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6 Psychology without a Soul, Philosophy without an I

Nietzsche and 19th Century Psychophysics (Fechner, Lange, Mach)

1 Introduction

Nietzsche's view of the problem of subjectivity – and particularly of the "I" *qua* subject – has an important role in his thought, and is, for this reason, extensively discussed in the secondary literature. As with other themes in Nietzsche's philosophy, its interpretation is deeply problematic, mostly because it is not always clear whether and to what extent Nietzsche is committed to a rejection of the I.

The I becomes a particularly important object of investigation in Nietzsche's late writings, because it is one of the distinctive elements of the Western worldview and its metaphysics of substance. Nietzsche's most significant reflections on the I – which he sees as the question on the substantial referent of psychic phenomena – occur in the first book of *Beyond Good and Evil*, devoted to the "prejudices of philosophers". Nietzsche then deals with that topic in *Twilight of the Idols*, "'Reason' in Philosophy", 5. In that section he blames the "basic presuppositions [...] of *reason*" for clearing the way to a "crudely fetishistic mindset. It sees doers and deeds all over: [...] it believes in the 'I', in the I as being, in the I as substance, and it *projects* this belief in the I-substance onto all things. [...] Being is imagined in everything – *pushed under everything* – as a cause." In these pages, Nietzsche is clearly taking a stand against all philosophical approaches that still make an uncritical use of the I and are therefore unable to give up the commonsensical view of the I. Thus, Nietzsche calls into question the legitimacy of using the proposition "I think" as an immediate certainty (BGE 16).[1] Nietzsche argues that in order to be able to discuss this issue, one would have to answer

> a set of bold claims that are difficult to establish – for instance, that I am the one who is thinking, that there must be something that is thinking in the first place, that thinking is an activity and the effect of a being who is considered the cause, that there is an "I" and

1 P. Bornedal (2010, ch. 3) has recently dealt with Nietzsche and Kant's critique of Descartes' "I think". See also Loukidelis 2005.

> finally, that it has already been determined what is meant by thinking, – that I *know* what thinking is. (BGE 16)

Moreover, since if we split the proposition "I think" into its two constituent parts,[2] we notice that the usual conception of the I stems from a non-philosophical account of both of them, and it bears with it traces of a naive metaphysics. Thus, Nietzsche concludes:

> In place of that "immediate certainty" which may, in this case, win the faith of the people, the philosopher gets handed a whole assortment of metaphysical questions, genuinely probing intellectual questions of conscience, such as: "Where do I get the concept of thinking from? Why do I believe in causes and effects? What gives me the right to speak about an I, and, for that matter, about an I as cause, and, finally, about an I as the cause of thoughts?" (BGE 16)

The kind of problems raised by Nietzsche is clear, but that does not make the questions less problematic, especially when one takes into account the fact (which was never denied by Nietzsche, but who on the contrary was well aware of it) that the notion of the I plays an important role in the common and immediate representation of acts of thought, and is, therefore, the indispensable basis of individual actions (practical and moral). This framework becomes even more complex when the question of the I is extended to include that of the soul, and we move from a classical problem for philosophy and psychology to more delicate issues concerning religion in general and Christianity in particular. Nietzsche explicitly connects these different levels in BGE 54, where he reflects on the I and stresses that in Descartes' time it was impossible to account for thinking without ascribing a cause to it, but modern philosophy eventually overcame this limitation:

> Since Descartes [...] all the philosophers have been out to assassinate the old concept of the soul, under the guise of critiquing the concepts of subject and predicate. In other words, they have been out to assassinate the fundamental presupposition of the Christian doctrine. As a sort of epistemological skepticism, modern philosophy is, covertly or overtly, *anti-Christian* [...]. People used to believe in "the soul" as they believed in grammar and the grammatical subject: people said that "I" was a condition and "think" was a predicate and conditioned – thinking is an activity, and a subject *must* be thought of as its cause. Now, with admirable tenacity and cunning, people are wondering whether

2 Nietzsche devotes special attention to this dualism, especially in the years following *Beyond Good and Evil*. See in particular GM I 13 and its preparatory note, NL 1886, 7[1], KSA 12: 247–250. Below I will refer to both texts. See also TI Errors 3, which incorporates and unifies the observations made in BGE and GM. Nietzsche's view of the relation between doer and deed is thoroughly discussed in Pippin 2010, chapter 4.

> they can get out of this net – wondering whether the reverse might be true: that "think" is the condition and "I" is conditioned, in which case "I" would be a synthesis that only gets *produced* through thought itself. (BGE 54)

In this passage, Nietzsche sees the soul as a religious interpretation of a fundamental psychological principle. This view was most probably influenced by a contemporary debate that included Friedrich A. Lange as one of the contenders.[3] The I of which Nietzsche speaks in BGE 16 does not differ from the soul discussed by Lange in his *History of Materialism*, (where Nietzsche found a detailed, updated exposition of the latest publications in psychology), nor is it different from what the Austrian physicist Ernst Mach called, in the same years, the "supposed psychic unity" that science claimed to be able to locate within the brain.[4] Mach, in particular, stresses the dependence of philosophical and scientific knowledge on a religious tradition of thought and deplores the fact that science insists on seeking a "seat of the soul" (*Seele*) in the ganglia of the brain, thereby failing to raise the hypothesis that no substantial entity of that kind actually exists.

The main problem that Mach addresses is the relation between body and I (matter and spirit) or, more generally, between the physical and the psychical – an issue widely debated in the nineteenth century and which has in Gustav Fechner's psychophysics one of its main points of reference. Indeed, Mach's investigations presuppose Fechner's results, which Mach intended to develop into a *neutral monism*. He thought that it provided an anti-metaphysical solution to the mind-body problem (see below sec. 4). Lange also relies on Fechner in his attack on the limitations of the explanations of the body/soul relation provided both by the materialism and the physiology of sense organs typical of psychology. In Lange's time, psychology was still engaged in seeking a substantial basis for its main object of study and, for this reason, remained in a "pre-scientific" stage of research (see below sec. 3). No wonder, then, that both Lange and Mach, taking a hint from Franz Brentano, raised the possibility of establishing a "psychology without a soul" and tried to show, in particular, that that position could be defended without resort to paradoxical formulations. Thus, they became spokesmen for a goal of considerable philosophical significance, that is,

3 Lange's influence on Nietzsche's thought has been clearly demonstrated by Salaquarda 1978 and Stack 1983, and later confirmed by several studies from the *Quellen-Forschung*.

4 Mach 1914: 26. The discussion concerning science's research on the self as an indivisible unit that forms the basis of mental processes is already present in *Beiträge zur Analyse der Empfindungen*, published in 1886 and purchased by Nietzsche probably in the same year (see Mach 1886: 19 n. 13). I will deal with Mach's view of the I in both section 4 and 5.

the fact that contemporary psychology no longer needed to refer to a substantial ground of psychic functions (without at the same time seeing its object of investigation vanish) is what brought about its liberation from the old scholastic metaphysics.

In this paper, I shall hence give an account of the nineteenth-century debate on the I and soul in order to address the problem of the subject as raised by Nietzsche in BGE 16. I shall first draw from that debate some elements that contextualize the "metaphysical questions" mentioned by Nietzsche in BGE 16 (that is, whether and on what basis is it possible to speak of the I as the cause of thoughts); and then, on that basis, I shall turn from psychology to philosophy and discuss Nietzsche's criticism of the subject and his view of what might be called a "philosophy without an I".

2 Towards a psychology without soul

If one wants to give a general and synthetic overview of psychological research as it was carried out in Germany in the second half of the nineteenth century, it should be pointed out as its main feature the intention of giving psychology the status of a real science, that is a mathematically founded discipline, which is able to furnish the tools to measure the object under investigation. The problem of the scientific foundation of psychology arose at that time due to Kant's reflections in the *Critique of Pure Reason* regarding the issue of the psychological knowledge of the soul as a substance and the philosophical problem related to it of the "community of the soul with the organic body".[5] The attempt of authors active in the first half of the nineteenth century to solve or at least circumvent the difficulties noted by Kant gave rise to multiple solutions, the most effective and most significant of which can be ascribed to Johann Friedrich Herbart and Gustav Fechner. The former had developed a system of mathematical computability of the soul, while the second is the father of psychophysics, a discipline based on a neutral assessment of physical and psychic events, focusing in particular on the possibility of measuring sensations.[6] The contribution of both researchers was undoubtedly important, especially since it constituted a reference for further investigations. These were, however, characterized by an addi-

5 I. Kant, CPR A 384, A 392–393 and B 427. On Kant's position regarding the possibility of the existence of any "psychophysical problem", see Martinelli 1999: 9–19.

6 On Herbart and Fechner see especially Banks 2003, chapters 3 and 6; Leary 1980, Sachs-Hombach 1993, Heidelberger 1996.

tional feature. In particular they had in view the rejection of those metaphysical principles that still characterized psychological studies, for the sake of a more honest "return to Kant". Since the mid-nineteenth century in philosophical and scientific domains people felt the need to return to Kant's epistemology and relinquish the idealist philosophy of nature and, with it, the metaphysical and speculative interpretation of Kant's thought. Authors who belong to the school of neo-Kantianism – such as Friedrich Lange and Otto Liebmann – and to whom we owe a first reception of Fechner's ideas, have privileged scientific themes in the work of Kant, particularly those relating to problems of psychology and anthropology. They tried, first of all, to grasp Kant's lesson without relapsing into the errors of previous interpreters. Secondly, they kept their investigation up-to-date as much as possible by relying on the most recent results of scientific knowledge.[7]

A further characteristic feature of German psychology, directly linked with the intention of establishing its scientific foundation, concerns the interest in the physiological investigation of sense organs. Given the difficulty of applying an exact method of investigation to a non-ascertainable object as the soul, reference to the bodily dimension appeared to be an essential step to provide psychology with a solid foundation. More than anyone else, Herbart struggled with problems relating to the establishment of a scientific study of the soul. At first he rejected Johannes Müller's influential idea that "no one is a psychologist without being a physiologist" (Müller 1822: 45). Herbart gave physiology a subordinate role, privileging instead a purely mathematical quantification of the entities studied by psychology. Herbart's intention of avoiding any form of measurement proved, however, untenable in the eyes of scientists of the time: the mathematical model should, in fact, be applied to anything, that is, the intended quantification could not subsist without measurement. On the other hand, such measurement could be applied to nothing else but sensations, a fact inconsistent with Herbart's theoretical assumptions. Thus, his proposal ultimately failed because of its purely speculative character. Studies continued in the direction of an experimental psychology that could enable an effective measurement of the soul. A further step on this course was made by Fechner, who proposed a scientific procedure to determine quantitatively the relation between psychic experience and measurable external stimulus. More simply, Fechner resorted to the physiology of sense organs to measure sensations, on the assumption that these are nothing but physical evidence of psychic phenomena.[8]

7 Cf. Lehmann 1987 and Martinelli 1999:52–53.

8 For a more extensive and comprehensive reconstruction of this process, see Guzzardi 2010, in particular chapter 2.

It was Ernst Mach himself who pointed out this transition in one of the writings in which he demonstrated to adhere, at least in the beginning, to Fechnerian psychophysics. He observed that "the part of the life of the soul which is immediately connected to the organism's physical phenomena has become in recent times accessible to exact research. I mean the sensations" (Mach 1863: 204). Mach emphasized what we said above, namely the fact that in psychology one cannot talk about "exact research" with reference to Herbart's mere mathematical quantification; rather, it was necessary for research to make use of processes aimed at the measurement of sensations, and therefore Herbart's mathematical psychology could be accepted only in the light of Fechner's psychophysics.

At the same time, however, Mach noticed the inadequacy of Fechner's solution. The latter still pursued the analysis of material phenomena involved in psychic phenomena with the purpose of locating a "seat of the soul". As we shall restate later, Mach radicalized Fechner's project, criticizing him for upholding a position that was still metaphysical. Conversely, Mach observes that the route taken by psychological research in its development goes in the direction of the soul's disappearance inside the nervous system. Nothing remains of the soul except its final effect, the fact that it is a principle able to give unity to the manifold, whereas its complete redefinition on the basis of the body leads to a "psychology without a soul" as its necessary outcome.[9]

In the following paragraphs, I will have to show in more detail what was hitherto only hinted at. For the moment, I am interested in showing how the outcome of Mach's considerations regarding the route taken by psychology up to the time of Fechner fits perfectly in the context of nineteenth-century science, which clearly shares with psychology the sense of a lack of metaphysical foundations. The conception for which psychology would be ready to abandon the reference to a substantial and spiritual soul, which cannot be identified except as a mathematical concept built on purely theoretical terms out of the system of relations linking psychical events to physical ones, corresponds to the most general position of science in the late nineteenth century, engaged in freeing itself from animistic and mythological conceptions that had their origin in the

9 This conclusion is presented by Mach in his *Knowledge and Error* (1905), which I will deal with in section 5. Before him, the idea of a "psychology without a soul" had been expressed by Lange, in the second edition of the *History of Materialism* (1975), taking over what was previously written by Brentano in his *Psychologie vom empirischen Standpunkt* (1874, vol. 1: 76). In the next section I will deal with Lange's reconstruction of the development of scientific psychology and, thus, with the development of the line of reasoning that led him to support such a position.

worldview of common sense.[10] More generally, during the nineteenth century, Western thought underwent a radical transformation, witnessing the collapse of the principles on which its knowledge was built. For those who are acquainted with Nietzsche, this can be easily understood by thinking of the "death of God": a formula with which he identifies the disorientation of his age, whose foundations lie beyond the religious and moral level. Metaphors aside, and remaining within the field of natural science, we may say that physical investigations at that time revealed a much less definite and unchangeable reality than what was believed. To these investigations were added mathematical studies, which in the nineteenth century undermined the foundations of Newtonian physics and reshaped the descriptive scope of the Euclidean system, on the basis of which the former stood. The emergence of Riemann's geometry, for example, made clear that the previously adopted model was not as "truthful" as it was previously believed. In fact, it says nothing about reality, merely describing it by means of a scientifically effective and "economic" system. Without expanding on a topic that deserves a thoroughly different treatment, I think it is important to emphasize the sense of disorientation experienced by scientists of those times, with which, however, they dealt in a positive way, turning it into a stimulus for a reconfiguration of the process of investigation of their own disciplines. This process culminated, for example, in Poincaré's conventionalism, as well as in Mach's studies on the economic character of scientific knowledge, which marked the beginning of twentieth-century research on matter and space.

An author who shortly after the mid-nineteenth century became the spokesman for the explanatory problem of modern epistemology was Emil du Bois-Reymond with his two conferences in 1872 and 1880 respectively: *The Boundaries of the Knowledge of Nature* and *The World's Seven Puzzles*. The former is famous for the way it ends, with an "*Ignorabimus!*" that does not leave room for the possibility of surpassing certain cognitive limits and solving certain problems posed by natural reality. One of these problems concerns the discourse relative to knowledge of psychic phenomena, particularly regarding their relation to the material dimension – what, in modern terms, we would label the mind-body problem. Du Bois-Reymond argues in particular that "consciousness [i.e. any mental process] cannot be explained by its material conditions" and that "it will never be explainable [...] on the basis of such conditions" (Du Bois-Reymond 1886: 117), and continues carrying out a detailed analysis of the histor-

10 As is well known, Mach was among the forerunners of that position. His work on *Mechanics in its historical-critical development* (1883) was a landmark for contemporary epistemology and for the philosophy of science in the early twentieth century. For more on this, see Blackmore 1972.

ical development of the debate on the relation between body and soul (*Leib und Seele*). His conclusion in this regard is that, since there was no progress in the understanding of mental processes on the basis of their material states, they should be considered, as much as the relation between matter and force, an insurmountable limit of our knowledge of nature (Du Bois-Reymond 1886: 125).

Du Bois-Reymond's reflections aroused great interest at the time, and references to his conferences can be found in different writings coming from the field of natural history and physiology.[11] They are an important sign of the cultural context within which scientific psychology evolved. The latter has precisely expressed the demand to be defined on a new basis, freeing itself from the remnants of an age-old metaphysics that surreptitiously attempted to introduce something that it could not specify, much less quantify or measure.

3 Friedrich Lange on the brain, soul and scientific psychology

Much of the elements considered above can be found in the examination carried out by Friedrich Lange in two chapters added to the second edition of the History of Materialism, published in 1875: *Brain and Soul* and *Scientific Psychology*.[12] The first of these opens with a discussion of the difficulty of putting forward any argument regarding the relation between brain and soul that is not contradicted by facts. However, the difficulty is not regarded by Lange as resulting solely from the futility of the studies of the period. Rather, he argues that the greatest problem is a theoretical one, consisting in particular in the fact that we have not yet been able to formulate a non-animistic hypothesis about the nature of the brain's activity. Having no other reference points on the basis of which to structure their own investigations, Lange explains:

11 On the debate regarding Du Bois-Reymond's warning, see Bayertz/Gerhard/Jaeschke 2007. A copy of the two conferences presented by Du Bois-Reymond in 1872 and 1880 can be found in Nietzsche's library (cf. G. Campioni et al. 2003: 202), although there is no record that he effectively read them. Thomas Brobjer has reported this fact, relating Nietzsche's interest in the work of Du Bois-Reymond to his knowledge of the writings of Richard Avenarius and Mach, which according to Brobjer were "three of the most important philosophers of science from that period", and whose contribution is particularly linked to the development and transformation of nineteenth-century positivism (see Brobjer 2008: 92).

12 These chapters are included in the third part of the second volume, which is devoted to the way in which the natural sciences have addressed issues relating to *man and soul*.

> Even educated men constantly fall back again, as if it were from despair, upon the theories, long since refuted by the facts, of a localisation of the cerebral activity according to the various functions of the intellect and the emotions. We have, it is true, repeatedly expressed ourselves against the view that the mere continuance of obsolete opinions is so great a hindrance to science as is commonly supposed; but here it does in fact appear as though the phantom of the soul showing itself on the ruins of Scholasticism continually confuses the whole question.
>
> We could easily show that this ghost [...] plays a great part amongst the men who consider themselves entirely free from it, amongst our Materialistic leaders; nay, their whole conception of the way in which we must conceive the cerebral activity is essentially dominated by the popular conceptions which were formerly held as to the mythical faculties of the soul. (Lange 1881: 113)

Therefore, the progress of psychology collides with traces of scholastic ideas: the idea that an explanation of psychical phenomena is only possible on the basis of the identification of a substantial foundation of the latter. According to Lange, the materialistic view of nature conceives the soul always as something existing on its own, a "ghost" (*Gespenst*) that populates our brain. Right from the outset, Lange expresses himself critically against this view of things, recognizing the liberation from the old metaphysics of substance precisely as the starting point on which a psychology, wanting to conform to natural science, should be based. In this, however, he acknowledges a fundamental difficulty, pointing out how some attempts in that direction have gone astray. This is the case of phrenology, which begins with the basically correct idea that the commonly accepted faculties of the soul are in fact abstractions (Lange 1881: 113), only to end up on the tendency to fall back on localization. Lange's final comment is that phrenology, while being in principle aimed at going "beyond the standpoint of the spectral soul", ultimately multiplies brain functions and assigns a subject to each of them. In this way, it "ends by peopling the whole skull with specters", failing to meet its founders' original intentions (Lange 1881: 125).[13]

13 The quoted passage continues in this way: "[Phrenology] falls back to the naive standpoint, which will not be content without putting a machinist to sit in the ingenious machine of our body to guide the whole." This metaphor closely recalls the observation made by Nietzsche in GS 360 where he complains about our tendency to personification and to look for an active cause underlying purely physiological events. In particular, Nietzsche points out, we tend to conceive our will as a "*driving* cause", but in doing so we mistake "the helmsman for the steam". This passage is of particular interest for the present discussion, because it appears in an example that Lange gives slightly below in the chapter on *Brain and Soul*. In fact, in GS 360, Nietzsche describes the cause of acting according to a purpose as "a small accident in accordance with which this quantum 'discharges' itself in one particular way: the match versus the powder keg". Thus, a few

Phrenology proves to be, therefore, absolutely unscientific, but precisely for this reason it serves for Lange as an example of the "irresistible tendency to personification" which represents the real danger in studies on brain and soul. The fact that up to his time phrenology has not been able to provide a good explanation of the relation between the brain and psychic functions springs, according to Lange, from the tendency to make use of abstract ideas, personifying them, instead of limiting oneself, as much as possible, to an understanding of reality (Lange 1881: 125). Thus, Lange's argument moves towards physiology as a discipline that makes use of the bodily dimension to explain psychic phenomena without going beyond the level of the reflex movements of the nerves. The discussion of this position, focused in particular on the figure of Johannes Müller, allows Lange to highlight a very important element for philosophical reflection on the scientific description of man. Even the physiological explanation of psychic phenomena is characterized by a fundamental difficulty, since reducing the psychical to the physical proves itself to be, as a matter of fact, impossible. Sensations, for example, are by no means something whose origin can be traced: researchers simply assume that they exist on the basis of physical signals in their bodies (Lange 1881: 128–130). The reason why a complete reduction of psychic phenomena to the bodily dimension is not possible is because the former phenomena *do not exist* at all. In fact, Lange remarks that the concepts used by psychology are nothing other than the product of a purely theoretical classification. They do not specify something real in itself. It is therefore useless to look for their bodily counterpart, because the physiological substrate of the faculties of the soul is not univocally linked to them. In other words, it does not exist as a true "seat" of these faculties in the body. Lange observes:

> Above all, we must be clear that in all the paragraphs of the ancient scholastic psychology there is nowhere mention of things that we may ever expect to find again in the elements of the cerebral functions. It is with them as much as if one tries to find the various activities of a locomotive, so far as they can be externally observed [...] In our whole traditional psychology the actions of men are classified, without any regard to the elements of their origin, according to certain relations to life and its aims, and indeed in such a way that the mere psychological analysis often shows clearly how little what is denoted by a single word forms a true unity. [...] Almost all these psychological notions give us a word by

pages after the discussion of phrenology, looking at the actual cause of a reaction in humans, Lange writes: "The living force for the transmitting process is ready prepared in the nerve, as that of muscular contraction in the muscles; it can only be set free by the infinitely feeble impulse of the light-wave, as the elastic forces of a barrel of powder by the glimmering spark" (Lange 1881: 157). Considering that the fifth book of GS was composed in 1886, it is not implausible to think that Lange was a direct source of §360.

> means of which a portion of the phenomena of human life is very imperfectly classified. With this classification is combined the metaphysical delusion of a common substantial basis of these phenomena, and this delusion must be destroyed. (Lange 1881: 137–138)

This final remark from this passage is of particular significance, because it identifies the point of division between scientific research and metaphysical explanation. This point is represented by the "mortal leap" that is taken when one ascribes an ontological value to a logical scheme aimed at description and calculation. In the case at hand, psychology provides a classification of psychical phenomena with a view to their study, to which is added, however, at a later stage ("pushed under" [*untergeschoben*], as Nietzsche would say) a substantial cause, as if that classification were a determination of the reality of things. Setting this problem aside, Lange nevertheless acknowledges a positive role to physiology in the advancement of scientific psychology. The latter, in particular, represents a step forward compared to the materialistic view, which remained tied to the intention of circumscribing a physical basis for the "faculties of the soul".[14] In addition, Lange remarks that true progress in brain studies consists in being able to refer the primal basis of psychical functions back to the physiological dimension, without the need to add mythical causes as explanations of these functions.[15]

Although recognizing that metaphysics has lost its *raison d'être* in psychological studies, a number of problems concerning the mind-body relation remain, nevertheless, unsolved. In particular, the difficulty in explaining some psychical phenomena arising from the physical substrate seems to lead research to an insurmountable limit. Although studies of the period began to spread the idea that there was nothing to investigate once all the "symptoms" of a given phenomenon[16] were specified, there remains the feeling, nevertheless, that something is left unexplained, that some aspects concerning sensations have not been taken into

14 Lange writes: "If the 'muscular sense' or the 'will-impulse' is hypostasized in the sense of this old psychology as a 'faculty', which is served by a greater or lesser portion of the brain, then on the materialistic view the 'faculty of the soul' is destroyed together with the corresponding part of the brain [...]. If, on the contrary, we keep strictly in view that from the standpoint of physiology, even in the production of a conscious impulse of will, we have to do with an organic process like every other, that the 'faculty' of psychology is only a name, with which the possibility of the process is apparently elevated to a special thing, [...] then we cannot at all see why even the 'terminus' of a psychical line or the place of origin of a 'faculty', like any other part of the brain, may not be replaced in its activity by new lines." (Lange 1881: 147)

15 See Lange 1881: 152–157. Lange's observations concerning this point refer to Wilhelm Wundt's *Grundzüge der physiologischen Psychologie* (1874).

16 That is, when it has been traced to nerve currents and states of tension, see Lange 1881: 159–160.

account. Referring implicitly to Du Bois-Reymond – and thereby showing how much his warning was present in the eyes of scholars of the time – Lange notes that

> the co-operation of very many, and, individually considered, extraordinarily feeble nerve impulses, must give us the key to the physiological understanding of thinking, and the form of this co-operation is the characteristic feature of each individual function. What in this remains unexplained – the manner, the external, natural phenomenon – is at the same time an internal one for the thinking subject: that is the point which altogether overpasses the limits of the knowledge of nature. (Lange 1881: 161)

The reconstruction developed by Lange on the debate concerning the relation between brain and soul in nineteenth-century German psychology shows that this discipline was moving towards a scientific account of the problem, understood in the sense of a complete emancipation from the metaphysical traces of scholastic metaphysics. At this point, Lange addresses the problem of the scientific foundation of psychology mentioning (most critically) Herbart's position, who was the first to attempt a mathematization of psychology. Lange notes that the idea of a "mathematical psychology" is certainly promising, but it does not constitute a sufficient step forward towards a genuine emancipation from metaphysics. And thus the risk is to become deeply disappointed, as in the case of phrenology, if one wants to believe "that Herbart with his differential equations has as thoroughly mastered the world of ideas, as Kopernicus and Kepler the world of the planets" (Lange 1881: 162). I will not go into the multiple aspects of Lange's critique of Herbart. What interests me is solely to stress the reason why mathematical theory represented an important phase, although not sufficient and definitive, in the development of scientific psychology. In remarking that Herbart's view is still based on metaphysical principles, Lange notes that it constitutes a first step towards a new modality of psychological investigation. "Herbart's school", he writes, "forms for Germany an important link in the epoch of transition, although here science is only beginning painfully to struggle free of metaphysics" (Lange 1881: 167–168). The contribution of Herbart and the authors related to him consists in having opened a path of research, which, however, fails because of its willingness to resort by any means to the concept of an absolutely simple soul, a concept that in principle can only be posited, but in no way further determined. Conversely, Lange remarks, "in the few phenomena which so far have been made accessible to more precise observation, there is not the smallest occasion to assume a soul in any very definite sense at all" (Lange 1881: 167–168). Hence he concludes that psychology's true progress should consist in the complete liberation from the metaphysics of substance and thus in the rejection of those accessory and unnecessary hypotheses which Herbart still seems to be willing to admit:

> "But does not psychology then mean the doctrine of the soul? How, then, is a science conceivable which leaves it doubtful whether it has any object at all?" Well, here we have again a charming example of the confusion of name and thing. We have a traditional name for a considerable but by no means accurately defined group of phenomena. This name has come down from a time when the present requirements of strict science were unknown. Shall we reject the name because the object of science has been changed? That were unpractical pedantry. Calmly assume, then, a psychology without a soul! And yet the name will still be useful, so long as we have something to study that is not completely covered by any other science. (Lange 1881: 168)

The direction of Lange's investigation cannot fail to recall some of Nietzsche's observations.[17] In fact, the rejection of all substantialistic hypotheses implies showing how much the progress of research had rendered the former useless, thus revealing above all its purely illusory character. Nevertheless – and this is worth noting if one wants to understand Nietzsche's later statements about the soul – Lange also claims that there is no harm in preserving the concept of soul as the object of psychological investigation, provided that it is defined in non-metaphysical terms.

Lange's idea that "scientific psychology" should be adapted to the principles of naturalistic studies and look no further than to what can actually be observed and measured is conveyed by Fechner's work in particular, to whom Lange is indebted and an obvious supporter (see Martinelli 1999: 52–56). A defense of Fechner's psychophysics is particularly clear in the critical remarks that Lange makes to Herbart, focused mainly on the character to be assigned to sensations and more generally on the idea, located in the sections of the *History of Materialism* examined thus far, of the relation between the physical and psychic sphere. Fechner's monistic model, which considers the physical and the psychical as two aspects of a single reality, is also referred to by Ernst Mach. As we shall see in the next two paragraphs, Mach shares with Lange the idea of founding a "psychology without soul", but goes a step further than Fechner's theory, giving rise to the anti-metaphysical direction, which will prove decisive for twentieth century's studies in both psychology and physiology.

4 The relation between the physical and the psychical

Psychophysics was born as a discipline with the publication of the two volumes of *Elements of Psychophysics* by Fechner (1860), and it is therefore to him that

17 He was in fact influenced by Lange in many aspects, as is fully demonstrated in Salaquarda 1978 and Stack 1983 and subsequently in a lot of critical literature on Nietzsche's sources.

we owe its principles. The aspect that I would like to emphasize at the end of this discussion concerns the position in which Fechner takes on the relation between body and soul, which of course constitutes the theoretical background that forms the basis of the positive contribution of psychophysics, consisting in the measurement of the relation between physical and psychic in the area of research devoted to human sensation. In the beginning of his main work, Fechner defines psychophysics as the "exact doctrine of the functionally dependent relations of body and soul [*Körper und Seele*] or, more generally, of the material and the mental, of the physical and psychological worlds" (Fechner 1966: 7). From this definition it can already be seen that the study of the relation between body and soul is not dealt with according to the traditional perspective, which treats them as two distinct and separate entities. Fechner aims to investigate "functional relations" between the physical and the psychical on the basis of a Spinozist ontology that takes them as two aspects of one and the same reality. Thus, he considers that there are no metaphysical differences among what may be designated as "material and spiritual world" (or physical and psychical). At the basis of both domains there is only one substance.[18] This monistic vision represents obviously a step forward in psychological studies when contrasted with the scholastic metaphysics deplored by Lange. Fechner gets rid of the idea of the soul as a substance having ontological autonomy from the body and thus renders meaningless any attempt at locating a seat of that alleged spiritual entity in the brain or in any other part of the organism. However, psychophysics is still characterized by its metaphysical foundation, represented by the way in which the substantial unity, to which both the psychical and the physical are referred, is defined. The Spinozist or Schellingian character of Fechner's conception represents perhaps the only aspect that prevents his system from serving as a model for a "science of the soul". There remains in its foundation an unresolved element, whose nature cannot be investigated and is therefore by no means describable or quantifiable.

This is the aspect on which Mach's critique of Fechner is focused. In *The Analysis of Sensations* (first published in 1886 as *Beiträge zur Analyse der Empfindungen*) Mach proposes a possible solution for the determination of the relation of the physical to the psychical, without falling into the difficulties raised by psychophysics, but maintaining, at the same time, its fundamental monistic structure. Mach's proposal is known under the name of "neutral monism" and

18 For a discussion of the general characteristics of Fechner's psychophysics, see Martinelli 1999: 40ff., in addition to the already mentioned Banks 2003, chapter 6, and Heidelberger 1996.

consists in admitting as the only reality that of the "elements".[19] The latter comprise, for example, colors, sounds, temperatures, pressures ("ultimate component parts [of reality investigated scientifically] which hitherto we have been unable to subdivide any further"; Mach 1914: 5–6). These elements do not possess any characteristic *in themselves*; they may be described in physical as well as in psychical terms depending on the dimension that in each case we are referring to (be it constituted by physical objects outside us – *Körper* – or by our own body – *Leib*). Mach, moreover, adds that the elements specifically related to individual corporality are described as "sensations" and that, since it is not possible for us to relate to them except through our own body, the terms "sensations" and "elements" are synonymous in most of the cases.[20]

It may be immediately noticed that Mach's definition avoids the metaphysical difficulty in which psychophysics is involved by taking the elements as a non-identifiable and especially non-definitive substrate. These are, indeed, the components to which phenomena studied on an exclusively methodological basis can be traced by the researcher, without the latter being necessarily committed to accept their ontological status. Mach stresses pointedly that his research path leaves always open the possibility that the "simple", to which in each case one arrives, is susceptible to further division. Therefore, its elements cannot be incorporated in any substantialist model, even if one were to think of an atomical system whose components do not present qualitative features of their own.

Thus, the moment Mach formulates his "principle of complete parallelism of the psychical and physical" (Mach 1914: 60), he claims for himself a position superior to that of Fechner, in an explicitly "anti-metaphysical" sense. Thanks to his conception of the elements, Mach says that the view he advocates

> is different from Fechner's conception of the physical and psychical as two different aspects of one and the same reality. In the first place, our view has no metaphysical background, but corresponds only to the generalized expression of experiences. Again, we refuse to distinguish two different aspects of an unknown *tertium quid*; the elements given in experience, whose connexion we are investigating, are always the same, and are of only one nature, though they appear, according to the nature of the connexion, at one moment as physical and at another as psychical elements. (Mach 1914: 61)

19 The name was used for the first time by Bertrand Russell to refer to the orientation which would be inaugurated by Mach and was common to a large number of philosophers and scientists living in the beginning of the twentieth century (see Banks 2003: 136).

20 This equation has generated quite a few misunderstandings over the years. For a detailed discussion of the theme of the "elements" in Mach, see Banks 2003.

Mach rejects the metaphysical foundation of Fechner's psychophysics, but agrees with the idea of overcoming the distinction between a corporeal and a spiritual world, focusing as well on the *functional* dimension of the relation between both domains. Since there is no physical or psychic phenomena, but only a physical or psychic *interpretation* of them, it does not make sense, in scientific research terms, to take into account anything else except the mode in which the elements are assembled. By focusing in turn on *relatively* more stable connections, it is possible to define the "metaphysical concepts of 'body' and 'I' (matter and soul)" (Mach 1914: 40), which in Mach's system clearly lose the metaphysical sense of an independent subsistence of their component elements.

5 The I as "ideal unity"

In the light of these observations, it is possible to address the specific issue of the I in Mach. He defines, first of all, psychic unity as the combination of sensations that refer to the individual bodily dimension (*Leib*), thus depriving the former of any determination beyond that complex of dispositions and feelings:

> That complex of memories, moods, and feelings, joined to a particular body (the human body), which is called the "I" or "Ego", manifests itself as relatively permanent. I may be engaged upon this or that subject, I may be quiet and cheerful, excited and ill-humored. Yet, pathological cases apart, enough durable features remain to identify the ego. Of course, the ego also is only of relative permanency. The apparent permanency of the ego consists chiefly in the single fact of its continuity, in the slowness of its changes. (Mach 1914: 3)

According to this perspective, the I is not anything beyond the multiplicity of elements that are related to the body (*Leib*); its origin is purely logical and derives from the demand of unity for the purpose of recognition. By means of the determination of a *soul* (Mach relates psychological unity explicitly to this notion), it is, in fact, possible to identify a person as such while observing her changes. The need to orient itself leads the intellect to build a unitary reference which may be used to give a name to the most persistent content of a complex of sensations. There is nothing beyond this purely practical process. The I, as well as the physical bodies (*Körper*), lose for Mach their traditional metaphysical value since it is not possible to identify a real and material substrate that remains once an object is deprived of all its properties.[21] Both the bodies and the

21 What is at stake here is the classical problem of the thing-in-itself, which Mach explicitly rejects as a useless and illusory notion. See Mach 1914: 6 and 30n.

I are simply a thought-construction. They are "only makeshifts, designed for provisional orientation and for definite *practical* ends" (Mach 1914: 13).

In his analysis of the I, Mach pays particular attention to the ontological primacy of the elements in what concerns the purely nominal unitary complex of notions developed by the intellect. Thus, the fundamental psychological concept is then to be defined starting from the formation of an "ideal mental-economic unity", whose function is to bring together "elements that are most intimately connected with pleasure and pain". "The delimitation of the ego", continues Mach, "is instinctively effected, is rendered familiar, and possibly becomes fixed through heredity" (Mach 1914: 22–23). On a strictly ontological basis, the complete dependence of the I from the elements demonstrates the illusory character of "its" metaphysical value. The elements, in fact, represent the "material" that, once connected, constitutes the individual soul; without the former there would be nothing to delimit:

> The primary fact is not the ego, but the elements (sensations). [...] The elements constitute the I. I have the sensation green, signifies that the element green occurs in a given complex of other elements (sensations, memories). When I cease to have the sensation green, when I die, then the elements no longer occur in the ordinary, familiar association. That is all. Only an ideal mental-economical unity, not a real unity, has ceased to exist. (Mach 1914: 23–24)

On the basis of Mach's monistic conception, it is not therefore possible, from a metaphysical point of view, to "save" the I (Mach famously argued that *"das Ich ist unrettbar"* – "the I is unsavable"; Mach 1914: 24). In fact, the I is lost in the (impermanent) connections between elements and it is thus necessary to abandon any pretension of ascribing an autonomous existence to it. In other words, once it is acknowledged that the subject is composed of sensations, it is impossible to want to maintain the integrity of the alleged psychical unity, as has been done in the past by science. The latter, Mach remarks, driven by the habit of "treating the unanalyzed ego-complex as an indiscernible unity", has attempted first to separate "the nervous system [...] from the body 'as the seat of the sensations'", and then turned to the brain and "selected [it] as the organ best fitted for this end" (Mach 1914: 26). Finally, science admitted the existence of a single *point* as seat of the soul, which was obviously not able to locate (Mach 1914: 26–27).[22] While sustaining a radical critique of scientific research of

22 Mach's remark is highly reminiscent of Lange's reconstruction, who focused at length on science's claim to locate a "seat" of the soul. We should notice also that after this paragraph Mach quotes a passage from Lichtenberg: "In his philosophical notes Lichtenberg says: 'We become conscious of certain representations that are not dependent upon us; of others that we

his day, Mach is aware, nevertheless, of the need to distinguish two domains of discourse, safeguarding the I's value as a reference notion, which is not possible to relinquish on the merely practical level. "In spite of all this", Mach admits conclusively, "the Ego is what is most important and most constant for my instinctive conceptions. It is the bond that holds all my experiences together, and the source of all my activity" (Mach 1914: 357). The consequence of this development is a new vision of the world in which "the antithesis between ego and world, between sensation (appearance) and thing [...] vanishes and we have simply to deal with the connection of elements" (Mach 1914: 14).

The reference to the illusory nature of the distinction between appearance and reality forms the point of departure of a section in *Knowledge and Error* (1905), in which Mach summarizes his own position concerning the I, using strong Nietzschean tones. Mach begins with the observation that, at the basis of the philosophical conception of the dualism between phenomenon and thing-in-itself, there lurks the view of common sense, which confounds "findings under the most various conditions with findings under very definite and specific conditions" (Mach 1976: 7). He continues:

> The weird and unknowable "thing-in-itself" behind appearances [*Erscheinung*] is the ordinary object's unmistakable twin, having lost all other significance. After misconstruing the boundary between the internal and external and thereby imposing the stamp of appearance [*Schein*] on the ego's entire content, have we any further need for an unknowable something outside the confines that the ego can never transcend? Is it any more than a relapse into ordinary thought to see some solid core behind "delusive" appearances? (Mach 1976: 7)[23]

at least think are dependent upon us. Where is the border-line? We know only of the existence of our sensations, presentations and thoughts. We should say, *It thinks*, just as we say, *It lightens*. It is going too far to say *cogito*, if we translate cogito by I *think*. The assumption, or postulation, of the ego is a mere practical necessity'" (Mach 1914: 28. This quote is present already in the first edition of Mach's work, Mach 1886: 20). This passage is the implicit point of reference of aphorism 17 of *Beyond Good and Evil*, in which Nietzsche carries further his critique of Descartes' I *think*, reflecting on the necessity of referring to an impersonal subject, that is, to the activity of thought itself, without having necessarily to *create* a subject underlying this event (see Loukidelis 2013). Thus, Lichtenberg seems to be a common source for both authors' reflections and this passage in particular constitutes a point of contact between Mach's psychological reflections and passages from Nietzsche's text.

23 As a confirmation of the Nietzschean character of Mach's thought and language, one should compare this passage with the final part of BGE 17, in which Nietzsche claims that "grammatical habits" mislead us into believing that thought is an activity, that every activity is produced by an agent, and as a result into postulating an ego as a cause of thought. Nietzsche continues: "Following the same basic scheme, the older atomism looked behind every 'force' that produces

Mach's anti-metaphysical position is well illustrated here. He thoroughly rejects any reference to a "thing-in-itself" inasmuch as it is beyond the reach of our understanding and thus superfluous (Mach 1914: 30n). Insofar as it is a mere illusory concept, it is also useless. Everything that we can know remains within the horizon of our ego. Moreover, Mach does not even admit the need to postulate such a metaphysical substrate in order to give meaning to what is observable. In his view, this is the difference between scientific knowledge and common sense. The latter is constitutively characterized by errors and "appearance".[24] Contextualizing his discourse in the field of psychology, Mach criticizes the pretension, still obvious in the science of his time, of seeking a substantial element beneath psychical phenomena. If one were to admit the principle of parallelism between the physical and the psychical domain, one would see how "the question as to appearance and reality loses its sense" (Mach 1976: 7). In fact, "elements like red, green, hot, cold and the rest, are physical and mental in virtue of their dependence on both external and internal circumstances" and "the only possible further question of interest concerns their functional interdependence, in the mathematical sense". Thus, continues Mach, "if we look at the restricted ego without prejudice, it too turns out to be a functional connection between these elements" (Mach 1976: 7–8). Mach is particularly clear on this point: "We need no unknown and unknowable something" to place beneath the ego's activity. "Yet there is something all but unexplored standing behind the ego, namely our body; but every new observation in physiology and psychology makes the ego better known to us" (Mach 1976: 8).

In the light of Lange's remarks examined in paragraph 2, these conclusions by Mach do not seem to require further explanation. In fact, they are in agreement with the perspective presented in the *History of Materialism*, which envisions the development of psychological studies progressing in the direction of a complete liberation from the traditional metaphysical conception. If psychology wants to establish itself as science, it should free itself from the need to find a

effects for that little lump of matter in which the force resides, and out of which the effects are produced, which is to say: the atom. More rigorous minds finally learned how to make do without that bit of 'residual earth'". With this comparison, it is certainly not our intention to argue for a direct influence between both authors (in this case, an influence of Nietzsche on Mach), but rather to highlight the agreement of their thought, which is accounted for by a contextualization of their ideas in a common cultural background.

24 Even in this point the similarities with Nietzsche's way of thinking are evident. The most important aspects are the fact that both stress the superfluousness of the "thing-in-itself" and the fact that they both reject as nonsensical the distinction between appearance and reality (see e.g. Mach 1976, ch. 1 and TI, How the 'true world' finally became a fable).

permanent material principle as a substrate of the soul. Any contrary attempt represents a step back from the position that holds to the *functional* character of all scientific notions.

Thus, with a sentence that sounds very similar to Nietzsche's remarks in BGE 54 and GM I 13 in which he rejects the distinction between agent and action in psychical phenomena, Mach continues to claim that "one who still needs an observing and acting subject has failed to see that he could have saved himself the whole trouble of the enquiry [of the reciprocal dependence of representations], for he has now gone full circle" (Mach 1976: 8). Finally, in perfect alignment with Lange, Mach takes Herbart's position into account, pointing out how the progress of psychology entails overcoming its chief limitation, that is, the fact of not having been able to take the decisive step towards a science free of metaphysical references:

> It was Herbart's main merit to have examined the processes of ideas as such, yet even he spoiled his whole psychology by starting from the assumption that the soul is simple. Only lately have we begun to accept a psychology without soul. (Mach 1976: 8)

6 The I as a "regulative fiction"

The considerations developed in the previous paragraphs present the context of Nietzsche's position towards the fundamental psychic unity. The discussion of Lange's and Mach's ideas is all the more useful in understanding some aspects of Nietzsche's critique of his contemporaries' conception of the ego since he had direct knowledge of both authors' work. In Lange's case, the debt is especially relevant as is now widely demonstrated in the critical literature. However, the same cannot be said of Mach. He is not mentioned in any of Nietzsche's writings and it is not possible to trace back to him any passage, be it published or unpublished. Despite this, it is possible to note a deep affinity regarding some epistemological positions, probably a sign of a common background of references.[25]

Nietzsche's point of view regarding the problem of the I is especially similar to Mach's critical approach to metaphysical knowledge. In fact, Nietzsche focuses on the purely fictional nature that characterizes the ego, with emphasis on the general characteristics of the activity of thought, which he describes in purely physiological terms. The I is considered as the product of a secondary activity of thought – that of logic – which intervenes in ascribing a subject to a process that is constitutively free of it:

25 For a discussion of the relation between Nietzsche and Mach, see Gori 2009 and 2012.

> What separates me most deeply from the metaphysicians is: I don't concede that the "I" is what thinks. Instead, I take the I itself to be a construction of thinking, of the same rank as "matter", "thing", "substance", "individual", "purpose", "number"; in other words to be only a regulative fiction with the help of which a kind of constancy and thus "knowability" is inserted into, invented into, a world of becoming. [...] It is only thinking that posits the I: but up to now philosophers have believed, like the "common people", that in "I think" there lay something or other of unmediated certainty and that this "I" was the given cause of thinking. (NL 1885, 35 [35], KSA 11: 526 = WLN, 20–21)

The I, as a product of thought, is nothing more than a conceptual entity whose value is limited to practical usefulness with a view to a categorization of the world and to its purely logical organization. Moreover, according to this perspective, the I belongs to the sphere of those substantial elements to which one is used to attributing absolute existence and whose origin lies in the translation of the outside world into a language that can be understood and used by our intellect.[26] Basically this is the same as Mach's idea according to which, as we have already seen, the I and the body are concepts that fulfill purely practical needs. It is not possible to locate any autonomous and absolutely permanent entity underneath them. Furthermore, Nietzsche agrees implicitly with Mach in admitting that the individual unity that holds together the multiplicity of perceptions, affects and sentiments which we refer to our body derives from a purely intellectual operation.[27] Besides, this operation conforms to the tendency of admitting being in a reality characterized by becoming and is, therefore, indicative of a purely metaphysical perspective, as Lange had already pointed out.

Nietzsche's reflections are not limited to the latter point. In his view, the I has a feature that distinguishes it from other substantial entities that arise from the simplification of a chaotic multiplicity through isolation of fixed and uniform forms. In order to give unity to feelings, perceptions and memories, one looks for something that is able to act as a source of such dispositions – as their "cause". The unification of the multiplicity of sensations is made through identi-

26 This is the case of the material atom, which Nietzsche, in BGE 12, directly compares with the notion of the soul in as much as both concepts are generated by a fundamental "metaphysical need". On the adaptive value of substantialist notions see also GS 110 and 111.

27 In a notebook from 1887–1888, Nietzsche points out in a more explicit way this dependence of the purely fictitious notion of the I from logic, demonstrating in particular the *need* of its admission in order that the human being be theoretically imposed upon the world. In fragment NL 1887, 9[89], KSA 12: 382, in particular, he speaks of the I as that "which is not touched by becoming", restating that the acknowledgement of individual subjectivity does not correspond to the description of a content that can be actually isolated, but instead leads in a more simple way to delimit a fictitious permanent core to which sensations and modifications ascribable to the sphere of inner sense can be referred.

fication of a spiritual entity, whose delimitation is not made otherwise than from its ability to act and for this reason it has no sense wanting to ascribe an existential value to it, as if it were possible to indicate and describe that from which an action springs in instances where all that is possible to ascertain are the effects of the action itself. In Nietzsche's interpretation, the subject is nothing but a creation of the activity of representation, an erroneous simplification generated by thinking that one can "designate as such the force which posits, invents, thinks, as distinct from all individual positing, inventing, thinking" (NL 1885, 2[152], KSA 12: 141 = WLN, 91).[28] We are moving within the general perspective that is synthetically expressed in Nietzsche's conclusion in GM I 13, according to which "there is no 'being' behind the deed, its effect and what becomes of it; 'the doer' is invented as an afterthought, – the doing is everything". If we apply this remark to the case of psychic phenomena, it is easy to see how it answers the question of the relation between body and mind (or, as has been previously defined, body-soul). Nietzsche reflects particularly on thought, noticing that it is not distinguished from the physiological activity that determines it and that as a result there is no subject-object dualism to substantiate it. There is no author of thoughts. The latter arise from the organism's inner processes. In the same way, there is no subject distinct from the sensations generated by our perceptive faculty: they appear spontaneously to us and only

28 The will to find a subject-agent located beneath the unfolding of events is a theme on which Nietzsche has insisted at length, deploring in particular the human being's tendency to anthropomorphize natural dynamics. This is evident, for example, in the case of the interpretation of the link between cause and effect. The latter is the model of a purely necessary dynamic, which, however, is commonly described in terms of human agency, even intentional one. The tendency, that is, is to project in things a familiar model of activity that ascribes subjective characteristics to the force that moves material reality. (See NL 1885, 2[83], KSA 12: 101–103 and NL 1888, 14[95], KSA 13: 273). This aspect was already pointed out by Lange in the pages of his *History of Materialism*, when he claims that force is "personified immediately" in the idea of matter, since we represent it "as an outflow of matter, as it were its tool. [...] What is anthropomorphic in the idea of matter still belongs at bottom to the notion of matter, to which, as to every subject, we transfer a part of our *ego*." (Lange 1880: 380) This observation may be compared directly with the following note by Nietzsche, in which is still manifested the tendency, common to Lange (1881: 156), to dismiss as "mythological" every explanation that claims to ascertain substantial entities beneath psychic phenomena: "'Cause' and 'effect': calculated psychologically, this is the belief which expresses itself in the verb, in active and passive, doing and being done to. In other words: it is preceded by the separation of what happens into a doing and a being done to, by the supposition of something that does. Belief in the doer is behind it: as if once all doing were subtracted from the 'doer', the doer itself would remain over. Here we are always prompted by the 'notion of I': all that happens has been interpreted as doing: with the mythology that a being corresponding to the 'I'––" (NL 1886–1887, 7[1], KSA 12: 249–250 = WLN, 129).

afterwards do they enter consciousness and are, thus, organized and understood. It is only at this point that the I's "regulative fiction" steps in. The latter is nothing but a logical support for the categorization of sensations (that are thus related to an unitary substrate), its usefulness being as undeniable as is its ontological inconsistency.

Nietzsche's most explicit discussion of the physiological conception of thought can be found in two fragments from 1884–1885, whose degree of development leaves us wondering if he intended to prepare them for publishing or even include them in *Beyond Good and Evil*. The first of the two notes contains also a draft for a title: *That which is involuntary in thought*. It reads:

> A thought emerges, often mixed and obscured by a crowd of thoughts. We take it out, purify it, put it on its feet and see how it *walks*–all this very swiftly! [...] The origin of thought is concealed from us; it is highly probable that it is a *symptom* of a more extensive condition like every feeling: that precisely this one and no other comes, that it comes with more or less brightness [...], in all this something of a total-condition is expressed. (NL 1884, 26[92], KSA 11: 173–174)

Nietzsche is of course referring to a form of conscious thought, which he considers a simple *sign* of an activity that takes place at a "pre-psychological" level.[29] However, when we speak of a psychological level we refer to something that arises from a much wider process, occurring at the depths, at the organic level, and of course in a manner absolutely devoid of intentionality. The origin of thought remains, therefore, unknown to us, not revealing itself at a conscious level, whereas everything we are aware of "is merely a surface- and sign-world" (GS 354), i.e. a *superficial* effect of the activity of the drives that constitute the inner dynamics of the organism.[30] This discussion is reprised and developed in the second note, written in 1885:

29 For an in-depth and exhaustive discussion of the issue of thinking and consciousness in Nietzsche, see Lupo 2006 (in particular p. 107ff.). On this topic see also Abel 2001, Emden 2005.

30 This claim of a "superficial" character of consciousness leads to the open debate on whether Nietzsche defends a strong epiphenomenalism or not. Such a view is developed in Leiter (2002) and in Riccardi (forthcoming), while Katsafanas (2005) argues against the strong epiphenomenalist reading. In his thorough study on Nietzsche's dealing with consciousness from 1880 to 1888, Lupo (2006) also argues that Nietzsche rejects a metaphysical view of consciousness (as a *faculty)*, but accepts an epiphenomenal view of it (even if not a strong one). In this section I basically follow Lupo, since it seems to me that his view is the most coherent with Nietzsche's statements from the *Nachlaß* 1884–1885. Nevertheless, it is not my intention to intervene in that debate, and even less to say a final word on the question of the causal efficacy of consciousness (also discussed in Constancio 2011), which I think exceeds the aims of this paper.

> In the form in which it comes, a thought is a sign with many meanings, requiring interpretation or, more precisely, an arbitrary narrowing and restriction before it finally becomes clear. It arises in me – where from? How? I don't know. It comes, independently of my will, usually circled about and clouded by a crowd of feelings, desires, aversions, and by other thoughts, often enough scarcely distinguishable from a "willing" or "feeling". [...] It is drawn out of this crowd, cleaned, set on its feet, watched as it stands there, moves about, all this at an amazing speed yet without any sense of haste. Who does all this I don't know, and I am certainly more observer than author of the process. [...] The origin of the thought remains hidden; in all probability it is only the symptom of a much more comprehensive state. (NL 1885, 38[1], KSA 11: 598–596 = WLN, 34–25)[31]

As we can see, Nietzsche restates the same idea in a more extensive form, namely that the process that generates thought takes place beneath consciousness, preceding the formation of a psychological or even logical dimension. By tracing cognitive processes back to their physiological foundation, he notes the absolute absence of a subject who could consciously – *voluntarily* – steer their occurrence.

What occurs in the case of thought is nothing more than the necessary occurrence of chemical and physical events whose outcome reaches our consciousness when the process reaches its end. Nietzsche refrains from any form of ontological commitment that could supply an answer to the question concerning the author of this activity. His suspension of judgment with regard to it is supported by the idea that we can remain simple spectators of the outcome of this unconscious process and that our intervention is reduced only to isolating the final thought from the "pulsional", instinctive mass from which it proceeds. The main error of Logic, to which is due the misunderstanding concerning the character of thought and the subsequent invention of an I, consists, thus, in this

31 It may be useful to say a few words to put this fragment into context. In fact, it appears in a very interesting section of the *Nachlaß* (group 38 of 1885), since many of its ideas appeared later in the group of paragraphs 15–19 of *Beyond Good and Evil*. In NL 1885, 38[3], KSA 11: 597–598, for example, one can find a retrieval of the fragment relative to the belief in the I as a cause of thought and as a immediate certainty (this note is clearly a preparation for BGE 16, as well as for the one which precedes it): "— thought is posited by the I; however hitherto one believed like the populace that in the 'I think' there is something immediately certain and that this 'I' is a given *cause* of thought, in analogy to which we can understand all other causal relations." It is no coincidence that immediately preceding it there is a note on logical thinking, where the idea of *regulative fiction* reappears, and that immediately after it there is a passage concerning "truth" (one should note that BGE 16 ends with the question: "but why insist on the truth?"). And again, flipping through the notebook of 1885, one can read a note on the subject of "will" that is a preparation for BGE 19, in which issues concerning the problem of the subject as the author of his own actions reappear.

attribution of an author/agent guiding the articulation of an absolutely natural dynamics. Thus, Nietzsche goes in the direction of a naturalization of thought processes, moving in the opposite direction to the practice of the anthropomorphic spiritualization of nature so harshly criticized by Lange, for example.

Stripped of the ontological value traditionally ascribed to it by psychology and of its autonomy from the chain of sensations, the I reveals its logical-fictional character, adopted for the purpose of ordering the flow of perceptions – a conclusion that, as we have seen, matches perfectly, either in its perspective as well as in its terms, that of Mach. According to this naturalization of thought, Nietzsche takes his argument to extremes and a few years later writes a note in his notebook, which suggests the complete exclusion of the subject-act dualism as a fiction:

> "Thinking", as posited by the theorists of knowledge, simply doesn't occur: it is a quite arbitrary fiction achieved by selecting one element from the process and subtracting all the others, an artificial trimming for the purpose of intelligibility ...
>
> The "mind", something that thinks: maybe even "the mind absolute, pure, unmixed" – this conception is a derivative, second consequence of the false self-observation that believes in "thinking": here first an act is imagined that doesn't occur, "thinking", and secondly a subject-substratum is imagined in which every act of this thinking, and nothing else, originates; i.e., both doing and doer are fictions. (NL 1887–1888, 11[113], KSA 13: 54 = WLN, 222)

In this passage Nietzsche is, of course, referring to a form of conscious thought, the culmination of a chain of processes enacted at a physiological level, of which only the final outcome can be apprehended. Both agents in this relation are the product of the translation of physiological dynamics in a language we can understand. Thus, they are mutually dependent on a logical level, and, as is the case with the "true" and "apparent" world spoken of in *Twilight of the Idols*, the elimination of the one entails the elimination of the other. In fact, there is no 'thinking' except as the ceaseless articulation of drives and instincts in the organism, just as there is no 'mind', a subject identifiable as '*something that thinks*'. Mind and thought can be defined only in relation to each other; once the former's ontological inconsistency is revealed, the latter loses meaning as well. Dualism is, therefore, overcome. In fact, it is completely eliminated.

7 Philosophy without an "I"

In light of these remarks, it is possible to observe a certain affinity between, on the one hand, Nietzsche's reflections on thought and the "I" and, on the other hand, the position of those who, in his time, argued for the possibility of found-

ing a scientific psychology. In general, Nietzsche shares the tendency to set himself free from a system of thought that claims to be able to find substantial entities everywhere, as if only with reference to them it were possible to achieve knowledge of a particular event. In contrast, philosophy for Nietzsche should go beyond ancient metaphysics and learn to do without those reference points that are as useful as they are illusory. The I is precisely one of those entities that we can only define as an "ideal unity" of our thoughts, and therefore something that can only result from the psychic activity it is supposed to cause. Nietzsche thus agrees with both Lange and Mach, who complained that scientific research should not aim at finding a "seat of the soul" and envisioned a new psychology that acknowledged the ontological inconsistency of its object of research. Accordingly, Nietzsche dissolves the I/subject in the depths of the physiological processes located beneath it, and in fact reduces it to them.[32] He does not think that the development of philosophy should lead to the (absolute) rejection of the I as a reference for human agency, but he definitely rejects the "prejudice of reason" which claims that the I is a substantial entity. One may still refer to the I, but only if one stresses its purely logical character, i.e., sees it as an "ideal unity" or "regulative fiction" that results from an interpretation of the physiological processes out of which conscious thought in his various forms arises (NL 1883, 9[41], KSA 10: 358).[33] As we read in Nietzsche's writings (chiefly in his notebooks), conscious thought is only the final moment of a long chain of

32 Nietzsche's view of the reduction of mental states to bodily states (see NL 1883, 9[41], KSA 10: 358) deserves a separate discussion, and we should first focus on the fact the he never provided a clear definition of what he meant by the term "body" (*Leib*). Without going into an issue that deserves a much more thorough treatment, I shall merely quote Luca Lupo's observations on this subject: "The notion of body held by Nietzsche is problematic, not univocal, and not reducible to a form of positivist materialism nor to a form of vitalism: in the place of the term 'body', philosophers employ the much more cautions phrase 'what we call body' and say of the latter that it is a 'symbol' pointing to a specific activity, that is, to the cooperation of a multitude of beings. Nietzsche thinks of the body as a field of forces, an organized entity, plural and multiple, in a word: *system of relations*" (Lupo 2006: 133). See also Gerhardt 2006.

33 In a note from 1885 Nietzsche stresses our erroneous giving an ontological value to this interpretation. He particularly argues that the proposition "I think" is a falsification of a natural process, and we mistake the result of that process for its cause. Whereas thought produces the I, we nonetheless see this I as the author of psychic phenomena: "*The chronological order reversed*. The 'external world' affects us: the effect is telegraphed into our brain, there arranged, given shape and traced back to its cause: then the cause is *projected*, and *only then does the fact enter our consciousness*. That is, the world of appearances *appears* to us as a cause only once 'it' has exerted its effect and the effect has been processed. That is, *we are constantly reversing the order of what happens*. – While 'I' see, *it* is already seeing something different" (NL 1885, 34[54], KSA 11: 437 = WLN, 4).

events that take place at an unconscious level, and the positing of a subject as the author of thought is due to our inability to order correctly the relation between cause and effect.[34]

We are thus thrown back to the starting point of this research, that is, to Nietzsche's critique of the "I think" in BGE and his remark that it is "a *falsification* of the facts to say that the subject 'I' is the condition of the predicate 'think'" (BGE 17). According to Nietzsche, we should replace this Cartesian "immediate certainty" with the idea that thought comes without an external subject willing it, and therefore we should say "it thinks" rather than "I think" ("*Es denkt*" rather than "*Ich denke*").[35] This would represent a considerable progress in philosophy, for it would entail our final release from that "metaphysical need" that prevails both in the scientific as well as in the religious sphere, a need that compels us to trace reality back to absolute foundations, no matter whether material (atoms) or spiritual (souls).

We can now provide an answer to the question initially raised – whether Nietzsche thinks that a "philosophy without an I" is actually possible. If we take the I as a remnant of a metaphysics of substance, that possibility does not strike us as so paradoxical. Philosophy should indeed get rid of this substantial notion, all the more so if philosophy wants to become truly "anti-christian" (BGE 54). But this task is limited to a very specific epistemic context and thus to a particular kind of I. More specifically, it does not involve a rejection of the I as a fundamental reference for the self-understanding of the subject as agent. In other words, the answer to the question whether the soul (i.e. the principle of human agency) disappears along with the I of psychology and philosophy (i.e. the cause of thoughts) is negative. Nietzsche's critique of the I is quite radical, but it does not prohibit the human being from referring to its own subjectivity – provided, however, that the latter is conceived of in a different way, that is, stripped from its metaphysical surface.

This is what we can infer, for example, from BGE 12. Here, Nietzsche criticizes the "atomistic need", and claims that alongside the principle of materialistic atomism "we must also put an end to that other and more disastrous atomism, the one Christianity has taught best and longest, the *atomism of the*

34 The reversal of the causal order of particular events, which Nietzsche finds peculiar to human beings, is one of the main topics of TI, The Four Great Errors. In §3 of that section Nietzsche particularly deals with the *error of a false causation* by making reference to the problem of "the I (the 'subject') as cause" and claiming that it is owing to the "oldest and most enduring psychology" that the "world become a multitude of doers" and "a doer ('subject') pushed its way under all events".

35 A detailed discussion of BGE 17 is provided in Loukidelis 2013.

soul [*Seelen-Atomistik*]", that is "the belief that the 'soul is something indestructible, eternal, indivisible'" (BGE 12). Nietzsche, however, does not stop at this point, but goes on to observe that "there is absolutely no need to give up 'the soul' itself, and relinquish one of the oldest and most venerable hypotheses [...]" (BGE 12). This passage is not in contradiction with what we stated above. Nietzsche's reasoning is in many respects close to that of Lange: he underlines, like Lange, the need to *reformulate* the concept of soul. The old conception of the soul as "a monad, an *atomon*" is to be replaced with a soul that becomes "mortal" and loses its substantial character by becoming a mere "subject-multiplicity", a sheer plurality of "drives and affects".

Thus the soul remains a subjective point of reference, and it retains, as such, the practical value that it had for the human being.[36] This is Nietzsche's view in *Twilight of the Idols*. The analysis of the "eternal idols", which are the truths established by the tradition (see EH, Twilight of the Idols 1), aims to abolish their value as absolutes, but not – as is often believed – to completely withdraw them from the practical plane. A closer look shows that Nietzsche focuses on how the faith in the epistemic legitimacy of knowledge created the "decadent" as a specific human type.[37] Therefore, is aim is not to reject the principles of our self-understanding – which are, after all, necessarily references for our agency –, but rather to "revaluate" them and promote the emergence of a new humanity, particularly of a new type of theoretical, intellectual human being. The possibility of a "philosophy without I" means, in sum, that behind the notion of an "I" there is a particular world-interpretation which needs to be reshaped in order for the human being to refer to the world and to itself in a new – revaluated – way.

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36 As we have seen, Mach states the same view in speaking of the economic utility of the concepts of body and I for scientific investigation.

37 See Gori/Piazzesi 2012: 17ff..

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