NORMATIVITY WITHOUT DUALISM: CONNECTING THE DOTS BETWEEN NATURAL AND SOCIAL SCIENCES

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Abstract: The normative phenomenon is ubiquitous in human interactions, emerging in a wide range of fields studied by social science and considered as one of the essential traits of human's way of life. The modern subjectivist tradition of social science has been based on a model in which elements like self, freedom and reason play the most relevant roles in explaining normativity by connecting beliefs to behaviors by means of motives that are non-reducible to preferences, desires or impulses. In this paper I will discuss normativity in general in order to turn into normativity as it is conceived in social science and then with a focus on normativity based on reasons. I will argue in favor of a naturalistic approach to normativity by means of a defense of a concept of will, which can provide a bridge between social and natural science, rather than giving further reason to sustain a dualistic approach to them. Moreover, I will claim that mental qualities usually alleged to be essential for assigning personality, agency, and moral responsibility, such as rationality, self-consciousness, and freedom, are neither sufficient nor necessary for a naturalistic characterization of moral agents, or for explaining normativity in human evaluative practices.

Keywords: Normativity, Naturalism, Social Science, Second Nature, Is-Ought

Introduction

The normative phenomenon is ubiquitous in human interactions, emerging in a wide range of fields studied by social science such as language, religion, politics and morality. In fact, normativity is usually considered by social scientists as one of the essential traits of human action. The modern – and still largely influential – subjectivist tradition of social science has been based on a model in which elements like self, freedom and reason play the most relevant roles in explaining normativity by connecting, in evaluative contexts of human actions, beliefs to behaviors by means of motives that are non-reducible to preferences, desires or impulses. Since such approaches to the normative phenomenon cannot be fully naturalized, an unnatural – or

quasi-natural – plan is commonly postulated, albeit implicitly, by social sciences. Therefore, under that conception of the nature of human action in evaluative contexts, a divide between social and natural science has been unavoidable, reflecting a dualistic approach within science: a deterministic natural science on the one hand, and a non-deterministic science of humankind on the other[1].

While in natural science, phenomena can be explained deterministically, in social science, free will is supposed to play a fundamental role to the task of explaining actions under evaluative norms rather then only under causal determinations. Although there has been a lot of experimentation in recent years – especially informed by cognitive and neuroscience – in establishing the embodied bases for human action and judgment, the meaning of their results for the explanation of normativity in the evaluative context of human action has been largely disputed.

Some people from social science don't think that the results can ever tell us what is right or wrong, although they can tell us how we arrive at our judgments of what is right or wrong. Experiments have revealed the bases upon which we build our reactions, social scientists say, but the dispositions revealed are value-neutral and, therefore, somehow irrelevant to the normative task of many human activities where evaluation is central, which render them marginal to the kind of explanation that social science is supposed to provide[2].

In this paper I will discuss normativity in general in order to turn into normativity as it is conceived in social science and then with a focus on normativity based on reasons. I will argue in favor of a naturalistic approach[3] to normativity in social science by means of a defense of a concept of will, which can provide a bridge between social and natural science, rather than

[1] Cf. Leo Strauss (1953), to whom I will return later, qualify those two kinds of science respectively non-teleological and teleological, embossing an aspect of human action, namely the orientation toward an end, which would make it not reducible to a deterministic approach.

[2] Cf. for instance Joshua Greene's defense of the intransitivity between *is* and *ought* by means of science: "Casebeer, for example, examines recent work in neuroscientific moral psychology and finds that actual moral decision-making looks more like what Aristotle recommends and less like what Kant and Mill recommend. From this he concludes that the available neuroscientific evidence counts against the moral theories of Kant and Mill, and in favor of Aristotle's. This strikes me as a non sequitur. How do we go from 'This is how we think' to 'This is how we ought to think'?" (2003, p.847).

[3] Naturalism can be understood in a variety of ways. Since this text is itself a defense of a view on naturalism, I refrain from starting defining it. A good general view on what I meant by naturalism can be learn from Dennett: "My fundamental perspective is **naturalism**, the idea that philosophical investigations are not superior to, or prior to, investigations in the natural sciences, but in partnership with those truth-seeking enterprises, and that the proper job for philosophers here is to clarify and unify the often warring perspectives into a single vision of the universe" (DENNETT, 2003, p.13-15).

giving further reason to sustain a dualistic approach to them. Moreover, I will claim that mental qualities usually alleged to be essential for assigning personality, agency, and moral responsibility, such as rationality, self-consciousness, and freedom, are neither sufficient nor necessary for a naturalistic characterization of moral agents, or for explaining normativity in human evaluative practices. This approach points to a closer collaboration between the social sciences and the natural sciences, especially cognitive science and psychology, in order to understand the normative phenomenon within human action and, consequently, human nature and interaction.

I shall start by discussing why it makes sense to think about normativity as a general phenomenon in a changing world. Next I will present the bases upon which normativity has been explained in the rationalist Enlightenment intellectual tradition, demonstrating by means of the second nature concept why this still widely dominant position poses an insurmountable problem to reconcile social science with natural science and is therefore unsatisfactory for a naturalistic approach. Following this critique, I will claim that normativity in social science can be kept within bare naturalistic terms without jeopardizing an adequate account of human action in evaluative contexts. Finally, I will provide an explanation to the move from *is* to *ought*, a classical formulation of the normative problem, *a propo* human action based in a concept of will to which free will is not a key element to understand how normativity works in relation to human's interactions.

Normativity and nature

Consider the following view: all that exists is determined by causality and if one could have a complete image of every casual chain in the universe, that would be a complete image of it, an image in which there would be no place for ought to be, since everything would simply be. That is how an omniscient being, if there were one, would see the universe. It would be a timeless perspective of a world in which nothing would ever change; a kind of panoramic photograph of everything[4]. Although science is all about causality, that would not be a scientific image of the universe, since science is in the business of explaining changes for beings, we humans, who cannot have a timeless image of the universe for the simple fact that we are in time, like everything else. Therefore, a naturalistic approach to science, one that does not

[4] For more on this idea, which in science was first presented by J. M. E. MCTAGGART, 1908, in *The Unreality of Time*, one can check for Eternalism, the philosophical doctrine that espouses the idea that all points in time are equally real.

place it outside and above the world to render a complete image of it, does not see it as committed to providing a timeless photograph of the whole universe, but rather as an activity oriented to help us understand how things were, how they are, or how they might be.

Of course, the world science is interested in has a place for what is, as well as for what was and for what will be; moreover, it can accommodate how things came to be and how they will evolve. By contemplating the world, we do not come to know all of this, but we are eager to at least know some of it. This is not primarily down to our curiosity, but more so because any information we can acquire of how things are and how they change matters a lot for us in terms of how we navigate our environment. Our expectations are built upon what we learn from our interaction with everything that surrounds us, and science is a very effective way of improving our knowledge, and therefore our expectations, of what was, is, and will be. To beings immersed in time and space, there is room in the world for what shall be, room for movement, and with that, room for normativity in its most elementary form.

Normativity is a property of the world because beings similar to us are in the world trying to manage complex changes. Humans cope with the environment through the same means as other complex organisms like ourselves do: sensorial information processed by a brain. But we have added something to this equation: propositional language. Therefore, we humans cope with changes also by processing information we gather from what there is through propositional mediation. Philosophical tradition named this *reasoning*. There can be no "will be" to God (if there were one), who is ubiquitous and timeless by definition. For Him, nothing changes. And no matter how rational He might be, to Him everything just is. He has the image of everything at once, together with all their relations. For us, however, and for other sentient beings, to cope with changes is vitally important for our survival, or for our simply being a viable biological creature. The more complex the behavior of an individual in a changing environment, the more complex the image of it that she should be able to elaborate, and the more important it is for her to anticipate changes, to control them and to manage unpredictability. In a bare scientific sense[5], this is what all normativity is about: improving prediction.

[5] For the sake of simplicity, I will not consider mathematics in this discussion.

From *will be* to *ought to be*: The behavioral component

For all that exists, adaptation is the rule in an evolving process which takes place in time. Matter must adapt to matter so it can be stable. If matter is stable enough, and the circumstances are favorable enough, then it might be the cradle of life. Biological structures, on their side, must adapt to matter and to other biological structures in order to be viable up to the point of replicating themselves, producing more individuals like them, more complexity, more diversity and again more of their kind in a spiral movement: the evolutionary drift.

Biological structures add an incredible amount of complexity to the environment. Biochemical components, packed in units which can produce their own energy to propel their growth and movement, interact with matter in much more varied ways than matter alone can do. Besides, the more numerous they are, the more abundant their interaction with their surroundings, and therefore the complexity of the system is even greater. From the point of view of those biological units, unpredictability grows to exponential levels in that evolutionary process.

Biochemistry generates tissues, physiology, cells, organs, organisms, and they all have to accommodate their behavior within the whole. Each element of the system imposes some constraints on others while being simultaneously constrained by them. Both anticipating and posing limits are determinant factors for biological individuals. They adapt to whatever is around them, but they also cause their environment to change in favor of them. What will be is as much a passive interest for the individual as it is an active one. Unpredictability grows and with it the room and need for normativity.

Behavior complexity has been an emerging effect of evolving processes (Cf. DENNETT, 2003), which goes hand in hand with normative complexity. Individuals must satisfy their needs by adapting to the environment and by making the environment adapt to them. That happens at the bare biochemical level, where information is processed without the intervention of neural processing, and it can also happen by adding to that level the complexity of neural biochemistry. Everything is biochemistry, that is for sure, but the menus of the possible outcomes are different and can be radically different in both systems when the neural network becomes more complex. In the first scenario, the outcome depends on what happens along the biochemical chain of reactions put forward by the interaction between individual and environment, while in the second scenario the outcome depends on that and on what happens along the chain of biochemical

reactions that take place inside the individual's neuro system while processing inputs from the world. The behavior menu can grow dramatically from one scenario to another, alongside the need for behavior control and, therefore, for normativity. The more complex the individual and the more flexible her behavior, the greater the need for behavior control. When the menu of possibilities meets information processing through a neural network, behavior gains another dimension, namely the neural, and with that dimension behavior control also jumps into the level of neural constraints among individuals' interactions. That is why, in the latter scenario, it starts to make sense to talk about 'ought to be', instead of simply 'will be'. From a mere naturalistic point of view, normativity among highly complex biological individuals with neural information processing still has to do with managing unpredictability. Only now this is done through behavioral control.

Normativity and Reason

When behavior control is at stake, the kind of complexity that is of most interest is the neural. Biological individuals with highly evolved neural systems are capable of a vaster range of behaviors than those with simpler systems. Accordingly, they can exert more and need to utilize greater behavior control than individuals with a poorly developed system of neurons. Humans are at the top of the hierarchy of neural complexity, which makes them the most effective normative creatures to date. Given that humans are as much a part of the evolutionary drift as any other creature on earth, should normativity operate among humans in a qualitatively different way from all other species? In a way that would transcend the boundaries of causality into a kingdom of ends which only they could inhabit? The answer for a natural scientist should be a straightforward 'no'. But instead, it has been a hesitant 'maybe'.

The uniqueness of human language poses the most relevant challenge to those who would equate humans with other animals when it comes to normativity. Wouldn't language change everything in the way humans interact with each other and the world by catapulting them over the immanent level of causality into a realm of reason-based behaviors? Even here, from a blunt naturalistic point of view, the answer should also be 'no', since language, as with everything else undertaken by the brain, is the mere result of biochemical reactions. And yet, hesitation, even among natural scientists, is more the rule than the exception. The propositional and recursive (Cf. among others PINKER, 1994; PINKER, S. & JACKENDOFF, R., 2005) character of human language is a phenomenon whose singularity and complexity leaves scientists prone to doubt the level of naturalism one should apply to humans considering the social life they are able to build upon behavior control

enforced by linguistically formulated norms. If one is a social scientist, things are certainly much blurrier. To sum up, to strictly equate humans with animals has never been an easy bullet for science to bite, and much less so for social science.

Animalism, the doctrine that "each of us is numerically identical with an animal", (OLSON, 2003) is definitely not popular among social scientists, although it might not be easy or comfortable to reject it *prima facie* since the "science" of the "social" would be jeopardized. Eric T. Olson describes the situation among philosophers, who I would put in the same basket as social scientists, precisely:

> It is a truism that you and I are human beings. It is also a truism that a human being is a kind of animal: roughly a member of the primate species *Homo sapiens*. It would seem to follow that we are animals. Yet that claim is deeply controversial. Plato, Augustine, Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, Kant, and Hegel all denied it. With the notable exception of Aristotle and his followers, it is hard to find a major figure in the history of Western philosophy who thought that we are animals. The view is no more popular in non-Western traditions. And probably nine out of ten philosophers writing about personal identity today either deny outright that we are animals or say things that are clearly incompatible with it (2003. p.318).

Indeed, once the question is considered from the point of view of normativity, animalism is a burden that almost no researcher from Psychology to Sociology and Philosophy is willing to carry all the way through. The core problem is that in order to explain the social world, where values and moral rules play a fundamental role, at some point the social scientist must resort to a kind of causality which goes beyond immanent nature and whose source returns to language, since it is the means by which humans became rational beings.

The dominant tradition in social science departs from the assumption that reasoning introduces another dimension in how social norms exert control, namely, by allowing individual self-determination through understanding the reasonable justification of the norm. In these terms, the process of behavior control supposed by this conception involves a number of peculiar elements unique to humans and which wouldn't be possible without language. Consciousness is one of them. Self-aware individuals are the basis for the necessary reflexivity implied in self-determined behavior constraints, so that only a mature personhood, and that is another of those elements, can carry the burden of responsibility[6]. For its part, responsibility demands from

[6] For further on that cf. BRITO, 2017.

the individual the capacity for autonomous action against ordinary inclinations, which represent a limit for self-imposed constraints. With autonomy, individuals have agency, in the sense that they can be the subject behind an action, which implies a kind of motivational independence to act, i.e. to have freedom.

It is hardly unusual for social science to set freedom as the *conditio sine qua non* for responsibility in a way that suggests that unless freedom is possible, the kind of duty-based normativity humans need in order to enter into social life would disappear, because duty would be an illusion and with it the whole world of morality would crumble. And once you have introduced freedom into the debate, you have a ticket out of this world.

Kant, one of the paramount figures of the moral tradition of rationalistic Enlightenment, defends what he calls 'the kingdom of ends' as the domain of a moral law-based reasoning where humans, as rational beings, are to build the moral world upon the world of causality:

> The conception of the will of every rational being as one which must consider itself as giving in all the maxims of its will universal laws, so as to judge itself and its actions from this point of view – this conception leads to another which depends on it and is very fruitful, namely that of a kingdom of ends. […]
> A rational being belongs as a member of the kingdom of ends when, although giving universal laws in it, he is also himself subject to these laws. He belongs to it as sovereign when, while giving laws, he is not subject to the will of any other. […]
> A rational being must always regard himself as giving laws either as member or as sovereign in a kingdom of ends which is rendered possible by the freedom of will. (*Fundamental Principles of the Metaphysic of Morals,* AB 260–265 (Ak. 433–434)).

The history of thought on human nature is the history of thinking about it by means of metaphysical tools. It is no coincidence that both correspond to the history of philosophy itself. One way of retelling that history is to examine how much nature philosophers accommodate into human nature. In other words, how widespread is naturalism when philosophers conceive of our species: *Homo sapiens*.

Kant's ambivalence toward human nature, accepting causal determinism but also affirming the legitimacy, not the existence, of freedom as a necessary concept for thinking about morality, perpetuates a respectable tradition which for centuries has been combining Plato's radical metaphysical inclinations with Aristotle's appreciation for empirical observation. While animalism would obviously be rejected by any bold Platonic anti-naturalistic tradition, the Aristotelian branch of philosophers have made innumerable adjournments of the attempt, Kant's among them, to reconcile humans' belonging to a deterministic nature with humans' cultural achievements which

would supposedly depend on a kind of normativity that could not be reducible to the normativity of natural laws. The Aristotelian notion of a second nature (Aristotle, *Nicomachean Ethics*), in one way or another, is at the center of all these attempts to fill the gap between nature and nurture.

John McDowell, following the respectable Aristotelian tradition, contemporaneously actualizes the notion of a second nature in an influential attempt to make laws of nature and reason-motivated actions compatible:

> I have been insisting that for Aristotle the rational demands of ethics are autonomous; we are not to fell compelled to validate them form outside an already ethical way of thinking. But this autonomy does not distance the demands from anything specifically human, as in rampant Platonism. They are essentially within reach of human beings. We cannot credit appreciation of them to human nature as it figures in a naturalism of disenchanted nature, because disenchanted nature does not embrace the space of reasons. But human beings are intelligibly initiated into this stretch of the space of reasons by ethical upbringing, which instils the appropriate shape into their lives. The resulting habits of thought and action are second nature. […] Such initiation is a normal part of what it is for a human being to come to maturity, and that is why, although the structure of the space of reasons is alien to the layout of nature conceived as the realm of law, it does not take on the remoteness from the human that rampant Platonism envisages. If we generalize the way Aristotle conceives the moulding of ethical character, we arrive at the notion of having one's eyes opened to reasons at large by acquiring a second nature (1994, p.84).

Roughly, the point here – and throughout the subjectivist tradition spectacularly renewed by the movement of rationalist Enlightenment – is that humans are creatures capable of a unique line of causality when it comes to action in evaluative contexts, because in those contexts actions must be value-oriented. They are moral actions. In those cases, the line of causality is from reasoning to acting. At first sight, this might seem innocuous to a fairly naturalistic account of human action, but it is not. Quite the contrary, it has had a decisive impact on how normativity has been explained and established in social sciences.

Under the approach of the second nature hypothesis, the connection between reason and action has to be seen as a substitute for a line of causality which, in organisms without reason, goes from desire or inclination to action. This does not mean that between those two elements of a causal chain for action, a third one is introduced, so that one would have a line going from desire through action passing by reason[7]. Rather, that reason would cause action by itself.

[7] That would be rather a Humean move, since Hume famously says in his *Treatise*: "Reason is, and ought only to be the slave of the passions, and can never pretend to any other office than to serve and

Reason is certainly a concept whose meaning is vast. Nevertheless, its connection with language is present in any region of its meaning, so that the idea that humans are talking creatures who, because of that, can act upon reasons and intentionally and not only upon impulses or inclinations is present in any theory of action that espouses any form of the second nature argument.

Following the theoretical framework of a nature above nature, one can add that because humans can be motivated by reasons, they are capable of acting upon evaluation of values and therefore are the single creatures that are apt to act morally. Now, while the normativity embedded in the causal chain connecting desires and inclinations to actions is as natural as any other in nature, be it organic or not, the normativity which enforces acting upon reasons is dependent on the nature of language, or in other words on the nature of reasoning by language, and is the very base for morality. Natural normativity, as I have suggested above, can be reduced to natural causality. What about moral normativity? How can we understand it within the elements of the second nature?

The model for the kind of normativity one experiences within reason is inference. If you have p and q, you can certainly infer p, and if you have p, you can have p or r, just as you can conclude that 'Greeks are mortal' if you have it that 'all humans are mortal' and 'all Greeks are humans'. Inference is the exemplary model for normativity in the realm of reasons and if one understands that, then one can make sense of McDowell's placement of rational demands outside the natural world. *Ipsis verbis*: "We cannot credit appreciation of them [rational demands] to human nature as it figures in a naturalism of disenchanted nature, because disenchanted nature does not embrace the space of reasons". Therefore, rational demands are governed by laws which can only exert their power in that space of reasons where a kind of inference-based normativity is the only legitimate normative force. This force, which takes reasoning from one step of the argument to another, is at the end of the day the effective core of laws in the space of reasoning, which reaches from knowledge to morality. And truth is the ground upon which the deductive normative force sets its lever to put things in motion. This is the Cartesian ideal to move from truth to truth in business.

The model, applied to morality, demands that we find the truth-makers of our moral beliefs, so that one is justified to act upon reasons adequately grounded in objective facts, although of a strange nature, namely:

obey them" (HUME, *Treatise of human Nature*, 2.3.3, p.415). This idea alone would be enough to attest to the incomparable achievement of this great thinker of the Scottish Enlightenment.

moral facts. Moral realism, the doctrine that claims that some facts have properties which are values, is popular in naturalistic approaches which rely on inferences by reasons as the source of moral normativity and are, therefore, compatibilist concerning natural causality and causality by freedom.

> […] a fully satisfying answer to the problem of normativity must be compatibilist. It must explain how to resolve the apparent conflict between our belief that there are normative requirements and prohibitions and corresponding properties and our scientifically constrained view of what exists. To do this in a satisfying way, it must explain what normativity is, so as to explain how it could be that the existence of normative properties is compatible with our scientifically constrained view of what exists. This means that a fully satisfying account must be a form of reductive naturalism (COPP, 2015, p.63).

Predictably enough, instead of looking for a causal chain which could explain an individual's actions from one state of her organism to another, the adhesion to the truth-based inference model for normativity leads philosophers to the search for moral facts which could be the truth-maker of beliefs which, thereat, would legitimate the inferential move in the evaluative space of reasoning, granting to the resulting conclusion the normative force in value loaded contexts.

The compatibilist approach, however, is doomed to fail so long as the second nature conception prevails, since even if a moral fact could be found in the world, the causal chain between it and the individual belief would be of a nature not reducible to the causal chain connecting one individual psychological state to another, as empirical connections between chains of beliefs are never sufficient or necessary to render them true. In a sense already expressed in the previous quotation from McDowell, rational demands – and truth is definitely a paradigm for such demands – can only be appreciated in the space of reasons.

Where a strong connection between truth and motivation is presupposed, in the sense that we could (and should!) have reasons to act that are independent of our mere desires or psychological states, normativity leaves the causal chain of the world to set foot in the realm of reasons. Quine once said: "We are after an understanding of science as an institution or process in the world, and we do not intend that understanding to be any better than the science which is its object" (Quine, 1969). This is exactly what social scientists are compelled to reject once moral normativity is brought out of the sublunary course of things.

Science within the space of reasoning?

If one is to make science of the world knitted by the network of reason-based causalities, it must be a different kind of science than that which

we use to scrutinize disenchanted nature. Kant again, in his *Fundamental Principles of Moral Metaphysics*, laid out the program of a discipline of that kind.

> As my concern here is with moral philosophy, I limit the question suggested to this: Whether it is not of the utmost necessity to construct a pure thing which is only empirical and which belongs to anthropology? For that such a philosophy must be possible is evident from the common idea of duty and of the moral laws (BA VII–VIII).

There is certainly a need for a natural anthropology, Kant would say, an anthropology empirically informed and scientifically disciplined by the same laws that govern natural science. Beyond that, however, there should be a place for a non-empirical science of humanity. One that would take into account humankind's orientation toward something higher than impulses: ends beyond desires; values beyond bias. A theory of human motivation to action purified of inclinations, and based on duties which should determine what humans ought to do if they are to do something morally good.

In a much more contemporary version of the program of a science of humanity beyond natural science, Leo Strauss notes the same point concerning the irreducibility of humans' motivations to mere desires or impulses. He says:

> It seems to be impossible to give an adequate account of human ends by conceiving of them merely as posited by desires or impulses. Therefore, the alternative solution has prevailed. This means that people were forced to accept a fundamental, typically modern, dualism of a nonteleological natural science and a teleological science of man (1953, p.8).

'Forced by what?', a naturalist is bound to ask. The premise that an adequate account of human ends is impossible in plain immanent terms is only true under the assumption that the roots of those ends of humans cannot be entirely traced back to this world. That they are not reducible to humans' biological nature even if one considers that individuals of the *Homo sapiens* species have the densest neuron-populated brains evolution has produced to date, a trait that is certainly responsible for the fact that humans also have the most complex array of behavior among all creatures.

The point of the dualism, to be clear, is not that a complexity yet to be understood leads science to explain human ends beyond the immanent casual chain, including those generated by brain activity, but rather that those ends can *only* be accounted for within the space of a nature beyond nature: the second nature left to us by tradition. Following Taylor:

> […] human thinking is situated thinking, in which any questions that can be raised only make sense against a background or framework of the taken utterly for granted. Our capacity for rational reflection is such that some of what was formerly background can now be put into question, but only against its own background of the unchallenged. (2000, p.248).

For the dominant part of social science, the ladder which leads from biology to humans' complex brain activity can only be climbed up, not down. The general idea, following the second nature conception, seems to be that once humans have reached a certain plateau of reasoning, all the furniture in this space can only be compared with itself. Therefore, elements within this space – such as ends, reasons, intentions, values or norms – are to be contemplated exclusively within the limits of the realm they inhabit. As Taylor has it:

> One strong bit of evidence for [the sentence:] "humans and their life-forms are part of nature" would consist in our being able to make sense of our deliberations in post-Galilean terms. But that is exactly what the phenomenology has shown we cannot do (2000, p.246).

And if we cannot do so, then is helpless to make a human science with the inadequate tools of "post-Galilean" science, which brings us back to the necessity of giving an account of the causal chain in human life-form in terms not reducible to the immanent causality of the world. Normativity leaves earthly constraints to exert control by means of some self-referential causality whose force is inferential reasoning.

The gap between immanent normativity and reason-based normativity generated by the sort of dualism I have characterized above and in the previous section, has been at the heart of the epistemological dispute between the social and natural sciences. Although many philosophers have tried to overcome the gap by means of a naturalistic disposition (Cf. among others DENNETT, 1995 e 2003; RUSE, 1989), the battle has not been decided in their favor, no matter how peculiar that might appear in an age of science like ours.

The resilience of those defending a kind of second nature argument, however, should not be explained on the basis of a stubborn and conservative conviction, which one could maliciously contrast with the boldness of a Hume, for example, who almost three centuries ago famously depicted himself as the Newton of moral science, but above all to the failures naturalism had faced in its attempt to give an account of humankind in bare immanent terms.

The nineteenth century attests to not only the many dynamic attempts to naturalize the worlds that humans have created, but also to the grave scientific and terrible political mistakes that have been carried out along the way toward bringing human nature into disenchanted nature. The idea that values are of this world is, after all, dangerous, if institutions are weak. Asking, as Nietzsche did, "under what conditions did Man invent for himself those judgments of values Good and Evil?" (NIETZSCHE, *Genealogy of Morals*), is to

suggest that there could be other values, that values are relative. Naturalism projects the shadow of relativism over social science[8].

Yet, new data from science is constantly arriving and challenging the dualism which, as I have shown, is one of the pillars upon which the divide between the social and natural sciences has been built and sustained. Some, like Dewey, were optimistic in a time where psychology was struggling to stablish itself as a science:

> Moral science is not something with a separate province. It is physical, biological, and historic knowledge placed in a human context where it will illuminate and guide the activities of men" (1922, p.204-205).

Other kept the science friendly tradition alive and are still optimistic:

> By drawing on converging new data from neuroscience, evolutionary biology, experimental psychology, and genetics, and given a philosophical framework consilient with those data, we can now meaningfully approach the question of where values come from (CHURCHLAND, 2011).

I am also optimistic. Nevertheless, the alluring idea that science will one day explain "where values come from" may lead us to concede too much to the dualistic perspective, since it insinuates that science could finally teach us to objectively distinguish right from wrong. The moral realism behind that hope reveals, as I have outlined above, that the reason-based normative model stands unchallenged. The nature of values is beyond the scope of this work, but whatever it is, normativity is central to the way in which values are useful to behavior control. In the final section, I want to return to the problem of normativity in order to present a way of understanding causality in evaluative contexts of human action without the gap that dualism depends on.

Filling in the gap: *is*, *ought* and *will*

In a deterministic world, time opens a space for *will be*. Cognition, for its part, opens a way for unpredictability and expectation in a world which changes in time. For cognitive individuals, the correctness of the expectations one has about what will be is vital to survival. The more active the individual can be, the more variables she adds to her environment, increasing unpredictability. Yet, if an individual can cognitively predict the outcome of an action within her surroundings, this is for her an advantage and there is, for

[8] "Now it is obviously meaningful, and sometimes even necessary, to speak of 'unjust' laws or 'unjust' decisions. In passing such judgments we imply that there is a standard of right and wrong independent of positive right and higher than positive right: a standard with reference to which we are able to judge of positive right." (LEO STRAUSS, 1953, p.2).

her, an opening for what shall be. Given that there are other cognitively apt and active individuals in her environment who can act as she can, the number of variables she must consider in managing her expectations increases exponentially. Now, if an individual's cognitively deliberated actions can have an influence over the behavior of other cognitive beings, then this is also a great advantage and a space in their world opens up for what ought to be. The world in which those creatures are living is also social.

Indeed, the gap between *is* and *ought* is only inhabited by individuals with highly complex cognitive abilities and vast behavioral options interacting with each other, since they have to control themselves in order to manage the exponential epistemic unpredictability that arises from the cognitive mediation of those individuals' actions. And if they are to cooperate, then the need for behavior control is once more exponentially increased.

Normativity in social interactions is central for us humans. The normativity in question here is normativity over behavior, that is to say, normativity over the will of each individual. From the perspective of behavior control, the more predictable the outcome of an action over the will of an individual, the better. Therefore, under normative pressure, what matters for efficiency is to diminish the individual's room for divergent action, which makes the individual disposition to be properly determined a decisive trait for her capacity to socialize.

A naturalistic picture of normativity in the social interaction of individuals with a highly complex neural network and vast range of behavior does not demand causality by freedom, in the sense of a second nature causality. Quite the opposite, it demands the adequate disposition to be properly determined. Among humans, that is the meaning of responsibility: a well-balanced disposition to be properly determined by normative pressure.

From a naturalistic point of view, therefore, social science does not have to deal with a space of reason in which reasons have to be a kind of self-referential causality which cannot be accounted for in a disenchanted nature, but rather can be thought, as Hume conceived of them, as slaves of the passions[9]. Reasons can, thus, be part of a description of human action in social interaction; only now they are plainly integrated into the chain of natural causality. To use a schematic outline, a chain of causality, which includes reasons as part of the process, comes from something internal or external to the individual (like a threat, desire or preference) passes through cognitive

[9] *Treatise of human Nature,* 2.3.3 p.415.

processing, where calculation plays a role in determining the resultant action, and reaches the world without having left it at all.

The complexity involved in humans' decision-making process is by all means a huge challenge for social sciences. However, from a naturalistic approach, the challenge can be met by using the same immanent principles that guide research in natural science. In a naturalized investigation of the social dimension of humans, the peculiar furniture of the social world finds a place among other existing objects. Values, for instance, whose nature presents a major difficulty in reducing them to earthly existence, can be seen as bias in determining relevance in the process of weighting reasons for actions, without diminishing the complexity of the social world. Since bias to relevance can be both evolutionarily and culturally selected, and since both can be interwoven in a blend whose elements are very difficult to disentangle, to follow the causal path from stimulus to action passing through cognitive processing is certainly a task of Herculean proportions. That task, however, is for humans to perform, not gods with transcendent knowledge.

What I am concerned with here is an accurate description of the psychological and sociological processes involved in the mutual behavioral constraints that are constitutive of social life. Following this line of argument, I would have no word for legitimating the rules societies end up having that govern them, and the whole point of naturalizing social science is lost before the enterprise has even started to pay off. Without the legitimating part, the critic would say (Cf. STRAUSS above), the social sciences are unable to give a proper account of human life, since humans would be left in the dark as to what ought (not) to be done. In a sense, the critic is right, and she is tapping a side of the *is-ought* problem which is beyond the reach of any naturalized approach to nature, in the same way that second nature is self-referential. In fact, there is no way to justify what *ought to be* from what *is*, unless you leave the world of contingency to that of necessity. The alluring idea of a second nature built upon our linguistic capacity and inferential abilities has its strongest pillar here: the desire for necessity of the governing norms. Therefore, that idea serves not the explanation of normativity among humans, but rather the task of enforcing norms once they have been established as good ones. The alluring idea is, after all, alluring because it is not morally neutral.

Let me grant the point for the sake of the investigation. A valid norm, which is the desired end product of the game played within the space of reasons, in order to be effective must not only be recognized as so – namely, valid – by those who are to live under its constraints (and reason is the tool they use for their judgment); it must also be determinant with regard to their will in order to control their behavior.

Thus, we find ourselves back at the circle to which naturalism has been bound, without being able to detach itself from the second nature tradition. The alluring idea behind the successes of the second nature tradition is that of a principle that reason recognizes as valid and, on that basis, motivates action. It is the idea of a practical reason that acts upon the certainty of a principle, which, because it is justified, empowers the reason to motivate, to be practical and to submit others. The idea is also not naive.

In neither the descriptive scenario nor the normative one can will be bypassed as causing action. In the normative one, however, certainty of legitimacy accompanies causation, while in the descriptive one, contingency is inevitable. Naturalizing social science on the subject of normativity, which is to opt for the descriptive approach, implies, therefore, limiting the normative impetus of the scientific enterprise in relation to the social world. One might think that this is like asking social science to give up its most important task; I say this is to recognize that it is not science but politics that constitutes the arena in which the legitimacy of norms must be decided.

The price for naturalizing social science is to give up moral certainty. I think this can be a fair price to pay. Moreover, it might be a price we should be willing to pay in order to achieve a better understanding of the social and political process of choosing and enforcing norms. Dispensing with the normative impetus which compromises research with a kingdom of ends, freedom and other furniture of a nature beyond nature, may allow social science to immanently scrutinize an objective "ought" that is not a subjective "I want", and to realize that is the "will" we "want" everyone "to want", and therefore that what we want everyone should want. It might realize that this "will", oriented to the will of others, is a "will" that everyone wants to be dominant, a "will" that wants to be the will of other wills, but which is also reflexive and therefore concerns everyone that is oriented in this way, which is the basis upon which normativity has been raised and maintained among humans. It might give us much less certainty than the view from above promised by the second nature approach. Nevertheless, considering how far humanity has come with such a frail mechanism of norm enforcement, naturalization can grant us an optimistic view of what we are apt and prone to want as human beings.

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