

**Naturalizing Ethics - Cognitive Science against Moral Relativism<sup>1</sup>**

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## Introduction

Ethics has for long been a privileged area of human activity untouched by deterministic and materialistic claims as its particular subject matter is essentially praxeological, that is the moral inclinations and conducts of people. With respects to free will and self-determination, moral epistemology has undergone significant changes over the centuries of occidental thought on moral judgments and their particular normative aims. The problem is, under the circumstances of a diversity of intellectual schemes and practices as observed worldwide by scientifically inclined thinkers, establishing morality on strong foundations and assuring a coherent scheme with metaphysical and epistemological presumptions became apparently harder as time has gone by. This has led to a polarization between two radical theories on the status of judgments of values, in the diverse avatars of absolutism and relativism.

Gilbert Harman (1985), fascinated with the ongoing allegiances towards either radical claims (and noting that a rare few were uncommitted) and with apparently no accepted grounds for a settlement, has reoriented the issue on a broader epistemological conflict between naturalism and autonomous ethics. My observations have led me to agree with this argument, but also under an orthogonal perspective, that is, the relativism and absolutism conflict generally revolves respectively around a cultural and external account of the nature of morality versus a rational and internal account of moral principles. On the first account, ethics are immanent to social and cultural interactions, and morality seems incommensurable, therefore voiding the possibility of there being universal moral truths. On the absolutist side, ethics are (almost) transcendent, *a priori* to human activity, and through rational endeavors it is possible to grasp or develop universal and general principles of morality that are invariably true.

I hold that the debate on ethical relativism is reductive. It is too preoccupied with the dual commitments of naturalization *contra* autonomy on one level, and drawing upon it being externally (empirically) *versus* internally (rationally) determined on another level, clouding a deeper disagreement in the form of a misinterpretation of the very concept of relativism. I will therefore dedicate the first part of this essay to a reinterpretation, or clarification, of what it is for a belief or a set of beliefs to be held in a relativistic framework, inspired by analogical empirical and formal systems of beliefs. In a second section, I will argue against the possibility of an autonomous study of ethics, drawing upon the debate on normative and descriptive clauses. I will also assess the coherence and fallibility of an autonomous research program, notably by pointing out its underlying metaphysical and epistemological commitments. In the following section, I will focus on the opposite view, the naturalization of ethics, and how it follows naturally from contemporary metaphysical and epistemological beliefs and endeavors, aiming to adjust to preoccupations of psychological realism, empirical adequacy and theoretical constraints. Finally, following a massive quantity of research in the interdisciplinary sciences of cognition, I will offer an account of what type of constraints and reliable sources of information naturalized and relativistic ethics may draw upon in the pursuit of moral inquiries.

## 2

### **The concept of relativism under scrutiny**

#### *A definition of relativism*

Let's start with a relatively (no irony is intended here) uncontroversial definition of what it is for a theory of knowledge to be dubbed of relativist. I have chosen a "clean" definition that is neither too obscure, nor too narrow and restrictive in my opinion, from Bénatouïl (1997), "... le relativisme consiste à affirmer, dogmatiquement, que nos jugements et nos valeurs n'ont de sens que

relativement aux sujets et aux contextes qui les produisent, leur prétention à l'objectivité et à l'universalité étant remplacée par une validité psychologiquement, historiquement, ou socialement limitée. “

What is fascinating about relativism is the age-old claim (of Greek origin, as this problem has been haunting at least the Occidental part of our world for quite a while) that it is a paradoxical dead end, an undesirable logical troublemaker to which we can not ascribe a truth value because its form (an absolute claim) necessarily contradicts its content (about nothing being absolute). The claim of relativism being, *prima facie*, paradoxical, is roughly as follows:

*All statements / theories are relative.*

Following pop culture in its inexorable generalization, or what scholars sometimes dub “folk science” or “naive science”, this already mind boggling puzzle of logic as gone as far as

*Everything is relative.*

which is truly blown out of proportion. Now, one might be tempted to abandon the relativistic outlook of knowledge for its hopeless tone, or either champion it or rebuke it in this very narrow form (to my sense, which I will justify in what follows). Literature is prolific about the “inadmissibility” or the “inevitability” of relativism, from theoretical knowledge to praxeological knowledge, from physics (even mathematics) to ethics. Let's be honest: in this crude form, either relativism dooms us all to the underdeterminacy of a referential framework, undermining the very concept of truth and “mutual agreement” on any statements or course of action in a world of *caeteris paribus* (all things being equal) or *petitio principii* (begging the principle or motive), OR relativism is inadmissible, has to be admonished and the alternative is to look to the stars in search of universals.

Well, I may have a romantic point of view of the ongoing debate, that is, the one between relativists and absolutists, but they leave a bitter sense of dichotomic, binary concepts when it comes to the study of knowledge. In both camps, one ought to find some clause that will threaten to shake the edification of its being a very radical thesis on the nature of knowledge. One good trick of

the philosophical trade, although it may be inadequate or misleading, is to reassess the problem in its very definition. Conceptual analysis, as it is, may be instrumental not only in solving problems of theoretical nature, but also in assessing if a problem has been correctly formulated, or in a more extreme measure, if it is really a problem at all. My claim here will be that relativism, along with the formulation in which it is usually presented, are semantically wrong, misleading us to other incorrect claims and edifying theories and counter-theories that hold on a misinterpretation. I will also discuss in the next section on the metaphysical and epistemological commitments that entail to such a misinterpretation, which are radical claims about knowledge and the world that are themselves controversial and questionable.

#### *Anecdotes on relativism and relativity*

Maybe a quick excursion in the realm of empirical and formal sciences could teach us a lesson or two on what is meant by strong claims of relativism in / of a system. In mathematics, relative clauses are translated in concepts such as dependent and independent variables, where a fixed magnitude and a dependent one express real world phenomena. Mathematical descriptions using algebraic or geometrical representations hold only through isomorphism (accurate mapping of relations) or homomorphism (accurate mapping of relations and topological properties of objects) in relation to the phenomenon they purport to describe. Independent variables are set in a domain, which could be described as an ontology of origin, and through a study of relations, most likely “strong” ones that have a mapping of variables of one on one that we commonly name functions, the end result is a description of a second ontology set in a co-domain, or usually named an “image”. Of importance here is the non-causal, non-necessary, as such arbitrary description of phenomena, but causal relations may also be portrayed mathematically. The key element is that such systems are purely descriptive, and only the actual phenomena are, to a certain extent, non arbitrary. Also, within formal models (their internal structure), that a formal description

includes relative clauses is so up to a certain level of regression both in mathematics and in logic, namely to the level of axioms. Hence, we may have yet to progress with caution when we claim that formal systems, in their descriptive role, are arbitrary. Internally, even formal sciences have an upper bound of arbitrariness, and axioms are *not* relative clauses.

Yet another journey into relative claims or even relative systems of beliefs has been available for the best part of the twentieth century in a sadly misinterpreted theory of mythical proportions: the theory of relativity developed by Einstein (1918) in its two avatars: general and special theories of relativity. In an obviously (reductive) general and nonmathematical way, here is what it says:

*“... in simplest terms, the theory of relativity is an approach to the measurement and study of space and time. The theory assumes that findings are based upon the relation of the frame of reference to the objects measured...”*

*“... both [theories] hold that certain physical quantities, formerly considered objective, are actually ‘relative to’ the state of motion of the observer.”*

Now, history has demonstrated how shamefully misunderstood have been Einstein’s claims about the nature of our *knowledge* of the physical universe. Following the paradoxical interpretation of relative clauses within a system of beliefs or even the relativity of wholly articulated systems of beliefs between themselves, it is as if Einstein’s work had reinforced the naive conception of relativism: everything is relative. In the realm of physics, people’s source of inspiration for the reinforcement of this belief comes from a troubled understanding of the following: observational statements about motion and position of objects are dependent on the measure involved and the status of the observer. Therefore, macrophysics being a set of descriptions of the behavior of magnitudes dependent on one another, it’s all relative. Everything is relative.

Wrong. Naive / wrong physics lead to a larger set of naive / wrong beliefs reinforcing the archaic relativist claim, just as its paradoxical formal structure is a false problem which finds its source in an apparent ambiguity of the semantics of relativism. We will explore my claim about the relativity of descriptions in the

empirical realm of physics first, and then the controversial claim that I just made about the semantics of relativism.

I do *not* want to drown the reader in empirical details of highly technical and abstract nature, but here is the proper treatment of the theory of relativity, as reductive as possible:

*“... when we have the above object moving, it will have a certain amount of energy. Einstein argued, the only way we can insure that it cannot be accelerated indefinitely, is if there is a universal equivalence between mass and energy. The more energy an object has, the heavier it will be. When we speed it up a little bit it becomes a bit heavier, and so it also becomes a bit harder to speed it up further. In fact, the closer we are to the speed of light, the larger the force is needed to accelerate the object; an infinite force is needed to speed up a material object to the speed of light: it never happens!”*

*“... [on general relativity] Special relativity made the velocity of light a limit for all causal processes and required revision of Newton’s theory of gravity as an instantaneous action at a distance...”*

*“A philosophical motive for the general theory was to extend the relativity of motion. Einstein saw special relativity’s restricted class of equivalent reference frames as an ‘epistemological defect’, and he sought laws that would apply to any frame... [after the physicalist justification] Thus not only velocity and rest, but motion in general would be relative.”*

*“The curvature of space is real and is generated by the mass of the bodies in it. Correspondingly the curvature of space determines the trajectories of all bodies moving in it. The Einstein equations are the mathematical embodiment of this idea. Their solutions predict, given the initial positions and velocities of all bodies, their future relative positions and velocities. In the limit where the energies are not too large and when the velocities are significantly below  $c$  the predictions of Einstein’s equations are indistinguishable from those obtained using Newton’s theory. At large speeds and/or energies significant deviations occur, and Einstein’s theory, not Newton’s, describes the observations.”*

Conclusion: relativity is a strong claim about empirical descriptions concerning macrophysics that misled many people to the wrong belief that these descriptions belong to a relativistic theory of macrophysical phenomena, and physics being a core discipline as it is, part of the “hard sciences” of nature, this misconception is reinforced *ad hominem* in support of the archaic claim of relativism. Here is what Ian Stewart (1990), mathematician at the University of Warwick, says about the general treatment of the concept of relativity, “[following a discussion on the concept of chaos in mathematics]... The same happened to Einstein’s relativity theory which was widely used in the United States as an excuse for social inequality. ‘Everything is relative, as Einstein says’, became the chant. Not so. The most interesting thing that Einstein said is that some things, notably the speed of light, are *not* relative.”

### *Relativism redefined and ethical significance*

To maintain an unambiguous and rigorous semantics of what I purport to clarify about relativism, here is a short version of relativism redefined:

*a belief or system of beliefs is / are relative in nature with respect to an invariant set of beliefs that are in turn justifiable, either internally or externally.*

Even shorter: *a claim or set or claims is / are relative **to something else***, they are not relative in essence ! The following precisions must be brought up:

- something being relative to something else is so in virtue of formal, methodological, theoretical or empirical reasons. Therefore, nothing in relativism entails that relativity is so by itself.
- This relative dependence on an invariant core of belief is not a form of absolutism: the set of invariants on which the relative clauses depend are NOT *a priori*, they might themselves be scrutinized along a dependence relation to other bodies of knowledge.

Some might be tempted to dub my conception of knowledge as holistic, where beliefs are held in relation to others *ad infinitum*, in complex interdependence where we have only access to our representations and phenomena, never the



factual basis of this knowledge. That is not what I believe to be so. My claim is simply that in every body of knowledge, a set of core beliefs are taken as such as postulates or axioms for the rest of the system. Their truth might be challenged and we may turn up with better theories, but this is *not* a sufficient argument against realism, nor is the thesis of the inscrutability of the reference.

My point can be resumed as follows: relativism is an interesting claim about knowledge, but misunderstood in its very semantics. As many archaic dichotomies have been progressively overthrown in favor of mediate solutions or entirely different ones over the history of science, so has the false problem of absolutism versus relativism got to give up. Perhaps we should think of it as a spectrum, with two poles being a set of “justified true beliefs” on one end, and a larger set of relative clauses that hold only in virtue of the former on the other end. We will explore the archaic alternative views of knowledge on which the modern theatre of relativism and absolutism clashes take place in the following section, and make sense of the precedent claim about a reconstruction of the concept of relativism in the context of ethics and its dependence on empirical sciences. It will become apparent that the epistemological and metaphysical foundations of the rift between absolute and relative knowledge are responsible for the complications that have generated an even larger misconception, the controversial normative and descriptive divide.

### 3

#### **Moral epistemology on trial: autonomy or naturalization ?**

*A legacy of autonomous ethics, from Hume to Moore, not forgetting Kant...*

We will follow Mark Johnson (1993, 1998) and Robert Audi (1998)'s accounts of the epistemological debacle over ethics. Why is there so much resistance from the study of ethics to delve into the realm of the empirical in search of wisdom ? From the empiricist claims of Hume (1739) to the rationalist

convictions of Kant (1797), quite opposite views of the world, spun forth a great epistemological gap over the status of empirical and moral claims. The *is/ought* dichotomy appeared to Hume as quite a natural state of the world. In his view, facts and values were totally independent of each other, and there was no justification for moral philosophers to admit descriptive statements of factials into the realm of normative statements of values. Kant viewed the sphere of ethics as an independent realm of moral laws, universals and necessary truths that were available to the scrutiny of pure reason. Empirical lore was available through synthetic and *a posteriori* scrutiny, whereas moral principles would be available through the exercise of rationality alone.

But it probably was G.E. Moore (1903)'s position that undermined later endeavors in being even interested in a possible reunion of the practical and the empirical. His radical view held that moral concepts are non analyzable in empirical terms and possess *nonnatural properties of experience* (by contrast with analyzable and natural properties of objects and states of the world available to perception and sensation). Johnson notes that Moore never really explained what was meant by nonnatural properties. On Moore's account, moral judgments and explanations can not draw upon empirical references, such as in the determination of the concept of what is good. He named the position of attempting to relate descriptive references to the development of normative clauses the position of *naturalistic fallacy*.

To sum up these views, moral philosophy ought to be about rational analysis and normative claims, since values are of another nature than that of facts. But what then, might I deservingly ask, are the tools and trade of moral thinking ? If by reason alone, it aims to be rule- or law-like internal coherence. Autonomous ethics then revolves around conceptual analysis, formal exercise and evaluation of concise situations (or counter examples). It therefore seems that ethics appeal to a rational, logical exercise of the mind in order to produce or discover evidential truths of universal, normative essence. This is a bold gesture, but before we follow up on the other side of the normative-descriptive divide, that is in the realm of the dependency of ethics on empirical matters, we may want to

explore a certain number of difficulties that are *internal* to such a claim of the autonomy of a rational view of ethical deliberation.

### *On the use of logic*

The twentieth century dealt with some lethal attacks on the workings of deductive logic, following some mathematical and logical theorems that successfully repudiated the apparent universality of logical systems such as first-order predicate logic and all of the non classical deployments of propositional calculus, such as modal logic and polyvalent systems. The pretense of universality and internal coherence of these avatars of logic was shattered with theses on incompleteness and undecidability within formal systems (Gödel 1931, Church 1936). Whether these considerations have any bearing on moral philosophy should be carefully weighted, since the use of formal-deductive judgments involving values rarely reduce to classical propositional calculus, mostly calling upon modal systems. Logic is an articulate representation of the internal coherence of arguments, and as such is really helpful for human knowledge, but it is fallible.

### *An epistemological prejudice*

Rationalist accounts of moral philosophy take many things for granted about how we relate to the world. It is entirely up to debate (and quite controversial anyway) as to whether there is such transparency of reason and freedom from external constraints on this same reason for the moral agent. The autonomy of ethics also presupposes an internalistic account of the comprehension of moral principles, since these are either developed by the exercise of reason, or worse, they are “discovered”, floating around and available to the wise. Autonomous ethics also take verifunctionality for granted, in a preference for meaning realism with a weak conception of justification such as would be challenged by Michael Dummett (1993), although outside of ethics. To

my sense, justification of moral judgments, in order to claim independence from the dominion of empiricism, has to have an *aprioristic* account of justification.

### *A metaphysically radical foundation*

Autonomous ethics, as I claimed above, are based on a realist account of moral principles. Whether they are constructed or discovered, moral truths or moral laws possess a strong ontology, where principles bear a univocal, universal and quasi- to literally transcendent status. *A priori* moral principles seem to come before moral practice and hold whether or not reason follows them. One last point worth noting is the teleological essentialism that permeates autonomous moral thought. If moral principles are “available” to human reason, whether created or discovered, they have this *external* teleological appeal to them that is taken for granted. It may be that moral truths or principles are teleological, but not necessarily by their being autonomously available through ethical exercise of reason.

While the reader might object to these considerations about the internal fallibility of autonomous ethics (and rightly so, since I only mean to raise properties of internal coherence of autonomous ethics to critical scrutiny), it is in no way preventing me from moving on to my more extensive thesis on the naturalization of moral epistemology.

## **4**

### **From naturalized epistemology to naturalized ethics**

#### *Saving something from Mill, visiting Dewey*

Granted, utilitarianism did not fare well, it was doomed by many ambiguities and its idealistic presuppositions of the likes of what would be a proper definition of *good* (1861). But there’s something about Mill: his defense of

external determination of moral judgments. Externalism is very important for the naturalistic enthusiast. After so much pressure from the naturalistic fallacy in the making of modern moral philosophy, moral psychology did not have much to say about normativity. John Dewey (1922) tried his best to bring back empirical science into the realm of moral philosophy, to the extent of claiming that empiricism was the *core* of ethics. His point was that since ethics concern human nature directly, empirical claims on the body, mind and social organization of moral agents are not only pertinent but indeed essential to moral exploration.

But according to Johnson (1998), Dewey was ignored by Anglo-Saxon analytic philosophy of morals. In the later half of the twentieth century though, as empiricism and naturalistic epistemology have taken over the sciences of the individual and the social, moral theorists have grown to be even more concerned with the normative-descriptive dichotomy.

#### *Flanagan's concerns with psychological realism*

The tide has turned, and empiricism is back in the theatre of morals. The later half of the twentieth century saw the birth and rise of interdisciplinary fields, where sciences met to further global and specific research programs by the means of collaboration. One dominant current has been that of the cognitive sciences, from their early endeavors under the label of cybernetics to the now immensely prolific areas of artificial and biological intelligence. But cognitive sciences are not only a diversity of areas of research, they are also a set of epistemological and metaphysical claims, a variety of methodologies, and an encompassing thesis over the life sciences and the sciences of individuals and societies: the thesis that all biological, and certain artificial entities, from their inner workings to their associations, can be heuristically described and explained through the concepts of information processing, intelligence, and the like.

Owen Flanagan (1991) has voiced an elementary concern to the study of ethics, in light of the importance of the cognitivist approach in contemporary empirical research programs, that he formulated as "... the principle of Minimal

Psychological Realism: make sure when constructing a moral theory or projecting a moral ideal that the character, decision processing, and behavior prescribed *are possible, or are perceived to be possible*, for creatures like us” (my emphasis in italics). As Johnson notes, the principle may sound “innocuous”, but its implications and consequences are radical in the context of ethics. It places normative ethics in a *direct*, and *necessary* relationship with what we know about the mind, and behavior of moral agents. And that is precisely what cognitive sciences purports to study. The philosophical “prejudice” against the descriptive and empirical cognitive sciences is here under trial, and supporters of autonomous ethics will here demand justification. Well, I will try to demonstrate, with the help of philosophers and cognitive scientists who have had a say in the relevance of their endeavors to the field of ethics, that the evidence supporting the claim of the *necessity* of grounding ethics in cognition is not only convincing, it is a lethal blow to any pretense of the autonomy of any area of knowledge about human life. And then, I will proceed to demonstrate the relativity of ethics not exclusively to culture (as anthropologists would have it, like Benedict, 1934), but to a larger scheme of constraints, from the biological to the social, under the guidance of cognitive sciences’ results.

### *Naturalistic endeavors and the autonomous ethics fallacy*

Johnson summarizes the importance of mentalistic issues in moral epistemology, “... first, any plausible moral system must be based on reasonable assumptions about the nature of concepts, reasoning, and moral psychology. Second, the more we know about such important issues as the role of emotion in moral deliberation, the nature of moral development, and the most realistic conceptions of human well-being, the more informed we will be in our moral thinking.” He then takes on utilitarianism and kantianism to prove his point: utilitarianism presupposed highly determinate concepts such as that of “good”, and capacities of rational calculation over the realization of what is good for self- and communal purposes. Kantianism held absolute, universal moral laws, under

the guidance of a transparent and all-encompassing reason, where all of these concepts were taken to be literal, clearly defined and available to all “sufficiently” rational agents.

Those theories are psychologically unrealistic. They are doomed to the status of idealistic outlooks on what normative morals *should* be. We have already discussed the reasons for the origins of the normative and descriptive rift, and it will become more and more apparent, as we progress, that maybe the denial of the relevance of empirical research on cognition was a bad move for ethics. So, where do we start ? Johnson says that “from the perspective of the cognitive sciences, then, the most fundamental challenge is to show that the alleged *is/ought* split is mistaken...” I have dubbed the departure from autonomous ethics the “autonomous ethics fallacy”, in a (admittedly sarcastic) tribute to Moore.

*The unbearable lightness of language, where words betray metaphysics*

A fundamental issue in the following discussion, as well as a clarification of the reworking of the definition of relativism above, revolves around the metaphysically “charged” concept of criteria. From ancient to modern philosophy and sciences, the concept of criterion has been a terrible metaphysical commitment in what constitutes knowledge and ontology alike. It presupposes much in the foundations of epistemology and ontology, and efforts have been made at the beginning of the twentieth century by logical positivists to “clean up” the linguistic pitfalls and biases that committed many thinkers into metaphysical delusions by putting too much “faith” in their conceptual schemes (Carnap, 1928). Quine (1953, 1990) did stop the frantic logico-positivist agenda from exhausting its radical pogrom, but also warned his posterity of the dangers of the underdeterminacy of conceptual translation and the inscrutability of ontology. Thinkers, he warned, should be careful about their claims on *what there is*, thus enforcing a strong position of *ontological commitment* in our use of language.

My point about criteria is that it's overrated, out (of fashion) and obsolete. Only formal systems may carry such a strong commitment on their design, by their purely artificial and descriptive nature and function. Empirical sciences, up to and including economics, have been influenced by many thinkers concerned with questions on teleology (Dawkins 1986, Dennett 1995, 2003, Millikan 1987), complexity and determinism (Lewin 1993, Coveney & Highfield 1995, Stewart 1990, Gleick 1988, Kauffman 1993) and rule-based systems (Nash 1997, Axelrod 1984, Simon 1956, Newell 1990). These endeavors have changed the face of the epistemology of science as well as its metaphysical foundations, and contemporary research from even mathematics to physics to all of the life sciences have departed from the metaphysically charged concept of criterion to embrace that of **constraint**.

The concept of constraint has a lighter touch in terms of metaphysical commitment. It doesn't place us in a world of ontological density (where everything from ideas to objects that you can think of are granted reality *a priori*), but rather in one of ontological propensity (where there *may* been something out there, from concepts to abstract entities to material ones). Note how it is also epistemologically lighter, in its "prudent realism", for we are committed to the limitations of not only ontology, but above all, our knowledge of the world. Our claims are weaker with constraints, but at least they do not commit us to idealistic schemes of ill-fated grandeur, of the likes of kantianism and utilitarianism. As such, the cognitive sciences-inspired individuals have a better understanding of what Johnson means when he writes "...we must examine the ways in which cognitive science *constrains* moral theory...", and later "... for the most part, results from the cognitive sciences available to date function primarily to *set constraints* on the nature of a psychologically and cognitively *realistic* morality..." (my emphasis in both quotes).



## 5

### **What cognitive sciences have to say about ethics**

#### *On concepts, rules/laws and reasoning*

Moral law has been a dominant ethical model from ancient Greece to religious thought, to absolutist views of the like of intuitionism, rationalism and even rawlsian judicial thought. "... Morality is regarded as a system of universal moral laws or rules, discernible by human reason, and directly applicable to the kinds of concrete moral situations that people encounter in their lives..." writes Johnson (1993). He then emphasizes that cognitive research on conceptualization and reasoning is of direct consequence to the viability of moral law theories. These theories hold on premises such as universality and explicit rules, and are incompatible with cultural and historical relativism. Drawing upon George Lakoff (1987), Paul Churchland (1995), and Amos Tversky and Daniel Kahneman (1974), we have sufficient results from cognitive research to undermine the moral law conception, as well as the autonomous and rational premises that support it.

There is an impressive quantity of research on the nature of concepts and categorization. Abstract concepts have been demonstrated to possess a "fuzzy" nature, by having no clear boundaries and a gradient structure. Thus are concepts ambiguous at best, and our categorizations under such concepts does not obey a classical (featural, definitional) semantic theory, but rather some form of prototype- or exemplar- based processing (Rosch 1978, Smith & Medin 1999). Moreover, research specifically about moral concepts has shown that moral prototypes or other non classic conceptual structures result from a radial

construction, by exposition to metaphorical and functional relations to other category members. As if it was not enough, those abstract moral concepts being defined by sets of metaphors, they exhibit inconsistencies and contradictions among themselves. As Johnson emphasizes, "... if our fundamental moral concepts are defined by multiple and possibly inconsistent conceptual metaphors, then the literalist picture of moral thinking [...] cannot be correct."

To complicate things further, it also follows that our reasoning about moral issues *can not be deductive* (with exceptions of simplicity in the correspondence between a situation that would follow literally from a line of moral reasoning). Moral reasoning is therefore an exploration of correspondence between metaphorical extensions of prototypical moral situations to atypical ones. Johnson notes that it does not commit us to the exclusion of moral principles, but these principles are not univocal and absolute, they are "idealized" strategies modulated by experience and categorization via prototypical concepts of metaphorical structure.

One line of cognitive research has demonstrated that we *frame* our reasoning. Our concepts *and* the relations they hold among themselves are context-dependent. A moral problem in a situation has many different outlooks and solutions depending on prior or subordinate clauses, by analogy to research on decision-making and problem solving in cognitive sciences. Frame dependence is incompatible with moral law theories and moral fundamentalism. As a corollary source of reinforcement for the frame-dependent view, there is a significant body of work that questions the ability of rational agents to make "good probabilistic judgments of the sort required by an economic conception of rationality..." writes Johnson. The subject matter here is psychological work on the use of heuristics and models of decision-making where risk is involved. As Johnson notes, moral theory draws upon a conception of rationality that surfaced in classic economics, where agents use their reason, in light of available information, in an optimal way, to assess their interests and the consequences of those rational choices.

This conception has been proven time and again to be quite unrealistic psychologically, and the sciences of economics have ruled it out a long time ago, always eager to borrow on empirical research to further their ends. It is commonly held nowadays that real agents (as opposed to ideal agents) have biases and limitations, or again constraints, on their so-called rational choices. Among the relevant empirical results, people have been shown to be strongly influenced by the framing of risk assessment, being risk-averse in deliberation about gains and risk-seeking when losses are concerned, without regards to the actual objective calculation in terms of optimality. Principles such as satisficing, as opposed to optimality, and heuristics use, as opposed to maximum information-oriented decisions, have undermined and replaced the classical rational perspective in economics and psychology, and ethics should know better than to stick with ghosts.

### *On emotions*

Dichotomies abound where morals are concerned. An important side effect of rationalism has been to relegate emotions to a secondary role in the matter of moral judgment, but prior to Kant, Hume posited morality as an essentially emotional phenomenon. In Hume's view, moral judgments were based on moral sentiments, because it was passions that influenced actions, whereas reason purported to make judgments about truth (Kant held an asymmetrical view, where emotions are matter of subjectivity and individuality, hence incapable of discovering universal principles, the works of pure reason alone). Hume's legacy is one where descriptive claims are left out of ethics, since moral judgments are expressions of emotions.

Johnson condemns the dichotomy as an assumption of radical mutual exclusion that is again psychologically unrealistic, thus undermining ethical views on concepts such as motivation and affective judgment. Following Antonio Damasio's research in cognitive neurosciences (1994), it had been demonstrated that practical reasoning is directly dependent on emotional and motivational

states, in complex physiologically and neurologically constrained processes. Research results on cortical lesions and neuropathological afflictions have shown that reason and emotions are interdependent in the mind's endeavors to achieve judgments of practical and moral propensity. A very important empirical matter here is the demonstration by neurosciences that reason is directly dependent on its embodiment, a radical turn in the study of rationality from a cognitive direction.

### *On development of the self and morality*

Research on empathy in developmental cognitive science as put forward the idea that our ability to relate to others through emotional dispositions is the source of our moral judgments and behaviors. The development of the self is dependent on socialization, and in a mutually reinforcing interdependence, the development of our attitudes towards others are dependent on our empathy (Goldman, 1993). Also worth noting is the ontogeny of infant-parent (particularly mothers) dynamics in what has been called *affect attunement*, which is considered as an essential step in the development of empathy, altruism and overall socialization. Direct experience of moral situations reinforce the sense of empathy in ontogeny, from children confronting distress, to the abstraction and generalization of imagined suffering, to extrapolation into the realm of social conduct and ethical and judicial tenets.

From Piaget (1932) to Kohlberg (1981), classical views on moral ontogeny has corroborated the rationalist preconception of moral law, viewing moral reasoning under the dominion of rationality as the natural end-state of development of individuals. Flanagan and Johnson argue against the relevance and realism of the examination standards of such early cognitive-developmental support to a rationalist conception. Among other concerns, it is not obvious that people ever develop the so-called later and higher stages of moral thought in general, since those stages have a highly abstract and formal definition that may fit the methodology but not the reality. *Caeteris paribus*, it is the very definitions of morality and rationality as they are preconceived that influenced the

examination standards of those early studies, thus biasing a claim that was already built-in the method.

Again, classical views on rational agents as being autonomous and without constraints have been challenged. For one thing, even very modern rationalist views of morality, such as Rawls' (1971) and Nozick's (1974) not quite compatible views of the political, economical and moral spheres of activity, presuppose moral agency as *a priori* and autonomous of actions and interrelations, thus following kantian rational and free egotism as opposed to a realistic developmental outlook on the emergence of morality. Also, developmental concerns have a tendency towards ethical cultural relativism (Shweder, 1991), underlining through cross-cultural studies that moral ontogeny is also dependent on exposure to values already in place in the social theatre.

#### *On conceptual schemes used in moral philosophy*

A finishing consideration of cognitive inspiration to our subject matter concerns whether the specifications of what ethics hold as moral orientations are realistic or not, or in other words whether moral archetypes are over-specified or under-specified by the argumentation taken in account in moral deliberation. For example, studies on moral agency from a distinction between genders have a tendency to segregate a morality of rights and justice from a morality of responsibilities and care, respectively attributing the former tendency to men and the later to women, as learned from patriarchal and matriarchal stereotypes that permeate our culture. Whether or not gender-based studies hold any significant and heuristic results for the sake of our understanding of ethics is debatable, and authors are very prudent in their comments with respect to the issue. But the point raised by Flanagan and Johnson is that we may be too quick to discriminate moral orientations such as above, and models of ethical inquiry from even an empirical perspective are biased towards simplicity and strong, radical segregations among concepts and categories. "... moral personality is, in the

end, too variegated and multipurpose to be analyzable in terms of a simple two-orientation scheme – even blended together” writes Flanagan.

## 6

### Conclusions

Much has been said above on the very large issues of ethical relativism and how to deal with classical preconceptions of epistemological issues on moral thought. But in both ways of dealing with a vast area of knowledge and pointing out to specific issues within them, I have left out a considerable wealth of questions and answers. My claims can be summed up in the following paragraphs.

Firstly, I have tried to demonstrate that the concept of relativism as commonly held is misinterpreted and misconstrued, and does not doom us with paradoxical or regressive arguments that should play in favor of absolutism. As such, relativism and absolutism may be but two ends on a spectrum, not an *either/or* dichotomy. (Non archaic and non radical) relativism is compatible with a practical realism, and does not entail that there should be no moral truths, whereas absolutism rests on unjustifiable metaphysical and epistemological positions.

Secondly, the issue of an irreconcilable normativity and descriptiveness brought upon by seemingly absolutist claims of different lineages need not worry us for much of the same reasons drawn from epistemology and metaphysics. The possibility of autonomous ethics has been thus demonstrated (time and again) to be nigh impossible, as with any autonomous research area concerning the sciences of the living anyhow. The very vocabulary inherited by moral thought has to keep up with contemporary epistemology and metaphysics, as in the departure from a criterial view of our knowledge of the world to embrace a realism of constraints on this knowledge.

Thirdly, much of ethics having to do with reason, concepts and agency, which are the domain of empirical cognitive sciences, we are naturally led to espouse a dependence of the former area of study on the latter. Not only does it concur with our previous intuition of the well founded adoption of a correct relativistic attitude towards knowledge, it eradicates the false pretenses of autonomous and absolutist ethics, along with the unsupportable claims on the necessity of untainted normativity by descriptive concerns.

Lastly, the pertinence of ethics is in no way questioned here. What was dealt with here is about the relativity of ethics to its empirical foundations, of (at least) cognitive importance. It is a reassessment of ethics' epistemological and ontological commitments. This relativity of ethics does not portray ethics as a failure or ill-fated enterprise, it informs it and constrains it in more realistic ways. What we might try to achieve is a non-reductive naturalistic realism of ethics, much in the same way that cognitive sciences resist reductionism and aim to a rigorously scientific treatment of what might be said to be true about human mind, behavior and agency.

Future work may go even further than a psychological and cognitive endeavor to rest ethics in scientific realism. I believe it to be possible to shed some light on some real and relevant constraints on moral thought and action within the realms of even lower levels of scientific complexity, from evolutionary biology down to dynamic systems theory.

“A morality which cannot be revised as new discoveries about the mind are made known is a dead morality incapable of meeting the kinds of change that are part of human existence.”

Mark L. Johnson  
1998

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