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Praktognosia: ecosophical remarks on Having a body

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Abstract
The authors trace the question "what can a body do?" back to one of the main conceptual lines of discussion featured in the history of modern thought, namely, the nature/culture distinction, closely linked to the object/subject and natural/artificial distinctions. These distinctions being the core of important developments in 20th-century French philosophical thought, a specific reference will be carried out to the works of philosophers Maurice Merleau-Ponty and Georges Canguilhem, dealing respectively with praktognosia and biological normativity. Having them in mind, the authors aim at relieving the body from the conceptual imagery provoked by yet another product of the nature/culture distinction: the mind/body dualism, which very often has submitted the latter to the former. Departing from the description of the ecosophical context assigned to the content of this article, the conclusive remarks hope for an ecologically renewed conceptualization of the body and its range of action.
Key words: Body; History of Science; Phenomenology; Praktognosia; Nature; Culture.

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Praktognosia: Comentários ecossóficos em ter um corpo

Resumo
Os autores rastream a questão "o que um corpo pode fazer?" até uma das principais linhas conceituais de discussão presentes na história do pensamento moderno, a saber: a distinção natureza/cultura, intimamente ligada à proliferação das distinções objeto/sujeito e natural/artificial. Por estas distinções, centrais pelo desenvolvimento do pensamento filosófico francês do século XX, eles vão fazer referencia *às* obras dos filósofos Maurice Merleau-Ponty e Georges Canguilhem, especificamente *às* noções de praktognosia e normatividade biológica. Tendo-os em mente, os autores pretendem libertar o corpo das cadeias do imaginário conceitual provocado por outro produto da distinção natureza/cultura: o dualismo mente/corpo, que muitas vezes submeteu o segundo ao primeiro. Partindo da descrição do contexto ecosófico em que se desenvolve o conteúdo deste artigo, as observações conclusivas esperam por uma conceituação ecologicamente renovada do corpo e de sua amplitude de ação.
Palavras-chave: Corpo; História da Ciência; Fenomenologia; Praktognosia; Natureza; Cultura.

Praktognosia: Remarques ecosophiques sur le corps

Résumé
Les auteurs retracent la question "que peut faire un corps?" dans le but revenir à l'une des lignes conceptuelles principales de l'histoire de la pensée moderne, c'est-à-dire, la distinction nature/culture, *étroitement* liée aux distinctions objet/sujet et naturel/artificiel. Avec ces distinctions *étant* au cœur de certains développements importants par la pensée philosophique française du XXe siècle, une référence spécifique sera faite aux travaux des philosophes Maurice Merleau-Ponty et Georges Canguilhem, traitant respectivement de la praktognosie et de la normativité biologique. En ayant cela à l'esprit, les auteurs visent à libérer le corps de l'imagerie conceptuelle provoquée par un autre produit de la distinction nature/culture: le dualisme esprit/corps, qui a très souvent soumis ce dernier au premier. Partant de la description du contexte *écosophique* attribué au contenu de cet article, les remarques concluantes espèrent une conceptualisation *écologiquement* renouvelée du corps et de son champ d'action.
Mots-clés: Corps; Histoire des sciences; Phénoménologie; Praktognosia; Nature; Culture.

Introduction

Some notes on an Ecosophical Approach. An ecosophical take on the issue at hand, "what can a body do", surely encompasses a reflection that concerns both philosophical and scientific ideas, since both conceptual lines are the very core of what we call "modernity". This interaction however, should not lead to an alleged dimension of pure thought or pure praxis, because this would result in paradoxes that seldom have been understood for what they really are: misconceptions about what either philosophy or science are supposed to do. We should not expect philosophy or science to tell what a body can do, but instead we should expect them to lay inside the possibilities of our bodies. In other words, we should expect them to mirror the concreteness of our life experiences: to do and to think must not be seen as mutually transcendent, but rather on the same plane of composition. This is precisely the spirit behind Arne Naess's definition of ecosophy:

> «"Ecosophy" is a compound of the prefix "eco-" found in economy and ecology, and the suffix "sophy" found in philosophy. In the word "philosophy", "-sophy" denotes insight or wisdom, and "philo-" denotes a kind of friendly love. "Sophia" need not have specific scientific pretensions as opposed to "logos" compound words (biology, anthropology, geology, etc.), but all "sophical" insight should be directly relevant for action. Through their actions, a person or organisation exemplifies sophia, sagacity, and wisdom - or lack thereof. "Sophia" intimates acquaintance and understanding rather than impersonal or abstract results… "Earth household" is closer to the mark. So an ecosophy becomes a philosophical world-view or system inspired by the conditions of life in the ecosphere» (NAESS, 1989, pp. 37-38)

Of course, along an ecosophical path of analysis, each body requires an account for the environment that houses it. Thus, no consideration of life can be provided by ecosophy, that tries to purify the body in itself from environmental factors or, conversely, the environment purified from the bodies that dwell in it. The human body cannot be isolated from its relation with other bodies dwelling in the ecosphere, bodies that effectively constitute the environment of the human body; furthermore, the human body is also the environment for other bodies. Rather than turning ecological issues into mere updates of the old question regarding the place of man in nature, ecosophy is willing to take the opportunity of developing a series of theoretical remarks that revolve around the feature of having a body: this alone should allow from the very beginning to avoid an anthropocentric take on the matter, which often lies at the end of other philosophical systems dealing with the environmental question.

Ecosophically speaking, thought is no evolutionary advantage, nor is it at its peak when realizing the ecological dimension. The difference is on the degree of articulation ecosophy aims at: rather than pointing at the urgency and the undeniable evidence, rather than turning ecology into a discipline of redemption, ecosophy would aim at expanding thought throughout the entire phenomenon of life on the planet.

> «The uniqueness of Homo sapiens, its special capacities among millions of kinds of other living beings, has been used as a premise for domination and mistreatment.

> Ecosophy uses it as a premise for a universal care that other species can neither understand nor afford» (NAESS, 1989, P. 171)

By implementing ecosophy in an analytical approach to the issues with which this paper deals, we try to bring human thought outside the boundaries of its own body and learn transversally about the experience of having a body, a feature that by no means can be considered as exclusive of humans. Thus, we aim at overcoming anthropocentrism, not as a naïve promise of developing an all-entailing systematic reflection on the environment, but more as an experimental promise of multiplying the ways of having a body, producing in this process a wider consideration on what life throughout the ecosphere actually is and how the dangers represented by the ecological crisis can take multiple forms throughout its vast extension. In this sense, another account of ecosophy that is key to understanding the scope of this analysis is that of Félix Guattari:

> «A new ecosophy, at once applied and theoretical, ethico-political and aesthetic, would have to move away from the old forms of political, religious and associative commitment. Rather than being a discipline of refolding on interiority, or a simple renewal of earlier forms of 'militancy', it will be a multifaceted movement, deploying agencies [instances] and dispositifs that will simultaneously analyse and produce subjectivity. A collective and individual subjectivity that completely exceeds the limits of individualization, stagnation, identificatory closure, and will instead open itself up on all sides to the socius, but also to the machinic Phylum, to techno-scientific Universes of reference, to aesthetic worlds, as well as to a new 'pre-personal' understanding of time, of the body, of sexuality. A subjectivity of resingularization that can meet head-on the encounter with the finitude of desire, pain and death» (GUATTARI, 2000, pp. 67-68)

It's important to understand that, in the same way as philosophical and scientific thought are seen as intertwined, thought and action, theory and practice are intimately related, and the only way to gain experience on this relation is by grasping the immense diversity implied in living beings' feature of having a body. In this sense, ecosophy wishes to switch back and forth from a classifying rationality to some sort of field comprehension. Ecosophy, as we understand it, can take the issue of a body's potentiality and further articulate it into a level of analysis that distinguishes the individual and the collective body, the logical and the analogical body, the body as a whole and the body as a sum of parts, and finally the body as product of a historical continuum and the body as a series of juxtaposed geographical continua.

> «The increasing deterioration of human relations with the socius, the psyche and ‹nature›, is due not only to environmental and objective pollution but is also the result of a certain incomprehension and fatalistic passivity towards these issues as a whole, among both individuals and governments. Catastrophic or not, negative developments [evolutions] are simply accepted without question… The explanations offered for this decline of social praxes – the death of ideologies and the return to universal values – seem to me unsatisfactory. Rather, it appears to be a result of the failure of social and psychological praxes to adapt, as well as a certain blindness to the erroneousness of dividing the Real into a number of discrete domains. It is quite wrong to make a distinction between action on the psyche, the

> socius and the environment. Refusal to face up to the erosion of these three areas, as the media would have us do, verges on a strategic infantilization of opinion and a destructive neutralization of democracy» (GUATTARI, 2000, p. 41)

Natural and cultural analogies of the body

Among those dichotomies that have marked modern philosophical thought as well as Western common sense[1], surely one of the most notorious and controversial is the pair "mind-body". Therefore, modernity (especially in its contemporary version) has a particular way of answering to the question put forth in the title of this volume. What a body might (or might not) do can be established by modern rationality if and only if a method (most clearly, a scientific method) can be held as valid means of obtaining knowledge related to the body itself. Thus, what a body does, it does methodically, and only so a body can do anything at all; besides, whenever it must be asserted that a body can't do something, the constraints on it must be methodical, at least formally. All of this implies, of course, that any method will always answer to the question about the body from outside the body, treating it as an object allowed to (or restrained from) a certain course of action, which is always external to the body itself: in other words, the body has to be placed in one side of the dichotomy. The movement from outside-the-body to inside-the-body (and all the way back) traces a polarity that is well known to historians of philosophy, for it constitutes a fundamental trait of modern thinking, a polarity that sets out from a neat distinction between a natural and a "social" (or "cultural", depending on the conceptual milieu in which one is moving) extent along which a body can (or can't) do.

The world as it is constituted by mind, by consciousness, by intelligence, by rationality is usually conceived as opposite to the world made up of bodies, of objects, of sheer things (*blosse Sachen*); this is the same as stating that on the one hand there is a world constituted by Culture (history, society) and on the other hand there is a Natural world, constituted by mechanical causality, in which causes may be of a chemical, physical or biological nature. Anyhow, the relationship between modernity and the world made up of bodies is always mediated by our intellectual faculties. Furthermore, this mediation is apparently neutral, to the extent that the feature of being "biological" blends with the feature of being natural in the wider sense, namely "organic", i.e., biological agriculture or organic food. This dichotomy stands in tight relation with another one, constituted by the pair "necessary-contingent", that is, what's necessary (stable, fixed, certain beyond any doubt) and that which on the contrary is changing, in transformation, often confusing: to know the body and its range of action means to fixate it properly along the necessary features it presents when compared to the tenets of a method, while contingency is taken into consideration only when the intellectual faculties' mediation is highlighted, usually ending up in its absolute negation. For this reason – wishing to avoid the misunderstandings the body has endured throughout the history of Western philosophy – it may turn useful to consider some interesting philosophical aspects of the history of

1 For simplicity's sake, "modern" and "Western" will be used as synonims in this paper.

Western scientific thought, in order to trace the body's relevance to the generation of this conceptual distinction.

The first method that allowed to codify the body as a modern object of knowledge actually lives on, and it consists on the implementation of the "machinery analogy"; an example that suits the purpose of illustrating how the body is turned into a mechanical model is the monumental work of Giovanni Alfonso Borelli, *De motu animalium*, published posthumously in two volumes towards the end of the 17th century: in this work, those features of animated non-human life that are most visible are methodically laid down as mechanical phenomena, the pieces of such machinery being muscles and tendons, joints and knuckles. Of course, the machinery analogy can answer to the initial question, "what can a body do" only by first replacing it with another question, "what a body is" (or should be, ideally). If the body is a machine, then the body can do whatever any mechanism can do; conversely, if the body is a machine, it will be correct to claim that there are some outcomes excluded from the workings of its mechanism. In other words, bodies are to be understood as movement and absence of movement, and this movement corresponds exactly to that which a body can do at any given time. Plus, by reprising the label "animal" of Aristotelian provenance, he purposely puts rationality and method, by all means "intellectual faculties", outside of the body (accordingly, the *facultas motiva*), adding up to the constitution of the "mind-body" dichotomy and to the neutralizing equivalence between "organic" and "necessary": whatever a body can do, it may do necessarily.

Of course, Borelli's viewpoint cannot be taken as the ultimate token of how modern mechanics relates to the body. First and foremost, because Borelli's work relies on merely one aspect of mechanics, that is, mathematical modelling. What a body can do (and what it can't do) can be established through the composition and balance of physical forces that can be expressed through quantitative analysis. Ideally, such an analysis results in the formulation of laws that bind together knowledge, foreknowledge and power over that which a body is able to do, therefore the body's mechanics aims at explaining how a body is through its movement, and movement is to be understood by means of laws. This, of course, is tantamount to admitting that the body is a machine, while avoiding the issue of conforming the method to the body's actual potentialities. It is not the duty of mechanics to know why a body moves because, to put it bluntly, an answer to this question could only be fulfilled by a hypothesis, which necessarily compels or defies what the model establishes: knowing what muscles and tendons, joints and knuckles may do without compromising their physical integrity is more convenient than finding it out, and precisely in this spirit Borelli closes his chapter on flight stating that the human body is unable to fly like the birds do (BORELLI, 1685, pp. 243-246). There has to be a good and a bad use of mathematically consistent models, and these cannot be explained by the model itself: the same understanding that lead to acknowledging the impossibility of human flight would eventually lead to heavier-than-air flight. This means for us that an answer to what a body can (or can't) do is not meant to be a definitive one: alas, men can fly, if not by themselves, at least thanks to their mechanical understanding of what bodies do.

The machinery analogy, though paramount to the understanding of the body's modern conception, wasn't the only conceptual attempt at treating the body as an intel-

lectual topic. As a matter of fact, medieval political thought from the 14th century onwards frequently made reference to the organic analogy, suggesting by it a certain manner of conceiving society as a whole body, more specifically the body politic: if not the most eloquent example nor the most intuitive introductory reading, the *Livre du corps de policie* by Christine de Pizan may prove a solid introductory reading to the question of obedience and vertical reciprocity in the Middle Ages, a topic that cannot be dealt with in this brief paper; however, if one were to follow this thread, indirect applications of the organic analogy would be found along such theological issues such as the causal efficiency of God's will and papal infallibility. Needless to say, these attempts would later ground very important contributions to modern political philosophy, contributions that would concentrate almost entirely on the subject of sovereignty and the rule of law. Arguably, the most visible shift between medieval and modern theories of sovereignty has to be the bottom-up conception of political power, in which all the importance assigned to the head of the body politic is balanced by the value of all the remaining parts of the body that contrast the head: no more is power to be understood exclusively as a top-down fact, always and equally given; as a matter of fact, Christine's book features one of the first conceptualizations of the common people's contributions to the political stability of the State, where by "political", a dimension of political economy is meant (PIZAN, 1994) There has to be some unity, but it has to come out of multiplicity: it may not be a coincidence at all thus, that modern political thought has faced very often and wholeheartedly the topic of unity under a sovereign while leaving aside those aspects of the body-politic that put the emphasis on the diversity of the parts that are built into a body.

By means of the organic and the mechanic analogies, the association between bodies and the feature of being animated became progressively less of a dogmatic subject and more an issue of discussion and consensus: instead of conforming to providential determinism and secondary causality, modernity opened the path towards an emancipation of the body and its modalities. Rather than being a feature of animated life, the body now is what establishes the extent to which life is animated or not. The body-politic and the body-machine are thus explanatory models that don't require any further and superior grounding, for their good and bad standards, their increase or decrease in terms of vividness is no more conformity to grace or natural laws, rather than an elaboration of their own features. In fact, experimentation is a crucial feature of knowledge of what a body can or can't do.

Body learning as a mimetic process

As a matter of fact, we all can endure in our daily lives how much a body is constantly permeated by contingencies; our physical features once we are 40 years old are not the same as those we had when we were 20; some daily actions may not be achievable anymore; if we stop training, our performance decreases remarkably; the smallest incident may have a strong impact on our muscular constitution. Needless to say, important enhancement comes from pharmacological and cosmetic treatments, as well as psychological counseling, in order to "tolerate" this transience of the body features.

Very often, in the context of our Western cultural milieu, we are brought to fight against the body's transient nature keeping up along the indictments of a scientific discipline, helping us to contain, contrast and ultimately keep under control this dimension of a body's constant transformation. We try to stay as close as possible to that which seems constant throughout these changes, that which is necessary for our bodies in order to be so. This way, we are prone to think that knowledge of the body is tantamount to finding out some fundamental laws (chemical, physical, biological and so on) that allow to establish *what a body is* notwithstanding the personal and individual experience of having a body; these laws thus allow to put constraints on the transience and the contingency of having it.[2]

However, and despite these efforts, a body avoids all these attempts at its subsumption, because it is an intrinsic feature of bodies to never be identical to themselves and, consequently, they never behave plainly as simple objects of knowledge. On the contrary, a living body bears its value and meaning precisely because it engages its natural (i.e. physical, chemical and biological) properties just as well as its cultural traits.

Regarding the human body, but the same should be said of every living body (LATOUR, 1991; INGOLD, 2000), it is utterly impossible to separate natural and cultural (i.e. historical and social) elements, unless this separation is taken to be a very abstract one. In this context, XXth century's French philosophical thought provides with fine instruments in order to comprehend the body in its crossroads status between nature and culture. For example, the anthropologist Marcel Mauss spoke of "techniques of the body", meaning by it the body as an instrument at the human animal's service, as input for a specific "technique", understood in the wider sense of using tools; for instance, the opposable thumb is not merely a case for natural selection but it also presents technical ("artificial") features, which means that what's natural in natural selection cannot be purified from the cultural layer of the human animal, that is, the social potential of primates as a whole (MAUSS, 1936).

In this sense, the body as a technical apparatus stands on the verge of the nature/culture distinction; properly speaking, it is neither natural nor cultural but lays outside this dichotomy. The body thus presents itself as a hybrid phenomenon, whose existence as far as it is technical coincides with its usage (LATOUR, 1991).

On the other hand, Gabriel Tarde, while attempting to establish sociology on a scientific ground, proposed *imitative repetition* as a fundamental element of society (hence, of culture). According to him, societies are grounded on a mimetic relation consisting of repetition of gestures, postures and behaviors. Putting the emphasis on the mimetic aspect of social life equals to settle the human not as a spiritual element (as did modern thought between XVIIth and XVIIIth centuries) but as a bodily subject. In fact, in order to underline the importance of the body-analogy, suffice it to point out that Tarde considers culture as a phenomenon of contagion of imitation.[3]

2 It is impossible to avoid seeing a marketing strategy behind the scientific characterization of these laws, aiming at the tollerance we mentioned before.

3 Tarde's work, which could be seen as a sociological interpretation of some key tenets of Leibniz's pilosophy, has a heavy influence on the work of Deleuze (1995). Plus, mimesis plays a major role in the French intellectual landscape, regarding specifically the nature/culture distinction (MERLEAU-PONTY, 1995, 240-243; HARDOUIN, 1946).

Mimesis is probably one of the most ancient and fascinating philosophical issues; it could lead us all the way back to Plato and Aristotle, but following this trail could in turn lead us off-topic[4]. However, it should be enough to highlight a paramount characteristic of imitation: to imitate implies producing a variation with respect to the imitated model rather than reproducing it faithfully. By this we mean that a body imitating another body's behavior doesn't limit itself to replay the very same behavioral formula but instead, by repeating it, learning and making it its own, a modification takes place, hence producing behavioral variations. In Tarde's point of view, these variations channel social transformation. This kind of social variation, which regards the body's ability to learn through an imitational procedure, departs from the natural reproduction of natural (physical, chemical, biological) laws. This process therefore implies the repetition of *anomalies* through the contagion of imitation (TARDE, 1890).

By means of this brief digression, loaded with introductory philosophical notions to which we can only hint at, we can give an idea of the strong relation that stands between contingency and the body, effectively providing with an alternative to searching for natural laws ruling over the body. As a matter of fact, we may now add another dichotomy to those that we introduced at the outset of this paper, mind-body and necessity-contingency: namely, the pair "knowledge-power" (*savoir-pouvoir*), a dichotomy linked most notoriously to the work of Michel Foucault. If we can read the social as a process of learning techniques of the body through imitation, then it's clear that to speak of a technique of the body means to be able to do something and in particular to be able to do something *like someone else does*. We'll get back to this further on. The concept of mimesis allows us to shift the attention given to knowledge: knowing is not to determinate what a body objectively is; rather, knowing equals to learning about some techniques, which in turn equals to learn *how* to do something, hence the body stands as the knowing subject instead of merely an object of this knowledge.

If knowledge means learning – and, as far as this learning is imitating, there's always a context, an environment to this learning – then what's learned allows to do some things and precludes other things. This weaving of knowledge and power is broadly what Foucault deemed a "bio-political dispositif". "Dispositif" derives from the Latin "disponere", "dispositum", "dispositio", and all of these terms refer to a sense of placement and ordaining[5]. A dispositif implies a series of orders, of things that can or cannot be done. Regardless of rigorous comprehensiveness, we may say that a dispositif defines what a bio-political body can do[6].

A dispositif thus ties knowledge and power. Gilles Deleuze (1988), in reference to his friend Foucault's work, has put the emphasis on how the Subject is the output of this tie (FADINI 2015, pp. 15-61; FADINI 2016, pp.103-111, pp. 139-163), that is, on how the dispositif is tantamount to a process of subjectivation (CREMONESI *et al.*, 2016). This

4 To make it very short, Plato though that imitation meant decay while Aristotle thought that imitation was creative: the difference could be that between painting and playing theatrically (IACONO 2010).

5 For an overview of the concept, (IACONO, 2018).

6 (FOUCAULT, 2004; STIMILLI, 2017; IOFRIDA, 2018; ESPOSITO, 2018; ESPOSITO, 2004; HABER, 2012; TERREL, 2010; CUTRO, 2005).

way, a peculiar definition of Subject comes out: it results from a disposition defined by that which can or cannot be done. Foucault, on speaking about bio-politics, underscored how dispositifs are to be applied on bodies, actually speaking about *neoliberal orthopedics* (BAZZICALUPO, 2013). This way, we are in front of a conception of the Subject and knowledge that is opposite to the classical model, according to which the Subject is mere consciousness while knowledge amounts to determining what a body objectively is. Through the dispositif, new light can be shed on the mind-body, Subject-object relation.

This Foucauldian perspective – akin to a post-structuralist take on the matter – mind and body, Subject and object do not constitute an antithesis. Consciousness thus is not the expression of a transcendental Subject, conscious of itself and the world around it; instead, consciousness amounts to all that a body has learned – one could say, experience protocols (LUCATTI, 2016, p. 105). In this view, the body is not the noematic correlative of consciousness, a mere object, but instead it is everything that can be done with respect to these protocols. A body therefore is not a thing but a potency.

Biological normativity and praktognosia

Doubtlessly, the relation between knowledge, power and the body is among the most fruitful topics within the post-structuralist context. Nevertheless, this relation shouldn't be attributed exclusively to Foucault's work. Here, we'd like to mention two authors; the first one is usually recognized as one of Foucault's masters: Georges Canguilhem.

One of the main concepts of Canguilhem's work is *biological normativity*. According to him, norm is to be distinguished from law. The latter is universal and is valid for every instance included in its jurisdiction (i.e. universal gravitation is valid for every mass in the Universe), while the former is not valid for every biological body and neither does it stay valid for the same body. A norm has to do with the very existence of the body (---) and expresses a habit of the body. With this, the very meaning of biology as a discipline shifts: it no longer is a science that states what a body is, but rather it follows the body's normative pace. Instead of reducing each body to an objective general law, modelling in biology aims at understanding what a body (in the context of a certain topology) can do. This take on the matters underscores a peculiar aspect of the relation between knowledge and power, which has a decisive influence on Foucault's work (MACHEREY, 2009). To know means to experiment on what a body can do.

In fact, the question itself implies a normative approach to the issue at hand; this is to say that objective knowledge of that which a body can or can't do. Basically, what happens is that the body is at the same time a natural and a cultural state of things: what seemed like a dipolar compound is actually a monopolar singularity. This means that whenever a (scientific) method concentrates on the body, it simultaneously assigns to it a degree of value that can account for this polarity: when the method addresses its necessary elements, the value assigned to the body is hierarchical and ultimately social, since intellectual faculties are taken for granted and animal faculties are ordained according to their specific abilities, so that anomalies are relative to an ideally good or ideally bad use of the body; when the method addresses the body's contingencies, the value assigned to the body is that of conformity to a natural law (SERRES 1982). To avoid this, it beco-

mes necessary to separate our analogic understanding of what a body can do from the nature-culture distinction and its mind-body, necessary-contingent derivations.

Thus, in order to understand what's at stake when answering to the initial question, it is important to recall that the consolidation of both these analogies preceded and cleared the way for the rise of modern biological disciplines: this is particularly obvious when considering the notion of life as polarity developed by Canguilhem. Canguilhem's insights are very important for the purposes of this paper. His work bears major significance in the history of philosophy because it mirrors the peculiar context in which the rise of French epistemology took place; though it will not be treated directly, the topic might be of interest in a wider scope on the interactions between philosophical and scientific thought, as the reader may acknowledge once he or she considers the development of a parallel conceptual trail in French philosophy during the same historical period: the philosophy of Merleau-Ponty, with wich we'll deal briefly further on. As Michel Foucault would put it, the theoretical concerns contained in the latter's work are more in line with a philosophical mood regarding the subject and experience, and it would be no inaccuracy to claim that this path leads directly to the issue raised by the initial question, that is, the body and what it can do; even so, a philosophy that deals instead with knowledge and rationality cannot be said to be completely unrelated to the body as a matter of discussion. (CANGUILHEM, 1991, p. 7)

Strictly speaking, before the existential mood that became typical of a certain strain in French contemporary philosophy, there was the proliferation of body knowledge in terms of biological processes involved in the body's development, and only through these conceptual developments a truly fruitful deconstruction of experience as a mode of existence was possible: it is impossible to detach these conceptual developments from the development of the medical disciplines, in which a further articulation of both analogies gave rise to an aspect of animated life, almost as if a new analogy could be able to absorb them both: the body as a regularity and the couple health/disease as a valid means of understanding the behavior of such regularity. Canguilhem's foundational work may indicate biological normativity as a constant readjustment of the learning process implied in having a body. In substance, whatever a body can do, it should be able to do normally, which means that the theoretical temptation of defining a body instead of dealing with its potentiality shows itself as the immediate, more "natural" approach, while what lies outside the norm is always open to the possibility of modification. But to deal with definition in terms of normativity requires a major shift in our understanding of the body's ontology.

> «For a long time people tried to find out whether they could prove the existence of the perfect being starting with its quality of perfection, since, having all the perfections, it would also have that of bringing about its own existence. The problem of the actual existence of perfect health is analogous. As if perfect health were not a normative concept, an ideal type? Strictly speaking a norm does not exist, it plays its role which is to devalue existence by allowing its correction. To say that perfect health does not exist is simply saying that the concept of health is not one of an existence, but of a norm whose function and value is to be brought into contact with existence in order to stimulate modification. This does not mean that health is an empty concept». (CANGUILHEM, 1991, p. 77)

It means instead, if we may complete the idea, that health and disease, the body's full or diminished range of action, cannot be defined unless an experience protocol is endured. This aspect of experimentation leads to the second author we had in mind, usually considered to lay far from Foucault's positions: Maurice Merleau-Ponty. In spite of this, Merleau-Ponty was a thinker who had a huge influence on the French intellectual milieu while Foucault was young (IOFRIDA & MELEGARI, 2018, pp. 13-21; p. 31); besides, in this same context, he was the philosopher whose work more than anyone else put the body at the center of a theoretical, ethical and political consideration: to go through all of it would exceed the length of this paper, just as much as it would be lengthy to trace the affinities between him and Foucault.[7] Here, we'll stick to developing one of Merleau-Ponty's key concepts in one of his major works, *Phenomenology of perception*, published in 1945, two years after the first appearance of Canguilhem's *The normal and the pathological*.

While Canguilhem's interest in the body was epistemological, Merleau-Ponty's take on the matter aims at outlining an ontology of the body (DASTUR, 2001, pp. 29-47), but in the renewed terms of polarity, accordingly as they were laid out in Canguilhem's work: this should be evident by addressing Merleau-Ponty's concept of *praktognosia*. Though it could offer a wide scope on the topic, it should be enough to consider the renewed sense this concept gives to the knowledge-power relation and the place of the body in this context, when considering it next to the techniques of the body, the contagion of imitation and their involvement in the subjectivation process.

Praktognosia is a portmanteau built by "praxis" (action) and "gnosis" (knowledge), and it stands for the strong tie between knowing and doing. This tie is double: it indicates knowledge of ways of doing, though it's not just a preliminary kind of knowledge placed immediately before action; this would lead to suppose that there is a knowing Subject that can know independently from his own doing, thus returning to the Subject-object distinction. In order to avoid this difficulty, which would lead to subjectivism, there is another aspect of praktognosia: to do is to know already, from the very outset. Doing and knowing are the same thing, for both of them determine the structure of the world understood as an environment, at the same time known and done: the sense of this is that the relation between the body and the environment runs back and forth.

Praktognosia should be helpful in going beyond the nature-culture distinction. On the hand, polarization over the natural pole leads to biological reductionism, subduing the body and its range of action to natural laws, as is the case of the "selfish gene" (DAWKINS, 1976). On the other hand, the social pole reduces the body to the rules of social construction, which seems to make impossible any statement about the body unless it hasn't been assumed as a success indicator for the proliferation of technology (BIJKER, HUGHES, PINCH, 1989). Whatever the strategy for subsuming the body under a universal law defining its essence, these two kinds of reductionism lose sight of the ecological moment: the deep relation binding together the individual and the environment.

7 "Ogni volta il corpo si ponga come agente nel mondo […], esso stabilisce una norma funzionale" (AMOROSO, 2014, 221). For an overview of Merleau-Ponty's thought in the Italian philosophical landscape, (VANZAGO, 2012). For the affinities between Merleau-Ponty and Foucault, (REVEL, 2015; RIGHETTI, 2006). For Merleau-Ponty and biopolitics, (ESPOSITO, 2004, pp. 171-183)

To stress only one sense of this relation leads to reductionism, so it becomes necessary to characterize it as having a double direction: from the inside to outside and conversely. This way, none of the two poles may exist outside this relation and the menace of essentialism is cast away: no longer will knowing what a body is be more important than taking into consideration its singular potencies.

Imitation is the core of the relation, while the techniques of the body stand for the cognitive value assigned to the body itself. Furthermore, interestingly, imitating the techniques of the body doesn't stand for the transmission of a quality, namely, a correct or incorrect use of such techniques, since imitating means transforming what's being taken as a model. Imitation implies the transmission of an anomaly, a difference between what imitates and what's imitated. Praktognosia stands on the verge of this difference: a kind of body knowledge that is grounding but in the most peculiar way (ROBERT, 2014). Through action, the body learns specific behaviors or experience protocol, as we deemed them above; these protocols are by no means "natural", nor can they be encompassed by social orthopedics. If this would be the case, then no difference would take place in imitation (IACONO, 2010). Instead, by characterizing imitation as the contagion of anomalies, it would be possible to think about body performances in terms of normativity, meaning by it some sort of retro-action, from what imitates onto what's being imitated. By binding together action and knowledge, the ecological moment thus becomes visible, between the individual and the environment under the conditions of this feedback relation (IOFRIDA, 2017).

Plus, praktognosia also has to do with negativity, which allegedly constitutes its most interesting aspect: a body learns only if it is manages to create anomalies. This notion stands out in Merleau-Ponty's lectures on nature, delivered at the Collège de France by the end of the 1950's; like Canguilhem, he defines the body as a fluctuation with respect to given norms [MERLEAU-PONTY, 1995, p. 239] in order to highlight its plasticity and its resistance to any kind of pre-established principle . This fluctuation takes place as the stochastic (dynamic) unity of experience protocols that define the feature of having a body.

It could be argued that Foucault dealt with the dynamic feature of these protocols in terms of governamentality, that is, in terms of the management of anomalies and abnormal individuals (FOUCAULT, 1999; LEMM & VATTER, 2014; MAUER 2015; SKORNICKI 2015; LEGRAND, 2007). But since there is no such thing as correct bodies, power (as in controlling the system's anomalies) is obliged to enforce the orthopedics of bodies by instituting models of usage that go hand in hand with bio-political aspects of knowledge (ESPOSITO, 2004, pp. 30-32; IOFRIDA & MELEGARI, 2018, p. 171). However, this resistance may become a line of flight, through the proper understanding of bodies as holders of praktognosia. What a body can do is determined not by an essence nor by a natural law, let alone by a social construct: what a body can do is determined by a normative capacity, which is given by imitation and set between knowledge and power. Notwithstanding, the order delivered by bio-political dispositifs manages to deprive the body of its radical contingency, bringing back the issue of the dichotomy necessity-contingency to our discussion (AMOROSO & DE FAZIO, 2018). In this sense, it could be interesting to read what Merleau-Ponty has to say about the topic at hand:

> «Everything in man is a necessity. For example, it is no mere coincidence that the rational being is also the one who holds himself upright or has a thumb which can be brought opposite to the fingers; the same manner of existing is evident in both aspects. On the other hand everything in man is contingency in the sense that this human manner of existence is not guaranteed to every human child through some essence acquired at birth, and in the sense that it must be constantly re-forged in him through the hazards encountered by the objective body. Man is a historical idea and not a natural species. In other words, there is in human existence no unconditioned possession, and yet no fortuitous attribute. Human existence will force us to revise our usual notion of necessity and contingency, because it is the transformation of contingency into necessity by an act of taking in hand. All that we are, we are on the basis of a de facto situation which we appropriate to ourselves and which we ceaselessly by a sort of escape which is never an unconditioned freedom» (MERLEAU-PONTY, 1981, pp. 170-171).

The reader should find ethical and political inspiration in these words by Merleau-Ponty. We can merely indicate how praktognosia and imitation beg the question for an ecological consideration of the body, which in turn calls for a reflection on the historical sense of it, where history doesn't stand for the realization of the human spirit's destiny, but rather for bodily experimentation, for the possibility of transforming somehow the already given situation. (IOFRIDA 2007, p. 85)

Conclusive remarks

Hence, throughout the Modern Age the body has gained sense and meaning from both poles, galvanizing upon one of them and constructing its discourse on the other one, assuming a subordinate position inside conceptual dichotomies, like mind/body, necessary-contingent: to deploy some rigorous philosophical terminology, the ultimate way of laying out the dichotomy would be to state it as symptomatology-hermeneutics. Naturalizing the body-machine, thoroughly modelling it, leads to Western medicine, whose development however depends upon strictly social protocols. Likewise, socializing the body-politic, accurately reconstructing it, leads to Western statistics, whose development is deeply rooted in the conceptualization of frequency, of regularity and, ultimately, of natural laws. One provisory conclusion from both Borelli's and Pizan's treatment of the body, with respect to those dichotomies that put it in a subordinate position, is that a body implies a process of learning: by means of the body-machine, Galilean mechanics is confirmed as a valid source of knowledge; by means of the body-politic, the prince's pedagogy is confirmed as the best alternative to the atomization of political power throughout the territory. Nevertheless, since the body is at the center of both analogies, modality is not inherent to these learning processes, for neither mechanics nor the organic analogy care to explain efficient causality, namely, why are the body-machine or the body-politic respectively mechanical or political in the first place: the polarity collapses whenever it is brought to answering to the initial question "what can a body do?", precisely because each body should be able to assess it for itself.

Why is Canguilhem concerned with the ontological implications of health and disease? It is important to consider the scope of his argument: a philosophical mood dealing

with the history of science tout court and specific scientific concepts faces the very same issues that before were mentioned when speaking of the nature/culture distinction's collapse. In this case, the problems arise when using the distinction to understand the opposition of approaches to biology that are either mechanistic or, on the opposite side, related to vitalism. Modernity often offers a picture of the medical disciplines as applications of a more fundamental knowledge, grounded either on the accuracy of the machinery analogy or in the goodness of a normal life. The problem is that this releases the development of medicine from the issue raised by the initial question, which seems highly counter-intuitive.

> «Physiological constants are thus normal in the statistical sense, which is a descriptive sense, and in the therapeutic sense, which is a normative sense. But the question is whether it is medicine which converts - and how? - descriptive and purely theoretical concepts into biological ideals or whether medicine, in admitting the notion of facts and constant functional coefficients from physiology would not also admit - probably unbeknownst to the physiologists - the notion of norm in the normative sense of the word. And it is a question of whether medicine, in doing this, wouldn›t take back from physiology what it itself had given» (CANGUILHEM, 1991, p. 123)

The challenge thus would be to start anew from a more sincere characterization of the scientific disciplines that have to do with the body and the production of statements that deal with "objective" knowledge of it; this is particularly valid for medicine and its status of "special science", because it often works as a gateway to new ways of thinking about and of conceiving the scientific status of knowledge that is relative to the body and its normativity. This could also be the spirit to approach more recent fields of philosophical research, regarding less canonical issues, as it's the case of the Galveston conference and the rise of the Philosophy of Medicine (CAMPANER, 2012). Because, when knowledge addresses the body and what it can do, the goal must not be to enforce the analogy on the object of knowledge, but rather to modify the analogy in order to better fit the degree of freedom that each body is offered when life is understood as a polarity.

It's important to focus on that which we imitate – this would be the ethical, pedagogic function of praktognosia – because our very own behaviors, our use of body techniques will be imitated: no one learns alone, it always happens by the side of somebody else. This could be the most profound meaning of the world "culture". By paying attention to the potencies of the contagion of imitation, the words of Spinoza come to mind: no one is really able to say what a body can do, unless he or she is willing to endure its experience.

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