

Özgün Makale

Beyond a Pathological Outlook? The Plastic Reality of Bodily *Phantoms* from Merleau-Ponty to Malabou*

Patolojik Bir Bakışın Ötesinde?

Merleau-Ponty'den Malabou'ya Bedensel
Hayaletlerin Plastik Gerçekliği

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Abstract

This paper explores phantom pain sensations. Key questions include why we sense something missing and how to interpret this experience. I discuss Merleau-Ponty's negative perspective on phantom manifestations and Malabou's concept of plasticity, which offers a more neutral view of bodily transformation. Malabou argues that somatic responses to lesions shouldn't always be seen as pathological, unlike Merleau-Ponty. However, Malabou's approach may still use similar language, especially concerning severe conditions like Alzheimer's, where normalcy can't be fully restored. This leads to a compromised aesthetic experience and limits engagement with the world, indicating a restriction in the understanding of successful aesthetic interaction.

Keywords: Phantom Limb Syndrome, Phantom Limb Pain, Plasticity, Habit, Phenomenology, Aesthetics, Neurobiology.

Öz

Bu makale fantom ağrı hissini araştırmaktadır. Makalenin gündeme getirdiği sorular arasında fantom ağrı hissine neden olan bir şeylerin eksik olduğunu hissediyor oluşumuz ve bu deneyimi nasıl yorumlayacağımız yer almaktadır. Bu makalede, Merleau-Ponty'nin fantom belirtileri hakkındaki olumsuz tutumunu ve Malabou'nun bedensel dönüşüme daha tarafsız bir bakış açısı sunan plastisite kavramını tartışıyorum. Malabou, Merleau-Ponty'nin aksine, lezyonlara verilen somatik tepkilerin her zaman patolojik olarak görülmemesi gerektiğini savunuyor. Bununla birlikte, Malabou'nun yaklaşımı, özellikle normalliğin tam olarak geri getirilemediği Alzheimer gibi ağır koşullar söz konusu olduğunda, yine de benzer bir dil kullanabilir. Bu durum, estetik deneyimin tehlikeye girmesine ve dünyayla etkileşimin sınırlanmasına yol açarak başarılı estetik etkileşim anlayışında bir kısıtlamaya işaret eder.

Anahtar Kelimeler: Fantom Uzuv Sendromu, Fantom Uzuv ağrısı, Plastisite, Davranış, Fenomenoloji, Estetik, Nörobiyoloji.

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1. Preliminary Remarks

What should we call a *phantom* from a phenomenological standpoint? Is it the curious reality of what no longer exists or the “fragments” of things yet to be (Merleau-Ponty, 2002, p.336)? Furthermore, how do we account for its ambiguous, uncanny, or “ambivalent presence” (Merleau-Ponty, 2002, 94; see Sobchack 2010, p.51-52) that can harm the subject’s life preservation and general well-being? Indeed, the concept of *phantom* is more complex than it may seem. In this paper, I aim to answer these questions. I will do that by analysing the multifaceted world of phantom limb syndrome and our brain’s plasticity that reproduce these bizarre body images and schematisms, as these topics are endorsed in phenomenology and contemporary neurobiological debates. To start, I will concentrate on

i) the notion of the *phantom* in Maurice Merleau-Ponty’s *Phenomenology of Perception* and *The Sensible World and the World of Expression*.

My primary focus will be on the pathological implications of cases of phantom limb syndrome and phantom limb pain (PLS, PLP) and their impact on an individual’s existence. I will primarily investigate the significance of these conditions as explained in the chapters *The Body of Object and Mechanist Physiology* and *The Spatiality of One’s Own Body and Motility of the Phenomenology of Perception; and the Tenth the Eleventh Lecture, and the Working Notes of The Sensible World and the World of Expression*. Initially, I will examine the role of the phantom in this context, and subsequently, I will then transition to

ii) Catherine Malabou’s reading of Merleau-Ponty’s interpretation of it.

Indeed, Malabou attributed significant importance to *plasticity* in describing body scheme transformations. By body scheme, I here generally refer to the internal organisation that the body as a harmonious set of practice attributes to the unitary sum of its movements, something deeply related, as I here want to prove, to the *phantasmatic* transition Merleau-Ponty’s subject may face when her “habitual body” (Merleau-Ponty, 2002, p.95) recedes into a more natural and primitive dimension of anonymous existence². As we shall see, according to Malabou, the capacity to undergo critical modifications can also lead to what she appeals to as “destruction” (Malabou, 2009b, p. 29). The destruction here at stake is a dramatic feature opening entirely new domains of human unedited existence and “unmasking [...] previously silent connections or the sprouting of new” ones the subject could not be capable of (Flor, 2002, p.183). Given the anthropological hybrid and *artificial* essence Malabou defends by commenting on texts of modern neurobiology (see Jaquet 2001, pp. 189-192); she also embraces a slightly neutral account of these alterations and what physical traumas may lead to. However, Merleau-Ponty seems more sceptical about that – although he partly supports a plastic interpretation of our body schematism – since the dialectical modification from the possibility of the habit body to the restrictions of what he calls the body of the *moment* does not allow him to catch this *plastic* feature and eventual body transformation positively because it diametrically corresponds to the loss of some aesthetic capabilities of sensible world rendering.

² The habit theme is vital in the phenomenological debate, explicitly starting with Husserl’s fourth Cartesian Meditation onwards (1977) but also earlier, in a less manifest way. In Merleau-Ponty’s account, the habit corresponds to the historical or genetic substrate formed over time and is based on the experiences the body gradually treasures. This layering allows the body to develop increasingly refined skills and abilities, taking advantage of the aesthetic regularity that its surroundings provide. Habit is phenomenologically opposed to the former naturalness of the body, which rather represents the liminal degree of the historicity of the latter, that is, that on which new habituations can successfully settle and evolve. As I will show, the naturalness of the body, for Merleau-Ponty, also represents the figure of its conceivable pathological regression in the progressive simplification of the volume of its praxis.

To demonstrate a shift in perspective, I aim to dignify this change and embrace a non-pathological view of body schema subversion and phantom manifestation following Malabou. At the same time, I will address some remaining controversy about

iii) *the destructive plasticity* theoretical framework finally endorsed by Malabou in her latest works.

Let us now consider some definitions of *phantoms*.

2. Phantom Limb Sensation and Phantom Limb Pain

As we can see by reading the *Phenomenology of Perception*, Merleau-Ponty extensively utilises the term phantom to elucidate the phenomenon commonly known as *phantom limb sensation or phantom limb pain* in scientific literature. This condition entails the perception of a nonexistent limb, typically accompanied by discomfort and potential hurt following an amputation (see Hill, 1999, pp. 125-131). The phantom manifests when an individual continues to sense the presence of the amputated limb as if it were still an integral part of her body (see Weeks and Tsao, 2010, pp.463). In reality, the phantom sensation is highly expected since it affects “up to 80% of all patients after limb amputation” (Erlenwein et al., 2021, p. 2). This vague impression is generally still perceived in the stump, i.e., in the body residual part and extremity where the original limb used to be located before its subtraction.

Merleau-Ponty defines the “phantom limb” sensation as “the presence of part of the representation of the body which should not be given, since the corresponding limb is not there” (Merleau-Ponty, 2002, p. 93). This presence-absence is something that still counts as an *image* in the unit of bodily schematism without actually being present or aesthetically compelling³. Or, as he states in *The Sensible World and the World of Expression*, the “phantom limb” represents the actual “missing limb” nevertheless reckoning in the body “schema, even though objectively is removed” (Merleau-Ponty, 2020, p. 96), as he claims by reading Head on this point. According to Merleau-Ponty, in such instances, individuals rely on and feel a part of their body that is no longer present physically and thus fail to perform some habitual tasks, i.e., things they efficiently used to do before. Many contemporary theories about the emergence of this phenomenon are now likely to psychologically and physiologically explain where this sensation originates and hopefully ceases, something Merleau-Ponty still needed to fully understand (see Merleau-Ponty, 2002, p. 89; see Méttral, 2008, p. 19-20)⁴.

Despite Merleau-Ponty’s partial yet reasonable ignorance of this feature, what is relevant to my point here is that, in *Phenomenology of Perception*, this cutting-edge argument is pertinent to prove for Merleau-Ponty the existential and, thus, the *temporal* relation of the subject and her *body schematism* – the latter here intended as a “system of motor capacities (...) built up thanks to experienced (...) sensations” (Gallagher and Meltzoff, 1996, p. 212-214) – entertain with her surrounding and concrete fields of practice. Indeed, as we will see in the following section, the body part deficit the subject deals with should not be interpreted, for Merleau-Ponty, as an injury that affects her *objective* body, i.e., a mere abstract, intellectual and external representation of

³ In the mainstream contemporary neurobiological debate, phantom pain is said to correspond to the “maladaptive reorganisation of the thalamus and body representation in somatosensory and motor cortices”, causing the drastic and unexpected “reorganisation” of former “body maps” (Giumarra, Moseley, 2011, p.525).

⁴ Merleau-Ponty acknowledges that the phantom sensation only occurs when a trauma, be it an *impromptu* “accident or operation”, previously did and that this phenomenon may *shrink* “over time”, according to the course of an “expressive function that admits of degrees” (Merleau-Ponty, 2020, p.96) of progressive bodily reabsorption. Indeed, *phantom* does not manifest in cases where “the limb was lost gradually” (Merleau-Ponty, 2020, p.89). As I will discuss in more detail below, time plays a crucial role in understanding the emergence of this phenomenon and its eventual disappearance.

its operativity (see Merleau-Ponty, 2002, p. 89). Here, “memory”, “recollection”, judgment, or forgetfulness serve no purpose in comprehending the phantom phenomenon, for they cannot account for a valuable “middle term between presence and absence” (Merleau-Ponty, 2002, p. 93-96; see Katz, 1993, p. 161; Sobchack, 2010, p. 58), i.e., its mysterious *ambiguity* that makes it precisely what it is. Conversely, the subsistence of this awkward sentiment of the presence of something missing would testify for Merleau-Ponty to a more profound *being-in-the-world* relation and a bodily and spatiotemporal belonging that the activity of thought fails to explain (see Deprez, 2016, p.36).

Indeed, the phantom Merleau-Ponty speaks of counts as the corporal survival of the *body's past*, i.e., a particular and affective or emotional endurance still influencing its present and future deeds despite the unfortunate and *present* happening of its physical mutilation and current *nonexistence*, in a certain sense (see Flor, 2002, p.182; Katz, 1993, p.157)⁵. Indeed, the “phantom is part of the body schema”, which does not correspond to a related *body image*, the latter meaning the representational account of this *absence* (Gallagher and Meltzoff, 1996, p.218). So, curiously enough, the subject perceives this phantasmatic presence as accurate and functional as other body parts remaining operative for her needs, even if she consciously knows the absent body part she feels is no longer there. This may, unfortunately, lead to a certain kind of “repression” (Merleau-Ponty, 2002, p.95) or a peculiar and practical strategy of “defence against loss” (Hill, 1999, p.134-137). However, through time passing, this subject may develop new action patterns and form new schematisms based on the different and often compromised body configuration because the latter is always looking for new possible balances and convenient accommodations, as the illustration of the “blind man’s stick” can also corroborate (Merleau-Ponty, 2002, p.164-165). For Merleau-Ponty, this should prove the fundamental, however deficient, *plasticity* of our body schema and its innate power of adaptation and consequent readaptation in a given vital *milieu* (see Gallagher and Meltzoff, 1996, 213).

In a recent work, Catherine Malabou discussed Merleau-Ponty’s *Phenomenology of Perception* and highlighted a particular point (Malabou, 2022). Here, she contends that our body’s capacity to adapt and regenerate, along with the ability of individuals’ bodies to acclimate when normalcy is disrupted, should not be perceived as a pathological reaction to injury but rather as a continual process of temporal *healing* where the following situation of body schematism is not qualitatively inferior to the previous one. As we will see, Merleau-Ponty sometimes falls prey to his pathological and dichotomic vocabulary (see Halligan, 2007, p.252), and he inevitably does so according to the *first-person* and deeply *phenomenological* standpoint he endorses when commenting on these cases. This feature prevents him from grasping the potentiality of *phantoms* in their totality, according to Malabou⁶. As a link with the body’s affective past, Malabou wants to prove that *phantoms* and phantasmatic ways of living can also guide the subject in the future, thanks to their projective and plastic power of construction of uncut schematism and fields of practice⁷. We will see what this means and what the consequences of this statement can lead to.

⁵ It is possible to admit that this emotional character can be indirectly associated with mourning, i.e., the expression of a feeling of lack for something that is gone but whose presence is still claimed. Indeed, such a realisation cannot fail to provoke sadness and inadequacy in the hearts of those who experience it.

⁶ While Merleau-Ponty’s work merits recognition for its effort to elucidate the temporal evolution of his definitions of body schema and being-in-the-world, his analysis may be too heavily rooted in disputes with contemporary opponents, i.e., neo-idealist, neo-Kantian and realist philosophers operating in France at that time. This focus has perhaps prevented him from capturing this phenomenon and its dynamism with due poignancy. For her part, Malabou, a philosopher no longer committed to carving out the specificity of her (no longer expressly phenomenological) field of inquiry, is more careful in capturing the transformative character of *plasticity*. Indeed, she goes further along the path of naturalising bodily schematism. Her approach is entirely free of potential *conscientialist* or idealistic residues, of which Merleau-Ponty’s analysis, on the other hand, remained a prisoner at times (hence, perhaps, the terminological dichotomy or *dualism* to which I shall turn my attention).

⁷ In a sense, the bodily schematism to which Malabou refers does not contemplate reference to a primitive naturalness, as in the case of Merleau-Ponty, but only to the sedimentation or continuous restructuring of specific (fields of) practices. I will show that even in her case, however, the modifications the body undergoes are not exempt from loss of meaning.

3. The Habit Body and the Body at *This Moment*.

Indeed, for Merleau-Ponty, body operativity and acquaintance amount to “two distinct layers”, namely a “habit body” and what he calls the “body at this moment,” the latter representing a natural and primitive bodily dimension subtracted by any temporal influence and eventual enrichment which could also be the result of significant trauma (Merleau-Ponty, 2002, p. 95). The concept of the body of the *moment* or natural body concerns the fundamental physical structure and characteristics that define an individual’s identity. In contrast, the habit body is a malleable stratum shaped by learned behaviours and cultural influences that perpetually changes and evolves for the better (see Ciavatta, 2017, p.159-90). While the habit body is also influenced by external factors, the natural body remains a constant and reliable source of selfhood. This dual nature allows us, for Merleau-Ponty, to discern between the body’s normal and *historical* functioning and its pathological and limited range of behaviour. However, how exactly does habit form in the body, and what is its true nature? Conversely, how can habit be deconstructed, leading the individual to revert to a world without a past?

According to Merleau-Ponty, body parts such as arms or legs in their performance may produce, aggregate and store habit, i.e., significant practical proficiencies attained over time and boundless training, as the piano player illustration proves, for instance, in *The Structure of Behaviour* (Merleau-Ponty 1967, 85). This acquired competence does not have an intellectual status, nor is it graspable by *objectively* or analytically comprehending the deployment of its numerous composing procedures⁸. Conversely, habit is fashioned and maintained by what Merleau-Ponty calls via Grünbaum “praktognosia”, i.e., a synthetic bodily involvement capable of treasuring the deep “temporal structure” of our experience (Merleau-Ponty, 2002, p.162) and thus to progressively attune the body to what the surrounding world asks to do with increasing ability⁹. This is how, for Merleau-Ponty, habit is moulded and preserved in the body’s physical capacity. As a matter of temporal institution and endless revision, the habit body of the subject is the corporal breadth constantly immersed in an atmosphere of generality or multifarious application context. “Habit”, as Merleau-Ponty points out, precisely “expresses our power of dilating our being-in-the-world”, i.e., of getting more and more used to a given practical situation and its delivery, as a factor of constant “rearrangement and renewal” of former body schematisms by new and supervenient ones (Merleau-Ponty, 2002, p.164, 166; see Merleau-Ponty, 2020, p.164; Kristensen, 2006, p.132). However, why is habit formation important to my issue? What is the relation between the habit body and the body of the *moment*? When do they conflate, and what role does the *phantom* showing play in this dynamic?

As anticipated, whereas the habit body is the body of the healthy individual, according to Merleau-Ponty, the body of the “moment” is the one which has tragically lost “the melodic character” or the “melodic flow” of the *ensemble* of its actions and its comprehensive scope, as it becomes clear in commenting on the famous patient Schneider’s case. The latter is crucial because it depicts the case of one individual – patient Schneider – who can no longer appreciate the temporal and *dimensional* structure of his habitual being-in-the-world (Merleau-Ponty, 2002, p.120, 133). The body of the moment is the body deprived of temporality, whose actions have become quite elementary and stereotypical. It represents a starting point and a level to which the subject

⁸ It is as if the body responds with *imprinting* to the universe of aesthetics and practices to which it is required to conform, consistently responding to the question posed.

⁹ A similar understanding may be found in Victor Turner’s works on behaviours and their eventual transformations. I thank the anonymous reviewer for the brilliant suggestion.

may fall back following a traumatic event. The body of the moment is a practical field devoid of depth, where active possibilities are drastically shrunken both on a qualitative and a quantitative side.

4. *Phantom Appearance*

Following Merleau-Ponty, the *phantom* appears explicitly in this context. The phantom justifies this significant shrinking, i.e., when the body of the moment replaces the habit body, and pathological behaviour replaces the healthy one in the “impoverished commerce” the subject detains with her world (Sobchack, 2010, p.60). This occurs when a bodily and *historical* portion of the subject life is severely compromised¹⁰. This deficit carries a *cesura* where the historical feature collapses, and the natural, *momentary* body enters the scene to make up for the shortcomings that this existential fracture produces. Here, being-in-the-world remains in operation and seeks to reorganise itself to regain historical volume but eventually fails¹¹. As Merleau-Ponty says, to have the “phantom” sensation of an arm, for instance, is to “remain open to all the actions of which the arm alone is capable”, as told before about the piano player (Merleau-Ponty, 2002, p.94). It is to retain “the practical field which one enjoyed before mutilation”, where habits were bodily conserved (Merleau-Ponty, 2002, p.94).

Here, the phantom incarnates the ambiguous presence of “habitual intentions that I can no longer, if I have lost a limb, be effectively drawn into it” but still somehow feel like I am capable of (Merleau-Ponty, 2002, p.95). When this happens, the subject tries to restore the temporal structure of her experience to confer a habitual arrangement to her nature. However, the bodily and affective past she counted on, and which was present in her arms or legs, for instance, is forever gone. Here, Merleau-Ponty says, “[i]mpersonal time continues its course, but personal time”, the historical one, the one of authentic temporality, is dramatically “arrested” (Merleau-Ponty, 2002, p.96).

The subject that faces this *phantasmatic* sensation finds herself in an equivocal situation of “repression”, where “momentary worlds”, i.e., dimensions dispossessed of any temporal and habitual evolution, indeed become the “formative” but always incomplete “element of my whole life”, the one supposed to generate new structures of accountable behaviour (Merleau-Ponty, 2002, p.97). Here, the *phantom* sensation is what keeps haunting the subject’s body present, like “a former present which cannot recede into the past” (Merleau-Ponty, 2002, p.99). It counts as something the body has not yet decided to do without, for its linking force is still curiously being felt. Merleau-Ponty can explain this because the bodily “intentional threads” are keeping the subject in contact with a particular “horizon of the lived-through past”, i.e., with a deep temporal and subterranean dimension, the one of habit which somehow remains there, as Proust also declares in his *Recherche* when commenting on the passing of Marcel’s grandmother. Furthermore, like the Husserlean “tail of a comet”, which never wholly recedes (Merleau-Ponty, 2002, p.115), body parts and their practical virtuality do not instantly disappear at a given moment when drastically amputated.

¹⁰ Katz holds for this temporal relation, too, as he says that “[p]hantoms” of this kind “do not develop if the process of sensory loss is gradual, as in leprosy” (Katz, 1993, p.154).

¹¹ This feature is also associated with the “possibility of a sedimentation that places the subject above empirical deficiencies and failures” (Merleau-Ponty, 2020, p.157). However, as Merleau-Ponty confesses in *The Sensible World and the World of Expression*, “this sedimentation”, i.e., this possibility of order restoration, “only remains living through the contribution of some other means of incarnation” (Merleau-Ponty, 2020, p.157; see Makin 2021, 1929-1930). “Indeed, “[i]ncarnation may be reduced, but not abolished”, as the distinction between habit and nature seems to attest (Merleau-Ponty, 2020, p.157).

Indeed, the body schema Merleau-Ponty speaks of has an “inner necessity for the most integrated existence to provide itself with a habitual body”, to restore what is lost and to be open again to the world and its harmonic flow of phenomena and action awakenings.

5. Beyond Formative and Compensatory Paradigm: Plasticity as Creation

However, is this restoration always possible? Does body schematism show evidence of *plasticity* in accommodating the outcomes of traumatic events? Does body plasticity present some limitations in its extent? I will try to answer the following by showing Malabou’s disappointment in commenting on these very quotations.

According to Malabou, Merleau-Ponty would endorse two “characteristics” of plasticity when commenting on the schema restoration the subject’s body undergoes after the *phantom* appearance and the consequences this brings forth (Malabou, 2022, p.302)¹². First, Merleau-Ponty’s body schema would initially form itself “under the influence of experience and development”, being open to change and eventual practical transformation, as the habit body and *praktognosic* knowledge formation would prove (Malabou, 2022, p.302). This leads us to the second characteristic of plasticity Malabou acknowledges in her reading of Merleau-Ponty, i.e., the “compensatory power” the latter would provide when body schema is weakened, because it “reconstitutes its integrity and reforms itself”, causing, in some cases, when it fails, “the vivid sensation of the missing limb experienced by the amputee” and thus the advent of the *phantom*, as we have seen before (Malabou, 2022, p.302). So, compensatory plasticity would come into play in offering the body schema the ability to reform itself and to compensate “after wounds or impairments” (Malabou, 2022, p.303) when the latter attempts to restore its historicity and practical habituality, but with meagre success (see Pazzaglia, Zantedeschi, 2016, p.3). However, unlike Merleau-Ponty, Malabou refuses the stark difference between a habitual body and a body of the moment, i.e., between a sheer historical and a natural body dimension whose transition would be sealed by the *phantom* manifestation and, finally, between a normal and a pathological behaviour.

For Malabou, the compensation offered by the immediate reaction of bodily schematism to the onset of traumatic incumbency does not represent the fading reconstruction of the virtual actions possible to a healthy subject or, as Merleau-Ponty says, the dramatic shrinkage of her repertoire. Compensation does not propose the partial and less valuable restoration of the body’s power. Conversely, compensation introduces “a creative moment, as a source, a resource of ‘first time’, and not as a replica-making process” (Malabou, 2022, p. 304). What Malabou disputes with Merleau-Ponty, who nonetheless concedes certain plasticity to his schematism in his phenomenology, is that he has ultimately led the “compensatory plasticity” of body schematism back to being “itself a pathology”, i.e., to be itself a pathological outcome of body transformation and not the coefficient of changing (Malabou, 2002, p.303). So, following his claim, the “fragmented body schema”, the compensative and derivative one, would always “come after the originary” one, i.e., the formative and most noble body organisation (Malabou, 2022, p.303). However, when the latter is “reconstituted”, namely, when the body manages to restore its equilibrium partially, “it works much less well”, and therefore, for Malabou, the preservation of the patient’s being-in-the-world often appears to be “paralysed” and constitutively “incomplete” (Malabou, 2002, p.303) as does the “approximation” of an anatomical limb (Murray, 2004, p.963).

¹² I here mainly refer to the work *Plasticity* and, more into detail, to one of the final chapters of this work, namely, *Merleau-Ponty and Current Neurobiology*, which is the elaboration of a previous article of hers, which appeared in 2015.

6. Malabou on Mapping and Remapping Our Corporeal Possibilities

Thus, according to Malabou, Merleau-Ponty would interpret the defective influence of the fragmentation of the original schema and, thus, the relapse of history into the naturalness of the body through lost evidence of the normality of the past and the instituted norm. This seems to follow from the definition of the *phantom* as the ambiguous presence of the past in the present, which Malabou rejects in her latest book, i.e., *Plasticity* (2022). The “substitutions” that the second schematism operates by coming together should not be understood as “copies, shams, imitations” as Merleau-Ponty appeared to do (Malabou, 2022, p.303). Indeed, these should be accounted for as capacities of a different kind. In her interpretation, formative and compensatory plasticity are not different, for the latter employs the same plastic power as the former, and the former is equally historical (and the latter natural). The substitutions that plasticity and its compensatory power offer would “not be substitutions in the traditional sense” but “original instances” that would be “as primordial, in their virtuality, as ‘normal function’” of the formative plastic body schematism (Malabou, 2022, p.304). In the theoretical framework of Malabou, there is no need to distinguish between formative and compensative plasticity in body schematism and its eventual “remapping” or “re-routing” (Ramachandran 1998, 1856) from its original “mapping” or route (Malabou, 2022, p.304; see Sobchack, 2010, p.63).

When rereading the phantom limb case in light of these considerations, according to Malabou, it is possible to recognise that the being-phantom of the present-absent limb does not lie in the ambiguous *pastness* of the limb in question, as Merleau-Ponty would do. Conversely, the phantom, the fact that something is “lost” in the reality of the present, equally applies, for her, to impairment as much as in the *process* of the continuous replacement of the “phantoms of the phantom” in the “phantoms of a compensation” (Malabou, 2022, p.305), meaning here the response always guaranteed by the bodily chain of compensative substitutions. Hence, the presence-absence of amputation would already be the result of an activity of adjustment or re-adjustment of a schematism that contemplates the possibility that its *physical* components may be modified, supplanted, or redistributed within the framework of their general competence, as we shall see in the case of synaptic unions in neurobiology, according to Malabou’s reading of Changeux. The action of the body and its schema is historically implemented through continuous compensatory dynamics, and the “mechanism” regulating these would thus be “as old” in its possibilities as the normal function “it is determined to substitute” (Malabou, 2022, p.306; see Brugger, Kollias, Müri, *et al.* 2000, 6172; Shukla, Sahu, Tripathi, Gupta 1982, p.57; Brugger, 2012, p. 206).

From this point of view, “original formative plasticity” and “compensatory plasticity are both, equally, existential possibilities” of equal dignity (Malabou, 2022, p.306). Going along with the sense of this understanding and contra Merleau-Ponty’s “phantom limbs”, the clinical cases Malabou considers are not to be interpreted as refusals or “physical disavowals” and, so, in psychopathological terms but as “results of a remapping of ourselves”, as a possible “phantom replacing phantom” a way of being a body that replaces another one qualitatively equivalent and only chronologically subsequent (Malabou, 2022, p.306). Thus, between the two plasticities, namely, the “formative” and the “compensatory” one, there would not be a “hierarchy” capable of sanctioning the superiority or originality of the former over the latter (Malabou, 2022, p.306).

7. Towards *Destructive Plasticity* Pattern. The tripartite model of plasticity

Malabou's theory about the plastic nature of our organism and its capacity for modification rests on the achievements of modern neurobiology and the re-discussion of the capacities and limits of our brain's operation (see Ramachandran, 1998, p.1851-1854). The lesson of "neurobiological revolution" enables Malabou to embrace the *epigenetic* thesis about the *historical* nature of our intelligence and bodily adaptivity, the latter understood as "a set of exposed dispositions fragile, open, contingent in their organisation" and "not responding to any predestination or plan" (Malabou, 2017, p. 81, 106; see Watkin, 2016, p.112-122). The epigenesis that Malabou defends specifically concerns the modifiability that she finds in our brains under the possible union or disintegration of its *synaptic units* established by bonds of neurons, which translate, in terms attributable to Merleau-Ponty, the extent of its openness or closure to the world around it (see Gaité, 2018, p.1035-1036).

Indeed, the coming together of these synapses strengthens our central nervous system and their disaggregation of the weakness. Based on Changeux's *Neuronal Man* reading, synapses regulate brain development as an epigenetic and cumulative initiative. They result from lived experience that is, at least partially, individual and contingent. Thus, the human brain has to deal with "synaptic modifications imposed on it by experience", including the influence of cultural artefacts following "throughout the entire course of life" (Malabou, 2017, p.87). Accordingly, our brain has to be accounted as the evolution of a "history" whose "work" and primary and defining action is "plasticity", i.e., the possibility of modification and also radical transformation (Malabou, 2008, p.1, 4). Indeed, the plasticity here pointed out connects our species' innate and distinctive cognitive tools with "individual experience" (Malabou, 2008, p.6), that is, experience content proper and exclusive to each of us as singular individuals. By its historicity, following this claim, our brain would not be a rigid structure but a reality in perpetual becoming, a *phantom* in constant synaptic replacement and practical updating, which also determines the range of our aesthetic performance.

When discussing our brain's plasticity, Malabou presents a three-part distinction regarding its capacity for transformation or temporal evolution of development, i.e., plasticity. First, she notes that our brain can "mould" (Malabou, 2008, p.5) neural connections, especially in her commentary on the works of Changeux regarding the development of a child's mind. On the other hand, she also discusses the consistent and subsequent "modification of neural connections" (Malabou, 2008, p.5), which pertains to the broader dimension of learning and is possible throughout the entire lifespan of individuals. This reference seems to mainly relate to the work of Pierre Bourdieu and his definition of *habitus*.

The third definition of plasticity that Malabou provides is the most interesting for my issue. In *What Should We Do with Our Brain*, she refers to it as "capacity for repair" or "post-lesional plasticity" (Malabou, 2008, p.5). This definition describes the nervous system's ability to change coherently due to development, experience, but also injury, particularly within the pathology framework she considers in the following. This capacity also encompasses regeneration, ageing, degeneration, and reconstruction processes. It involves the formation of new synapses and the dissolution of existing ones, resulting in novel modifications within the original "neuronal landscape" (Malabou, 2008, p.27). This process reflects a dynamic of correction and a "power of healing" (Malabou, 2008, p.27) that demonstrates the brain's plastic capacity to repair itself and return to normalcy on a wholly renewed basis (see Andrieu, 2009, p.112).

However, is this always the case? Is the body, according to this representation, able to make up for the handicap brought by all the traumatic events it may face? Are there specific cases in which this does not occur?

8. A new identity by “default”. Endorsing Destructive Plasticity

Indeed, repair and post-lesional plasticity have limitations in the extent of their efficacy and sphere of application. These are most evident in the unfortunate onset of symptoms of severe neurodegenerative diseases such as Parkinson’s or Alzheimer’s, and thus considering episodes far from those inherent in physical amputations or minor injuries, i.e., traumas not directly concerning the nervous system and its influence on body schematism. However, following Malabou, even in the case of Parkinson’s or Alzheimer’s, the nervous system consistently exhibits “plasticity”; that is, it negatively welcomes the possibility of its insufficiency (Malabou, 2008, p.28; see Brugère, 2014, p.61-62). Indeed, when this happens, the “affected structures of functions try to modify themselves so as to compensate for the new deficit or form a new and abnormal organisational schema that restores normalcy” (Malabou, 2008, p.28).

Indeed, although in brain activity it is possible to discern, at least in the early and less disabling stages of the disease, “a more or less successful, more or less efficacious, more or less durable attempt” to recover a lost function, i.e., the stylistic finesse that is now lacking, the “[r]eparative plasticity [...] does not make up for every deficit” to which schematism has incurred (Malabou, 2008, p. 28). This is precisely well figured by the prodromes of Alzheimer’s disease and by what is found when “the encroaching amnesia is compensated for in part by a capacity to recuperate stored information” that is, of what predates the newborn condition of life (Malabou, 2008, p.28-29). Thus, Malabou comments, the “deactivation of certain regions” of the brain in the case of Alzheimer’s, such as those attributable to regular hippocampal activity, is somehow “balanced” in the exercise of this recovery “by a metabolic activation of other regions” such as the frontal ones (Malabou, 2008, p.29). In these cases, it is possible to detect an appreciable “modification in strategies for handling information, a modification that again attests to the functional plasticity of the brain” (Malabou, 2008, p.29), as an intimate and existential possibility, as Malabou indicates.

This occurs, however, only in the early stages of Alzheimer’s disease. Sadly, as Malabou here observes in detail, the post-lesional paradigm sketched in these and earlier passages is not suitable for photographing the more drastic *metamorphoses* that patients affected with this disease seem to go through, as conversely occurred in the description of phantoms and their continuous replacements in the cases of impairments. It is for this reason that Malabou goes so far as to speak of a “[d]estructive plasticity” (Malabou, 2012, p.xix) in the overcoming, or rather, in the *realisation* of what, following injury, is not recovered, but rather expressly introduces a *personality* and a way of life entirely new compared to the previous one.

This depicts an absolute transformation that has been “until now *unknown to psychoanalysis*” and not sufficiently investigated by neurobiology, in Malabou’s opinion, because it is one “that forms the psyche through the deconstitution of identity” (Malabou, 2012, p. xix, emphasis of the author; see Watkin, 2016, p.126), and shapes an individual by the destruction of another. Indeed, brain lesions “frequently manifest themselves as an *unprecedented metamorphosis* of the patient’s identity” (Malabou, 2012, p.15). “Unprecedented” means here without relation to the subject’s identity past since it is a new person that emerges due to the metamorphic process that destructive plasticity seems to trigger. For instance, Malabou again observes that Alzheimer’s

disease leads to severe brain damage that also affects the mechanisms responsible for the production and regulation of emotions and comes to radically alter “the personality to such a degree that it becomes unrecognisable without necessarily diminishing the higher cognitive functions” such as language, memory or attention (Malabou, 2012, p.15).

These plastic alterations “do not allow patients to return to a previous state, to seek refuge in a past of any kind, or to find even the most precarious relief in the labyrinth of their psychic history” (Malabou, 2012, p.48). This process is mirrored thus by a form of transformation “through destruction”, i.e., a form of “post-lesional plasticity” which, unlike the one appreciated earlier, “is not a plasticity of reconstitution but the *default formation* of a new identity with loss as its premise” (Malabou, 2012, p.48; see Marin, 2014, p.49-58). In this case, like that of neurodegenerative diseases involving brain injury, the lesional plasticity evoked here reveals its “sculptural power”, which produces its “form”, curiously enough, “through the annihilation of the form” itself (Malabou, 2012, p. 49).

9. Conclusions

To conclude this study, let us examine Malabou’s similarities and differences regarding the idea of plasticity found in Merleau-Ponty’s work and its connection to the appearance of phantoms. Both authors consider the body’s plasticity fashioned by history, allowing it to adapt to changes and experiences. However, in response to trauma, especially in Merleau-Ponty’s view, losing habitual patterns seems to reset the body’s natural equilibrium rather than allowing for accommodation. In cases of injury or amputation, the body’s natural state is not replaced, but it can still reorganise based on its underlying nature. Such relapse and defective reorganisation, for which “natural time is always there”, so reads the *Phenomenology of Perception*, is correctly interpreted by Malabou’s reading in equally pathological terms (Merleau-Ponty, 2002, p.404). Indeed, for Merleau-Ponty, possessing a body coincides with possessing a body in time (see Merleau-Ponty, 1967, p.24; de Vignemont, 2003, p.122). The habit loss that is realised in the deprivation of a limb, for example, coincides with the loss of the time enclosed in it, which *phantasmatically* re-presents itself as the “ambivalent presence” of the re-representation of something whose rejection has not yet been fully recognised and eventually accepted (Merleau-Ponty, 2002, p.94).

However, when discussing “metamorphosis” as a personal possibility within existence, Merleau-Ponty asserts that our habitual way of living can shed its former self and become “anonymous and passive” (Merleau-Ponty, 2002, p.190). Here, he seems to anticipate something of Malabou’s *destructive plasticity* but not to go to its extreme consequences, as she will do even while benefiting from studies of current neurobiology. In the body, existence can contract, and the latter becomes the “places where life hides away” by its innate capacity, as stated, for metamorphosis (Merleau-Ponty, 2002, p.190). What Merleau-Ponty may not have emphasised with due poignancy was the idea of *no return* that, on the contrary, drives the destructive side of Malabou’s plasticity. This is apparent in the impossible rejection of the “prospect of living” that the world continues to present, even to the sick person, and his natural body is delineated as “the empty form of the true event”, that is, the appeal to the resumption of historical time (Merleau-Ponty, 2002, p.191).

In a sense, patient Schneider is still patient Schneider, for Merleau-Ponty, and not another person, even if the “familiarity” of his communication with the object is suddenly “interrupted” (Merleau-Ponty, 2002, p.151), whereas, as we read, in Malabou’s account the post-lesional plasticity does not always allow the person to take refuge in any past and thus in *memory* of her previous

life. That said, I stated that even Malabou does not forgo the use of a defective and, in a sense, an equally *pathological lexicon* in describing the third and most hyperbolic form of plasticity. It is undeniable that the illness that gives rise to the absolute transformation, as we saw in commenting on the Alzheimer's case, represents a tragic fact in the life of the subject who is affected by it. Again, the form of existence that emerges from it cannot but be a depowered, less effective version of the previous one. The compensatory capacity then, even in Malabou's proposal, has heavy limitations in its application sphere. It is theoretically possible that history spills over into nature in Malabou's proposal, as it was for Merleau-Ponty's, even though she does not subscribe to the assumptions of this terminological dualism in her work. On the other hand, her conceivable *naturalism* must also be able to account for the fluctuations that human life may run into, in the course of its exercise, as well as the possible misfortunes it may encounter. Malabou's issue may mainly stem from her choice of terminology, or sometimes from her inability to express the limitations of this narrower range of possible actions. *Destruction*, as she describes, cannot occur without cost, as something is always lost in the transformation that allows for something new or different to emerge. Finally, what is a norm made of, according to Malabou? How shall we account for the volume of habits, their minimum size or their possible recession if we do not admit the incidence of a defective term in this almost *alchemical* process ruling the transition from nature to history and from history to nature again, in Merleau-Ponty's terms?

This essay concludes by encouraging a deeper exploration of the term *plasticity*. Its philosophical meaning is intricate and far from fully understood within the context of this discussion. Plasticity encompasses more than just aesthetics and behaviour. It also plays a crucial role in evolutionary theory, highlighting our inherent incompleteness as beings. Additionally, it reflects our relationship with the past—how we retain memories and experiences—and our forward-looking nature as we anticipate and shape our futures. By viewing plasticity as a fundamental aspect of our existence, we can understand it as a lens through which we engage with time itself. Plasticity articulates not only how we adapt and respond to our current circumstances but also how we navigate the complexities of our temporal experience. Nonetheless, this essay recognises the need for a more exhaustive investigation into the various dimensions and implications of plasticity. Understanding its transformative characteristics is vital for a comprehensive grasp of the concept. Therefore, further studies will be required to elaborate on what plasticity truly signifies and how it influences our lives.

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