its emphasis on 'absolute exchangeability', echoes Marx's attacks on capitalism—and, like capitalism, has no outside. Malabou's plasticity, Galloway argues, is a 'voracious monster' capable of gobbling up anything in its path in a manner akin not only to the Hegelian dialectic but also to the logic of the neo-liberal market. Galloway asks, 'when perpetual change is mandated by the mode of production are we not obligated to look beyond such perpetual darkness?'.³³

Although her insistence on the potential explosivity of plasticity might superficially differentiate it from flexibility, this annihilation of form results in profound alienation. Amid the tumultuous upheavals that followed the October Revolution, Luria attempted to trace the 'changes in the organization of thinking' that had come in its wake (MM 24), but the hope was ultimately to found a new mode of being that was not characterized by constant flux—to create a new subjectivity rather than to excavate some essential structure by scraping away a layer of dirt.

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Notes

1. Slavoj Žižek, *The Parallax View* (Cambridge, MA: MIT Press, 2006), p. 212.
2. Catherine Malabou, *What Should We Do with Our Brain?*, trans. by Sebastian Rand (New York: Fordham University Press, 2008), p. 52 (hereafter *WB*). Further references to this work are given after quotations in the text.
3. Catherine Malabou, *Plasticity at the Dusk of Writing: Dialectic, Destruction, Deconstruction*, trans. by Caroline Shread (New York: Columbia University Press, 2010), p. 23.
4. Alexander R. Galloway, 'Catherine Malabou, or The Commerce of Being' (25 October 2010) <<http://cultureandcommunication.org/galloway/teaching.html>> [accessed 4 January 2011].
5. For her detailed etymological discussion of 'plasticity', see Catherine Malabou, *The Future of Hegel: Plasticity, Temporality and Dialectic*, trans. by Lisabeth During (London: Routledge, 2005), p. 8.
6. Slavoj Žižek, 'Descartes and the Post-Traumatic Subject', *Filozofski vestnik*, 29.2 (2008), 9–29 (p. 15), hereafter *D*. Further references to this article are given after quotations in the text.

7. Joseph Conrad, *Heart of Darkness* (London: Dover, 1990), p. 10, p. 11.
8. Friedrich Nietzsche, 'On Truth and Lies in a Non-Moral Sense', in *Philosophy and Truth: Selections from Nietzsche's Notebooks of the Early 1870s*, ed. and trans. by Daniel Breazeale (Atlantic Highlands: Humanities Press, 1979), p. 80.
9. Oliver Sacks, 'Foreword', in A. R. Luria, *The Man with a Shattered World: The History of a Brain Wound*, trans. by Lunn Solotaroff (Cambridge, MA: Harvard University Press, 1987), pp. vii–xviii (p. viii) (hereafter MSW). Further references to this work are given after quotations in the text.
10. Sacks, p. x, p. xvi.
11. A. R. Luria, *The Making of a Mind: A Personal Account of Soviet Psychology*, trans. by Michael Cole (Cambridge, MA: Harvard University Press, 1979), p. 24 (hereafter MM). Further references to this work are given after quotations in the text. An almost identical description occurs in MSW (p. 22).
12. On the institutional and publishing constraints Luria experienced in the USSR, see Michael Cole's epilogue to *The Making of a Mind*, and Martin A. Miller, *Freud and the Bolsheviks: Psychoanalysis in Imperial Russia and the Soviet Union* (New Haven: Yale University Press, 1998).
13. Quoted in Miller, p. 191.
14. In the same paragraph Luria also cites the influence of Lenin.
15. Lilya Kaganovsky, 'How the Soviet Man was (Un)Made', *Slavic Review*, 63.3 (Autumn 2004), 577–96 (p. 582). See also Katrina Clark, *The Soviet Novel: History as Ritual* (Bloomington: Indiana University Press, 2000).
16. Nikolai Ostrovsky, *How the Steel was Tempered*, trans. by R. Prokovieva (London: Central, 1973). Pavel Korchagin, the novel's protagonist, is wounded in the civil war of 1918–21, but according to Kaganovsky, the novel was widely read by soldiers fighting in the Second World War, the war in which Luria's patient Zazetsky was injured. By 1950, it had sold six million copies. A film based on the novel was also released in 1942.
17. See Catherine Merridale, 'The Collective Mind: Trauma and Shell-Shock in Twentieth Century Russia', *Journal of Contemporary History*, 35.1 (January 2000), 39–55.
18. A. R. Luria, *The Working Brain: An Introduction to Neuropsychology*, trans. by Basil Haigh (London: Penguin, 1973), p. 16, p. 38.
19. Michael Cole, Karl Levitin, and Alexander Luria, *The Autobiography of Alexander Luria: A Dialogue with the Making of Mind* (Mahwah: Lawrence Erlbaum, 2005) [on DVD].
20. On the ambivalent status of Taylorism in the Soviet Union, see Zenovia A. Sochor, 'Soviet Taylorism Revisited', *Soviet Studies*, 33.2 (April 1981), 246–64, and Don van Atta, 'Why is there no Taylorism in the Soviet Union?', *Comparative Politics*, 18.3 (April 1986), 327–37.
21. Luria, *Working Brain*, p. 13.
22. Anton Chekhov, *Uncle Vanya*, in *Five Plays*, trans. by Ronald Hingley (Oxford: Oxford University Press, 1998), p. 67.
23. Catherine Malabou, *Les nouveaux blessés de Freud à la neurologie, penser les traumatismes contemporains* (Paris: Bayard, 2007), p. 258.
24. Žižek claims that 'countless examples' (*D 10*) attest to the particular form of subjectivity he is describing, although he neglects to give many in his own text.
25. Catherine Malabou, 'What is a Psychic Event? Freud and Contemporary Neurobiology on Trauma', lecture delivered at Kingston University, 26 October 2010.
26. Karl Marx, 'Critique of Hegel's Philosophy in General', in *Economic and Philosophic Manuscripts of 1844*, <www.marxists.org/archive/marx/works/1844/manuscripts/hegel.htm> [accessed 4 January 2011].
27. Michel Serres, *Angels: A Modern Myth*, trans. by Francis Cowper (New York: Flammarion, 1993), p. 264.
28. 'Dasein is in such a way as to be something which understands something like Being [...] when Dasein understands either itself or something like Being in general, it does so in terms of the world': Martin Heidegger, *Being and Time*, trans. by John Macquarrie and Edward Robinson (Oxford: Basil Blackwell, 1980), p. 43.

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29. Heidegger, p. 83. Following a Heideggerian logic, working brains could be understood as 'ready-to-hand', smoothly integrated into the environment, but when brains are damaged they can become 'present-at-hand'.
 30. Malabou, *Plasticity*, p. 67.
 31. Luc Boltanski and Eve Chiapello, *The New Spirit of Capitalism*, trans. by Gregory Elliott (London: Verso, 2005), p. 364.
 32. Francis Fukuyama, *The End of History and The Last Man* (New York: Free Press, 1992). The origin of this phrase is contested. Frederic Jameson uses it in 'Future City', *New Left Review*, 21 (May–June 2003), 65–79, and *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (London: Verso, 2005), p. 199. It also appears in Mark Fisher, *Capitalist Realism: Is There Any Alternative?* (Ropley: Zero Books, 2009), p. 3; Alexander R. Galloway and Eugene Thacker, *The Exploit: A Theory of Networks* (Minneapolis; University of Minnesota Press, 2007), p. 133.
 33. Galloway, 'Catherine Malabou'.

Works Cited

- Boltanski, Luc, and Eve Chiapello, *The New Spirit of Capitalism*, trans. by Gregory Elliott (London: Verso, 2005)
- Chekhov, Anton, *Uncle Vanya*, in *Five Plays*, trans. by Ronald Hingley (Oxford: Oxford University Press, 1998)
- Clark, Katrina, *The Soviet Novel: History as Ritual* (Bloomington: Indiana University Press, 2000)
- Cole, Michael, Karl Levitin, and Alexander Luria, *The Autobiography of Alexander Luria: A Dialogue with the Making of Mind* (Mahwah: Lawrence Erlbaum, 2005) [on DVD]
- Conrad, Joseph, *Heart of Darkness* (London: Dover, 1990)
- Fisher, Mark, *Capitalist Realism: Is There Any Alternative?* (Ropley: Zero Books, 2009)
- Fukuyama, Francis, *The End of History and The Last Man* (New York: Free Press, 1992).
- Galloway, Alexander R., 'Catherine Malabou, or The Commerce of Being' (25 October 2010)
<<http://cultureandcommunication.org/galloway/teaching.html>>
[accessed 4 January 2011]
- Galloway, Alexander R., and Eugene Thacker, *The Exploit: A Theory of Networks* (Minneapolis; University of Minnesota Press, 2007)
- Heidegger, Martin, *Being and Time*, trans. by John Macquarrie and Edward Robinson (Oxford: Basil Blackwell, 1980)
- Jameson, Frederic, 'Future City', *New Left Review*, 21 (May–June 2003), 65–79
———, *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (London: Verso, 2005)
- Kaganovsky, Lilya, 'How the Soviet Man was (Un)Made', *Slavic Review*, 63.3 (Autumn 2004), 577–96
- Luria, A. R., *The Working Brain: An Introduction to Neuropsychology*, trans. by Basil Haigh (London: Penguin, 1973)
———, *The Making of a Mind: A Personal Account of Soviet Psychology*, trans. by Michael Cole (Cambridge, MA: Harvard University Press, 1979)

-
- , *The Man with a Shattered World: The History of a Brain Wound*, trans. by Lunn Solotaroff (Cambridge, MA: Harvard University Press, 1987)
- Malabou, Catherine, *The Future of Hegel: Plasticity, Temporality and Dialectic*, trans. by Lisabeth During (London: Routledge, 2005)
- , *Les nouveaux blessés de Freud à la neurologie, penser les traumatismes contemporains* (Paris: Bayard, 2007)
- , *What Should We Do with Our Brain?*, trans. by Sebastian Rand (New York: Fordham University Press, 2008),
- , *Plasticity at the Dusk of Writing: Dialectic, Destruction, Deconstruction*, trans. by Caroline Shread (New York: Columbia University Press, 2010)
- , 'What is a Psychic Event? Freud and Contemporary Neurobiology on Trauma', lecture delivered at Kingston University, 26 October 2010
- Marx, Karl, 'Critique of Hegel's Philosophy in General', in *Economic and Philosophic Manuscripts of 1844*
<www.marxists.org/archive/marx/works/1844/manuscripts/hegel.htm>
[accessed 4 January 2011]
- Merridale, Catherine, 'The Collective Mind: Trauma and Shell-Shock in Twentieth Century Russia', *Journal of Contemporary History*, 35.1 (January 2000)
- Miller, Martin A., *Freud and the Bolsheviks: Psychoanalysis in Imperial Russia and the Soviet Union* (New Haven: Yale University Press, 1998)
- Nietzsche, Friedrich, 'On Truth and Lies in a Non-Moral Sense', in *Philosophy and Truth: Selections from Nietzsche's Notebooks of the Early 1870s*, ed. and trans. by Daniel Breazeale (Atlantic Highlands: Humanities Press, 1979)
- Ostrovsky, Nikolai, *How the Steel was Tempered*, trans. by R. Prokovieva (London: Central, 1973)
- Sacks, Oliver, 'Foreword', in Luria, *The Man with a Shattered World*, pp. vii–xviii
- Serres, Michel, *Angels: A Modern Myth*, trans. by Francis Cowper (New York: Flammarion, 1993)
- Sochor, Zenovia A., 'Soviet Taylorism Revisited', *Soviet Studies*, 33.2 (April 1981), 246–64
- Atta, Don van, 'Why is there no Taylorism in the Soviet Union?', *Comparative Politics*, 18.3 (April 1986), 327–37
- Žižek, Slavoj, *The Parallax View* (Cambridge, MA: MIT Press, 2006)
- , 'Descartes and the Post-Traumatic Subject', *Filozofski vestnik*, 29.2 (2008), 9–29