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7. Morality, Cognition and the Language Analogy

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Is there such thing as moral knowledge? If so, how is it possible? Philosophers have addressed these questions at least since Plato. Contemporary philosophy has placed them at the center of what is known as metaethics or, more specifically, the metaphysics, epistemology, philosophy of mind, and philosophy of language of moral discourse, thought and practice (see Miller, 2014; Jacobs, 2002; Horgan and Timmons, 2006; Darwall, Gibbard, and Railton, 1997). Intuitively, the first question has a positive answer. There is moral knowledge and humans have plenty of it. We know, for example, that causing unnecessary harm is bad, that helping others is good, that suffering should be avoided, and so on. It is the second question that has proven to be highly problematic, so much that is has cast doubt over the correctness of the intuitive positive answer to the first question. If there is moral knowledge, as the intuitive answer claims, then the so-called "moral truths" must correspond with some or other moral fact or moral property of which the said moral truth is a truth. This, however, generates problems of all kinds.

First, the metaphysics involved seems dubious. There seem to be no normative or moral facts in the world, there are just facts – physical ones perhaps – which can be fully described and accounted for without any appeal to moral knowledge, moral judgment, or moral claims (see Railton, 1986; Brandt, 1979; Brink, 1989). So what kind of non-physical facts and properties are we talking about when we talk about moral knowledge? Are they some kind of special fact with a

unique *sui generis* metaphysical nature? Are moral facts somehow physical – i.e., nothing over and above the physical – and in what sense?

Second, supposing that we somehow find an answer to the metaphysical question, if we are somewhat satisfied with the postulation of moral facts and properties, we now have an epistemological problem. Unlike our knowledge of the physical world, there seems to be no perceptual access to moral facts. Moral facts and properties, even if considered as somehow physical, would seem to demand a special methodology for them to be properly understood (see Sturgeon, 1985; Nelson, 1996; Campbell, 2014). What sort of epistemological access do moral facts demand?

Special moral facts and properties demand a special epistemological access to moral reality. Yet, accepting all these problematic claims will only give place to more problems. So we get to our third problem. If there are special moral facts and properties, and if our epistemological access to them is not a simply causal / perceptual one, then how is it that moral terms such as 'good' and 'bad' end up referring to them? A simple, causal semantics for moral terms would seem to be of little use, something more (or something else) than just causal / perceptual relations will be needed (see Schroeder, 2012; Wedgwood, 2007). What is the correct account of how moral terms get to denote moral properties – if that is what they do?

A fourth problem has to do with the role that a subject's knowledge of moral truths is meant to play in her everyday life. Moral knowledge, it seems, is especially important as a behavior-guiding tool. This is so, at least in part, because of the motivational force of moral judgments (see Hume, 2007; Dancy, 1993; Smith, 1994) . Sincerely judging, for example, that helping others in need is good will naturally lead us to actually help others in need whenever possible, and sincerely claiming that causing unnecessary harm is bad will lead us to avoid engaging in actions that may needlessly hurt others. This motivational force of moral judgment,

however, becomes somewhat mysterious if moral knowledge is a matter of knowing the facts and properties of the world. Knowledge of physical facts and properties, for example, is not especially motivating. Knowing that there is a glass of water in front of me will not make me reach for it unless I happen to have a desire, or need, for water. But desires and needs do not constitute any kind of knowledge, let alone moral knowledge. So we are left wondering what kind of mental states are associated to moral knowledge so that it ends up having such motivational force (see Campbell, 2007; see also Kumar, 2015). Alternatively, what is it about moral facts and properties that, unlike any other fact or property, they sufficiently motivate human subjects into acting in some or other way? (see Mackie, 1977).

Finally, and supposing we somehow find a satisfactory solution to the preceding problems, the intuitive idea that there is moral knowledge faces a fifth – and, for the purposes of this chapter, last – problem having to do with the cultural and social variability of moral codes and, allegedly, moral knowledge across human populations. If moral facts and moral properties exist just like physical facts and properties, independently of any views, beliefs, or desires any subject (or group of subjects) might have, we should expect the distribution of moral judgments and moral views to be somewhat similar across cultures. Yet, much to the contrary, the evidence shows that there is more cultural variation and group-relativity than homogeneity in the distribution of moral judgments (see Super and Harkness, 1997 and 2002; Whitting and Edwards, 1988; Knight and Carlo, 2012; Brenick and Killen, 2014).

In this chapter I want to address both questions concerning moral knowledge – whether there is any such knowledge and, if so, how is it possible – from the standpoint of *open compositionality*. According to the latter, natural language is a supermodular cognitive ability (see sections 4.1 to 4.4) useful both as a communicative tool and as a platform for higher order thought. As I will show throughout the chapter, language plays both roles in moral cognition. It

helps communicate moral judgments and engage in moral inquiry, while it also facilitates moral understanding. Moral knowledge, as I will argue, is better understood by analogy with human knowledge of language. This language analogy, I believe, is a very fruitful one, as it naturally delivers the basic elements of an account of moral knowledge based on a naturalist ontology of moral facts, an ordinary epistemology for moral knowledge acquisition, and a simple semantics for moral discourse. The resulting view also suggests an internalist view of moral motivation, an account of why there are robustly objective moral truths, and an explanation of why there is so much cross-cultural moral variation. To achieve these goals I will assume the *Lewisian Compromise* (see section 4.1) while following the *cognition-first* methodology of *open compositionality* (see section 4.4) as it applies to moral discourse.

Lewisian Compromise: Natural languages are, first and foremost, things that can be learned, developed and used by human beings given their limited cognitive resources.

Cognition-first: To understand a given linguistic phenomenon and how it takes place, we must first understand the underlying cognitive processes, as understood by our best cognitive psychological and psycholinguistic theories (among other cognitive scientific endeavors).

If we want to understand how moral discourse works, according to this view, we must first understand moral cognition. To do so I will look into studies of moral cognition and moral cognitive development, including of course infant and adult moral cognition. To have a clear view of how understanding moral cognition may help us understand moral knowledge I will begin in section 7.1 by describing the core elements of naturalistic moral realism, as I take it to be the best account of moral knowledge available in the literature that may be said to observe the

Lewisian Compromise. With this proposal in mind, in section 7.2 I will present a brief yet detailed account of moral cognition according to our best empirical studies on moral cognitive development. Based on this evidence, in section 7.3 I will develop what I call the "language analogy", the claim that moral and linguistic cognition are substantially similar to each other and should be theoretically approached in parallel ways. In section 7.4 I show how this analogy offers what may be considered the blueprint for theory of moral knowledge that solves the traditional philosophical problems associated with it. I will describe the idea of knowledge of a given moral code in terms of moral competence – i.e., acquiring, sustaining, and developing moral cognitive abilities, and present a brief account of what this moral competence consists of. I conclude by showing how the suggested account avoids the most common objections against naturalistic moral realism coming from metaphysics, moral motivation, and objectivity.

7.1 The challenges for a naturalistic moral realism

Although, as Railton (1986) mentions, there are many different theories that claim to be forms of naturalistic moral realism, for present purposes I will assume that the view is best characterized as defending three central claims. Naturalistic moral realism claims first, that there is in fact moral knowledge; second, that the moral facts and properties warranting such knowledge are nothing over and above the natural facts and properties of empirical science; and, third that such moral facts and properties are real facts and properties in the sense of having a mind-independent reality. The challenge for a naturalistic moral realist is to find " a plausible synthesis of the empirical and the normative." [Railton, 1986: 163]. This synthesis refers to an acceptable theoretical equilibrium whereas both, the normative and the empirical, aspects of morality are well accounted for. A naturalistic moral realist's goal is, thus, to show how our best empirical theories allow for normative functions to take place in our world. To achieve this difficult theoretical task is, thus, to offer an account of moral truth and its warrant, which is compatible

with a naturalistic moral epistemology – i.e., an account of how these truths are known that does not postulate special or *sui generis* epistemic access to such truths. As Railton (1986) puts it, moral truth and its warrant must be such that there is some "reliable causal mechanism for moral learning." [Railton, 1986: 171]

Railton (1986) sets a high standard for any version of naturalistic moral realism to constitute a satisfactory account. First, the facts and properties postulated by the theory must exhibit two important signs of reality and behavioral guidance, dubbed "independence" and "feedback"

Independence: it exists and has certain determinate features independent of whether we think it exists or has those features, independent, even, of whether we have good reasons to think this;

Feedback: it is such – and we are such – that we are able to interact with it, and this interaction exerts the relevant sort of shaping influence or control upon our perceptions, thought, and action. [Railton, 1986: 172]

Second, the proposed account must also show how, in virtue of the postulation of such and such moral facts and properties, the theory can perform a much-needed explanatory function, accounting for our everyday experience. Furthermore, if the proposed theory is to be seriously considered as a satisfactory one, it must show how this explanation is compatible the available empirical evidence.

Now, while meeting these standards – having explanatory relevance, metaphysical independences and guiding effectiveness – any naturalistic moral realism must somehow distinguish moral from non-moral facts, since only the former may warrant the truth of moral

judgments while also having practical or guiding force upon us. Railton (1986) argues that we cannot offer such an account by looking into human reasoning, assuming, of course that rationality is merely instrumental. Moral facts cannot be identified as whatever is taken to be a moral fact by instrumental rationality since instrumental rationality sets its values depending on its ends, which in turn depend on the subject's beliefs and desires. Fixing moral truths in terms of instrumental rationality would be tantamount to accepting moral relativism and, thus, rejecting naturalistic moral realism from the get-go. Instead, Railton (1986) offers what is perhaps the best available account of the metaphysical nature of moral facts within naturalistic moral realism (but see also Brandt, 1979; Copp, 1995; Brink, 1989; and Sturgeon, 1985). Railton is skeptical that the difficult challenge above described can be met with a psychological strategy that postulates a special form of moral reasoning and so, he argues, we must "shift to ontological ground" if we want to find an acceptable account of moral facts that may ground a naturalistic account of moral truths and, *a fortiori*, moral knowledge.

According to Railton's (1986) account of moral properties and facts, moral rightness is understood as "what is rational from a social point of view with regards to the realization of intrinsic non-moral goodness." [Railton, 1986:191] Five closely related yet distinct notions are needed to understand this definition of moral rightness. First of, the notion of social rationality involved is idealized. Something is socially rational if it would be rationally approved of "were the interests of all potentially affected individuals counted equally under circumstances of full and vivid information." Second, the notion of an intrinsic non-moral good is defined in terms of an objective interest of an agent *A* without reference to any other objective interest of *A* [Railton, 1986: 178].

Third, as with the notion of social rationality, the notion of an objective interest of an agent *A* results from an idealization. An agent *A* has an objective interest in *o* only if, given full

information about *A*, about the relevant circumstances, and about *o*, *A* would have a subjective interest in *o*. Alternatively, for *A* to have an objective interest in *o* is for *A* to have an interest in seeking *o* provided *A* is fully informed and is perfectly rational about herself, her circumstances and *o's* nature. Objective interests determine what a subject "would want himself to seek if he knew what he was doing." [Railton, 1986:177]

Finally, the fourth and last notion, that of a subjective interest of an agent *A*, is understood as denoting a a relational property of *A* that supervenes upon *A*'s desires and other attitudes, her circumstances, and the dispositional properties of what is of interest to *A* in the relevant circumstance. In other words, to say that *A* has a subjective interest in *o* at time *t* is to say that *o* has the dispositional property of causing a positive attitude in *A* at *t* provided that (i) *A* has certain desires and other attitudes at *t*; and (ii) that the relevant circumstances at *t* obtain.

Together, these definitions deliver a surprisingly simple account of moral rightness. On this view moral rightness is, at bottom line, a relational property that holds between certain aspects of an agent's constitution, aspects of the circumstances, and the dispositional properties of certain objects. As such, moral rightness is nothing over and above the interests or wants an agent may have. More specifically, moral rightness defines those among the enormous and varied set of interests of agents that would be socially rational to approve (in the proper idealized sense). Understood as agential interests approved by ideal social rationality, the postulated moral property / fact satisfies the requirements for any satisfactory naturalistic moral realism. First, the postulated property has an independent existence of its own, agents do have interests independently of whether we think they do or do not, and a subset of them are those that would be ideal for them to have given full information and perfect rationality. Second, the property is such that agents may interact with it, most importantly, by finding out through experience which ones among their interests are in fact members of the relevant objective subset and which are not

and by acquiring new interests accordingly, and consequently modifying their behavior. By altering her behavior, an agent *A* may receive feedback as to the appropriateness of her newly acquired interests. Railton (1986) argues that this feedback feature of the proposed account of moral rightness accounts for its explanatory function. Once viewed as a set of objective interests approved by ideal social rationality, moral rightness is necessary to explain how an agent *A*'s modified behavior and changing interests constitutes an improvement of her rationality. Changing one's behavior towards acquiring more objective interests is, after all, the goal of moral learning according to the view (see Railton, 1986:pp.188-189).

This proposal is meant to offer a synthesis of the empirical aspects of morality – i.e., concerning the very nature of subjective interests, and instrumental rationality – and the normative ones – i.e., concerning objective interests and idealized social rationality. This synthesis naturally meets Railton's (1986) high standards for naturalistic moral realism, but it is in trouble when it comes to the more general problems considered in the previous section. I mentioned five such problems coming from metaphysics, epistemology, semantics, moral motivation, and cultural variability. Railton's proposal appears to avoid both the metaphysical and epistemological problems. Moral properties are real, spatiotemporal and causally efficacious natural properties. They are not *sui generis* moral properties with *sui generis* efficacy. Thus, the metaphysics is not dubious and the account of how moral knowledge and learning is achieved is compatible with a naturalist, causal epistemology.

Railton's account appears to have little trouble accounting for cultural variability. Acquiring all the interests that would be approved of by ideal social rationality is, on this view, an ideal goal that all social groups strive to reach. Social groups slowly move towards that goal by changing and accepting new interests and modifying their behavior accordingly. The path must be completed empirically, through every day experience. Every distinct social group will

start from distinct initial conditions, face distinct circumstances and aim at distinct non-ideal interests. It is, thus, not surprising to think that "no one kind of life is likely to be appropriate for all individuals and no one set of norms appropriate for all societies and all times." [Railton, 1986:165]

The trouble begins when we look at the resulting semantics for moral terms. Railton (1986) defines the term 'moral rightness' as denoting a set of intrinsic objective interests approved of by idealized social rationality. Intuitively, that is not what 'moral rightness' means. When ordinary competent speakers utter something like 'Helping others is morally right', they do not seem to be saying something like "Helping others is an intrinsic objective interest that would be approved of by idealized social rationality." Railton (1986) admits this is problematic, as it makes the theory vulnerable to so called "open question" arguments suggesting that the proposed definition is simply mistaken (see Railton, 1986:204-207).

More trouble comes from the motivational function that moral properties are supposed to have. Unlike natural properties, moral properties are a source of motivation in the sense that by merely judging that seeking *o* is morally right *A* acquires, *ipso facto*, a motivation for seeking *o*. Yet, the source of moral motivation is rather mysterious in Railton's account. It is not to be found in the reduction base of moral properties, for these are constituted only by ordinary, non-normative natural properties. The only potential sources of moral motivation left are the idealized notions of an objective interest and of an ideal social rationality. Railton thinks that the very idea of objective interests is somehow a source of motivation. If one is to learn that one would still want *o* if one were to be "fully informed and perfectly rational", then presumably this would motivate one to want *o*. But this account seems to presuppose, rather than account for, moral motivation. One will be motivated to have objective interests, and to make one's goals such that they would be approved of by ideal social rationality, only if one is already interested in doing

what is the morally right thing to do. It is at least not obvious that just the thought of a fully informed and fully rational agent wanting *o* will make me want *o*. And it is even more doubtful that I need to reflect on these matters in order to be motivated to do what I consider to be the morally right thing to do. The problem remains even if we accept Railton's claim about motivation. For even if the thought of objective interests and ideal social rationality may somehow motivate an agent to act in a certain way, the account of how this happens remains a mystery. There is nothing particularly normative about objective interests or ideal social rationality, being fully informed and fully (or perfectly) rational do not seem to be specially normative characteristics, at least not in the appropriate moral sense. A proper account demands for a naturalistic ontology that may include normative properties or normative functions. We need naturalistic normative properties of the non-mysterious kind.

Thus, a fully satisfactory naturalistic moral realism is still wanted. Not only does it need, as Railton (1986) puts it, a proper synthesis between the empirical and the normative aspects of morality, it also needs a proper balance between the naturalistic metaphysics of the theory's postulation and the normative functions it is meant to perform. Without this balance it will be difficult to solve the semantic and moral motivation problems just mentioned. I believe a more satisfactory naturalistic moral realism, one that better achieves the balance between the naturalistic metaphysics and the normative functions of our theoretical postulations, is forthcoming once we adopt the *cognition-first* methodology. As I will show in subsequent sections, a proper understanding of moral cognition and development delivers an account of both moral epistemology and metaphysics that avoids the semantic and moral motivation problems facing Railton's account. This methodological shift requires a move from the ontological ground of objective interests into the psychological ground of human cognition.

7.2 Moral cognition and development

Since Piaget (1932) and Kohlberg (1969) the study of human moral cognition and development has vastly advanced, following in part the extraordinary progress made by what are nowadays known as the cognitive sciences. Human moral cognition is now the focus of study within a rich interdisciplinary setting that includes cognitive psychology, evolutionary biology, anthropology, and neuroscience (among others). From PET scans and fMRI tests to behavioral studies – with humans and non-humans –moral cognition is under close empirical scrutiny. There is, as one would expect from such a varied interdisciplinary approach, an enormous amount of research on this topic (see Killen and Smetana, 2006; Brugman, Keller, and Sokol, 2013; Nucci, Narvaez, and Krettenauer, 2014; and Lapsley and Carlo 2014). It is not my goal to present an all-encompassing review of this thriving field, not even a brief one. Instead, I will simply focus on a few outstanding features of moral cognition and development that will prove to be of great significance for the purposes of this chapter.

Evolution of Morality

Human morality has an evolutionary history. Studies with primates have shown that chimpanzee's develop and enforce prescriptive norms for certain socially salient behavior, such as mating and caring for infants. Whenever such a rule is violated, third parties usually give their attention to the victims and identify the transgressors. Together, victims and third parties, commonly punish the transgressor (see de Waal, 1991 and 1997). Aggressive, reconciliatory, and altruistic behavior have also been observed in non-human primates (see de Waal, 1998; Hauser 2006). This suggests that moral cognition is a unique and salient element of human cognitive endowment just as much as the human visual system. It also suggests that moral knowledge, whatever it may turn out to be, is at least partly the result of natural selection and not purely a matter of experience-based scientific-like knowledge.

Based on these evolutionary studies, as well as studies from multiple other sources– i.e., social, cultural, and biological studies – Haidt forcefully argues that moral reasoning is a post-hoc construction that usually follows once a moral judgment has previously been made. Moral reasoning, whenever it takes place, appears to be working as a defense strategy to support the already formed moral judgment. Thus, moral reasoning is not typically, the evidence suggests, a source of moral knowledge. Moral judgments are automatic, not the result of much reflection (see Haidt, 2001 and 2007). Even so, moral judgments play a central evolutionary and cultural role as "social binders." Aside from the automaticity of moral judgment, the evidence also shows that emotions are more significant than reasons when it comes to determining moral judgment and consequent behavior (see Haidt, 2001).

Assuming that there is moral knowledge, it must be of the sort that can be – at least partly, if not substantially – evolutionarily endowed. It must be capable of being exercised in an automatic, fast, and simple fashion in a way that resembles the use of fast and frugal heuristic principles in language interpretation (see section 4.3). Moral knowledge also appears to demand emotional intelligence, more so than scientific knowledge. Some have argued that these features are enough to foreclose the chances of any such thing as moral knowledge, for knowledge cannot result from such an emotional, intuitive, and frugal cognitive process as described (see Kahane, 2011 for a review of such evolution-based objections to moral knowledge). Others, such as Railton (2014) defend the possibility of moral knowledge by arguing that, when properly understood, intuitions and the human affective system are not incompatible with knowledge, even scientific knowledge. Like Railton (2014), I believe the evidence does not show that there is no moral knowledge. Unlike Railton (1986) I believe a more thorough consideration of the empirical studies on moral cognition shows that moral knowledge is of a very special kind, one that is

certainly not “of a piece with empirical inquiry.” [Railton, 1986:165] More specifically, I believe the evidence supports what I call the “psychological hypothesis”.

Psychological hypothesis: moral knowledge, at individual and social levels, is determined by the nature – i.e., *qua* species – and state of a subject’s psychology.

Exactly what this psychological hypothesis entails will be clear as we move on considering further evidence.

Prelinguistic Moral Principles

Carey (1997) offers a useful criterion for identifying universal cognitive principles needed for a given human cognitive function to perform – e.g., natural language acquisition and development – and for distinguishing them from representations that do play a role in the said cognitive function but are in fact cultural constructions that differ from population to population. To do so, Carey (1997) argues, we must first identify the candidates for universally cognized representations. Second, we must “establish whether these articulate the mental representations of prelinguistic human infants.” [Carey, 1997: 37] Insofar as the identified representations are prelinguistic, there is good reason to think that they are universal and perhaps also innate. Finally, third, with respect to those representations that are found to play a role in the same cognitive functioning, but do not express infant understanding, we must determine “when these conceptual resources become available to children, and explore the mechanisms by which they do so. These latter cases are candidates for empiricism and Whorfian influences.” [Carey, 1997: 37]

I believe Carey’s (1997) criterion may be of great use when it comes to understanding the nature of human moral cognition and how it develops from infancy into adulthood. Multiple studies have identified what, following Carey (1997), may be understood as universally cognized moral representations, that is, moral concepts or principles that are common to all human individuals across populations (see Cushman, Young, and Hauser, 2006; Hauser, 2006). I will

call these “prelinguistic moral principles”, which including principles such as *suffering is bad*; *helping others is good*; *hindering others is bad*; *each one must receive what is deserved*; and *it is good to be empathic*. Whether some or other moral principles are part of this universal, prelinguistic set of moral representations is, of course, an empirical matter. So far, these are some of the principles for which there is independent empirical evidence.

Martin and Clark (1982) replicated studies on newborn sensitivity to suffering. The study involved 70 newborns, which were presented with tape-recorded crying of other infants. On the one hand, calm infants cried in response to the crying of other infants, but showed no response to their own crying, and ignored the crying of a chimpanzee and that of older child. Crying infants, on the other hand, continued to cry when presented with the crying of another infant, but almost stopped crying when presented with a recording of his own cry. The evidence shows human newborns are equipped with sensitivity to suffering and with empathy for others.

In a study with 6 to 10 month old infants, Hamlin, Wynn, and Bloom (2007) found that from early on human infants engage in social evaluations of unrelated their parties. Infants were presented with an animate character – i.e., the climber – that was either helped or hindered by other characters in its attempt to climb a hill. The experiment used a choice paradigm for determining preference – infants reach out at what they prefer – and a violation of expectation paradigm for determining surprise – infants look longer at surprising events. Infants robustly reached for the helper character over the hinderer, and were surprised to see the climber approaching the hinderer afterwards. A further experiment included a neutral character that simply did not interact with the climber. Infants reached more for the helper than for the neutral character, yet preferred the neutral character over the hinderer. “That is, infants were both drawn toward helpers and independently inclined to avoid hinderers revealing positive and negative evaluations.” [Hamlin, Wynn, and Bloom, 2007:558] Further studies (see Hamlin, Wynn, and

Bloom, 2010) show that this capacity for social evaluation, although with a privilege for negative social information, is already present at 3 months of age. These studies suggest that human infants are equipped with a capacity for assessing the actions of others, as well as with a prelinguistic principle that positively values helping over hindering. Hamlin and colleagues argue that this capacity for social evaluation, given how early it appears in infancy, can be seen as a biological adaptation that "may also serve as a foundation of a developing system of moral cognition." [Ibidem]

This understanding of the value of collaboration seems to be substantially refined as soon by the first year of age. In a study with 14-month-old infants Henderson and Woodward (2011) found out that infants have a complex understanding of collaborative work. They seem to know that collaboration is complementary yet critical to achieving the goal, and that there is no collaboration unless there is a causal relation between the actions of the helper and those of the agent in need of help.

Between the second and third year of age human infants already understand retribution. When resources are scarce they tend to distribute them unequally between helpers and hinderers, with a preference for the former. Yet preschoolers also exhibit a preference for equal distribution of resources when these are plentiful (see Kenward and Dahl, 2011). A separate study by Hamlin, Wynn, Bloom, and Mahajan (2011) shows that this understanding is rooted in an early ability to assess moral actions and their agents not only by considering the moral worth of both the agent and the recipient of the action. Subjects were presented with a scenario including two characters; one intending to perform a difficult action while the other character either helps or hinders the first one. After observing these interactions, subjects were presented with a second scenario including as agents the helper and the hinderer of the previous scenario, both of which were performing an action for which they needed help and they were both either helped or hindered.

The results show that by 8 months of age human infants prefer those who help prosocial agents – i.e., those that were helpers initially – as well as those who hinder antisocial agents – i.e., those who were hinderers initially. The evidence shows that very young infants have a rather complex capacity for social and moral evaluation, showing sensitivity both to the agent's moral worth as well as to the context in which the action takes place.

As with collaboration and the value of helping versus hindering, fairness is another moral notion for which there appears to be prelinguistic preparedness. In a study with 12 to 18-month-olds, Geraci and Surian (2011) presented subjects with two alternative animations involving four characters, namely, a distributor of resources, two recipients, and a bystander. On one first scenario, the distributor would effect an equal distribution of goods in front of the bystander, while an unequal distribution would take place in the alternative scenario. Infants were then asked to select between the equal and the unequal distributor, and were presented with a final scenario in which the bystander would approach either one of the two distributors. Infants were asked to perform a manual task, reaching for their preferred distributor, and a looking task, observing the bystander approach either one of the distributors. Infants preferred the equal distributor to the unequal one in the manual tasks, and looked longer at the bystander approaching the equal distributor than when it approached the unequal one. These results show that at 16 months of age human infants are sensitive to the outcome of distributive actions and take it into account when evaluating agents. The results also show that young infants already prefer equal distributors to unequal ones, and reason about others' preferences – i.e., the bystander – by assuming they will similarly prefer the equal distributor. Other studies (see Kuhlmeier, Wynn, and Bloom, 2003) have shown that 12-month-olds are already capable of understanding goal directed actions and interpret an agent's behavior on the basis of her previous actions, even if they took place in physically distinct contexts. Kuhlmeier and colleagues (2003)

argue that this ability is better understood in mentalistic terms, whereby infants posit intentional or goal-directed mental states mediating between agents and their actions. Together these studies suggest that human infants are equipped with a prelinguistic principle of fairness (see Schmidt and Sommerville, 2011 for further evidence).

These briefly reviewed studies show that human infants are equipped with a complex set of prelinguistic cognitive abilities that belong to the moral domain of human cognition. There is evidence of young infants possessing prelinguistic moral principles (see also Cushman, Young, and Hauser, 2006; Pellizoni, Siegal, and Surian, 2010), as well as a complex and context sensitive capacity for goal directed understanding of action and social evaluation. Following Hamlin, Wynn and Bloom (2010), it seems justified to claim that there are substantial, principle-based and evolutionarily endowed *foundations* for human moral cognition (see also Wynn, 2008). Given that these principles appear to articulate the mental representations of very young, prelinguistic human infants, there is good reason to think – following Carey's (1997) criterion – that they are universal. However many and distinct these prelinguistic moral principles turn out to be, all human beings are endowed with all and the same ones. This substantiates and supports the psychological hypothesis above presented.

Psychological hypothesis: moral knowledge, at individual and social levels, is determined by the nature – i.e., *qua* species – and state of a subject's psychology.

Moral knowledge, the very goal of human moral cognition, is essentially constituted by an evolutionarily endowed cognitive foundation comprised, among other things, by evaluative abilities and principles of moral cognition (see Hamlin, 2013). As I will show in what follows,

this “innate moral core”, as Hamlin (2013) calls it, also includes a rather complex mentalistic understanding of agents and their goals.

Intentions, Emotions and the Mental

Several studies on moral development have underscored the central role that the Theory of Mind (ToM) plays within competent moral cognition and vice versa. ToM has been postulated to account for the human ability to understand others, mainly their conspecifics, by attributing mental states (mostly representational ones) to them. ToM is considered to be a higher order cognitive ability, closely related with an early understanding of intentionality and necessary for humans (both infants and adults) to competently engage in social interaction and, importantly for our purposes, to competently acquire and develop natural language (see sections 3.3 – 3.6; see also Shatz, 1994 and 2007b).

The initial workings of ToM appear early in infancy and seem to be effortless and automatic. In a study with 7-month-olds and adults, Kovacs, Teglas, and Endress (2010) tested subjects in order to determine if and how the beliefs of others were represented and how this affected the subject’s behavior. Infants and adults were shown movies presenting an agent and an object (e.g., a ball). In some of the movies the object was placed in a certain location while the agent was present. In other movies the object was moved to a different location while the agent was absent. Adults were asked to signal as soon as they detected the object, 7-month-olds looking times were measured as a reaction to the location of the object. The results show that both, very young infants and adults immediately form a representation of the agent’s beliefs, and that this representation was automatically taken into account when performing the relevant task. Adult subjects’ reaction times were larger when the agent’s beliefs differed from their own, and infant looking times varied similarly.

Other studies have shown that ToM is involved in human social evaluations since early infancy. A mentalistic understanding an agent as a helper / hinderer requires second order mental representations, as the goals of the helper / hinderer depend on the goals of a separate agent who may be helped / hindered in reaching her goals. For example, a helper is represented as having the goal of helping achieve someone else's goal *x*, *y* or *z*. Hamlin, Ullman, Tenenbaum, Goodman, and Baker (2013) tested whether 10-month-old infants were capable of having such a mentalistic understanding as it is expressed in their social evaluations of agents. Subjects were presented with a puppet show including three characters, an agent *A* with the goal of grasping a preferred object *o* among a set of objects, and two other agents that play the role of a helper *H*+ and a hinderer *H*-respectively. After the puppet show takes place, infants are asked to select between *H*+ and *H*-, which are identical puppets except for a difference clothing color. If *A* expressed its preference for *o* in the presence of *H*+ and *H*-, infants would consistently prefer *H*+ over *H*-. In contrast to this result, infants chose randomly between *H*+ and *H*- whenever the latter where ignorant of *A*'s preference – either because *A* did not express its preference for *o* or because it did in the absence of *H*+ and *H*-. These results strongly suggest that 10-month-olds are already capable of mentalistic social evaluations, including a second-order understanding of agents as having goals that depend on those of others.

Now, aside from mental representational states, other mentalistic forms of cognition and understanding appear to be also at play in moral cognition. Emotion understanding has been found to be a part of moral competence from early on in infancy. As I mentioned before, empathy has been found to be a component of human cognition from the very beginning, as evidenced by newborn empathic cry in response to the crying of other babies (see Martin and Clark, 1982). This empathy appears to develop into more complex forms of affective response, with 8 to 10-month-old infants showing some affective and cognitive concern for others (see Roth-Hanania,

Davidov, and Zahn-Waxler, 2011), and 12 to 16-month-olds showing comprehension of the emotional state of others (see Davidov, Zahn-Waxler, Roth-Hanania, and Knafo, 2013). Empathy and affective understanding becomes more complex as it interacts with a subject's cognitive and social development. In a study with 4 to 7-year-olds Lagattuta (2005) found out that 4 to 5-year-olds understood an agent's emotions in relation with her goals, whereas 7-year-olds and adults understood an agent's emotions also in relation to the rules and consequences that may have an influence in them (for a detailed review of prosocial behavior and development see Eisenberg, Spinrad, and Knafo-Noam, 2015; and Carlo, 2006). The evidence suggests, thus, that competent moral cognition involves both mentalistic and emotion understanding. Studies of neuroimaging data seem to support a complex view of moral cognition as involving not only complex mental representational and conceptual reasoning, but also a serious emotional involvement and cognitive control required of moral judgments (see Greene, 2005a). For a general overview of the neuroscience of moral cognition see Greene (2005b).

Other studies have found that theory of mind and emotion understanding closely interact constitutive elements of social evaluation since early childhood. In a study of longitudinal data with children from their 3.5 to their 5.5 year of age Lane, Wellman, Olson, LaBounty, and Kerr (2010) found that both, the level of competence with ToM and emotion understanding at age 3.5 predicted a more or less sophisticated moral reasoning at age 5.5, with high levels of ToM associated with greater reasoning involving the psychological needs of an agent, and high levels of emotion understanding associated with reasoning about the physical and material needs of agents. In general, the study found that the state of a child's competence with ToM and emotion understanding at 3.5 years of age predicts the complexity and sophistication of moral reasoning at 5.5 years of age. Further analysis suggests that ToM and moral reasoning – deontic reasoning about obligations and permissions in particular – are further intertwined, as not only is the former

constitutive of the latter but also vice versa. Based on empirical and conceptual reasons, Wellman and Miller (2008) argue that deontic reasoning is also integral to a competent use of ToM, as reasoning about others' mental states involves not only belief-desire considerations but also an understanding of their obligations and permissions.

Studies on the mentalistic aspects of moral reasoning show that human infants are not only equipped with an understanding of intentional mental representational states, as well as a basic capacity for empathy and emotion understanding, but that both these mentalistic elements of human cognition are constitutive of moral cognition from early on. The evidence strongly supports the claim that ToM and emotion understanding are also part of what I have (following Hamlin and her colleagues) called the *foundations* for human moral cognition. Since they are part of human cognition from early on in infancy, ToM and emotion understanding are considered as prelinguistic capacities. Thus, following Carey's (1997) criterion once again, there are good reasons to think that they are universal. All human beings are endowed with such capacities and, barring abnormal cognition, all of them deploy such cognitive capacities as constitutive parts of moral cognition. There is, then, more substance to the *psychological hypothesis* above presented.

Psychological hypothesis: moral knowledge, at individual and social levels, is determined by the nature – i.e., *qua* species – and state of a subject's psychology.

The evidence suggests that competent moral cognition and development is heavily mentalistic, as it requires an understanding of intentions, mental representational states, and emotions from early on. The evidence further shows that these elements are, together with the moral principles and social evaluation abilities previously described, universal across human individuals and part of an evolutionarily endowed foundation for moral cognition. This

prelinguistic moral capacity appears to describe a rather complex cognitive domain, one that includes complex evaluative capacities, principles of moral cognition, mentalistic understanding of agents, empathy and affective understanding, and the resulting interactions among them. To conclude this brief and partial review of empirical studies on moral cognition and development, let me now consider some of the elements of moral cognition that seem to vary across populations.

Personal and Cultural Variability

Now, even though all human beings possess the same elaborate, principle-based, mentalistic, affective and empathic prelinguistic moral capacity, this capacity develops differently among individuals and across populations. These developmental differences naturally result in a heterogeneous mosaic of moral competence among adults, with different behavioral patterns, different moral principles being endorsed (and socially enforced), as well as different individual and social towards normative principles in general.

As is natural, developmental differences begin with development itself and, hence, they may be found already in young infancy. Parent-child relations may vary from case to case. In some cases this relation is "close, mutually binding, cooperative and affectively positive." [Kochanska, 2002]. These are known as parent-child relations with "mutually responsiveness orientation." These relations are characterized by a shared positive affect and a mutual responsiveness between parent and child. The presence or absence of this kind of parent-child relation is heavily decisive, as it determines whether, when, and how the child develops an internal guidance system for behavioral regulation, commonly known as "moral conscience", which works independently of any external influence or control. A strong moral conscience is generally considered to be necessary for the child to be properly integrated into a broad network of values and norms that surpass those that may be part of the parent-child relation.

Developing a mutually responsive relationship during the first year of life is determinant of the appearance of a strong moral conscience in the second year of life, and maintaining such a relationship during the toddler years predicts the nature of moral conscience during preschool and early school years (see Kochanska, 2002 for a review). Perhaps surprisingly, the mechanisms by means of which mutually responsive parent-child relations influence the development of moral conscience are rather simple. First, mutually responsive relations foster positive emotions and happy moods in the child, which in turn show a better disposition for prosocial behavior. Second, mutually responsive relations also foster more receptiveness, on the side of the child, to parental guidance. As such, mutually responsive relations constitute the means for a child to properly internalize paternal moral rules and behavioral control. When the child is not offered a mutually responsive relation a considerably high degree of effortful control will be needed to properly internalize the relevant rules and develop a moral conscience (see Kochanska and Kim, 2014). Effortful control may, in fact, be the only means for such a child to develop morally, whereas children benefited by a mutually responsive parent-child relation may rely in multiple alternative mechanisms (see Kochanska and Kim, 2014; Kochanska, Koenig, Barry, Kim, and Yoon, 2010).

Several longitudinal studies have shown there is a stable pattern of moral functioning from infancy into adulthood, both for prosocial and antisocial behavior. Eisenberg and colleagues (see Eisenberg, Spinrad, and Knafo-Noam, 2015 for a review; see Eisenberg and Fabes, 1998 for a meta-analysis) have found that prosocial behavior, moral reasoning, empathy, and perspective taking remain stable, with an increase during early school years, a decline during adolescence, and a rebound into adulthood. Parallel results have been found for antisocial behavior including irritability, hostile rumination, and moral disengagement (see Caprara, 1986; Caprara, Paciello, Gerbino, and Cugini, 2007). Thus, the individual differences in moral cognition that appear in infancy, both for prosocial (see Kochanska, 2002) and antisocial behavior (see Caprara,

Barbaranelli, Pastorelli, and Perugini, 1994; Caprara, Alessandri, Fida, Tisak, Fontaine, and Paciello, 2014), are typically maintained if not augmented in adulthood.

Additional individual differences in moral cognition appear to be related to a subject's personality and personal identity. Moral personality has been shown to mediate out-of-sight observance of maternal rules from 25 to 52 months of age and predicts adaptation at 80 months of age (see Kochanska, Koenig, Barry, Kim, and Yoon, 2010). Moral personality, in turn, appears to be determined by the quality of the parent-child relation, whether there has been parental scaffolding, and the role these elements play in the subject's autobiographical narrative (see Lapsley and Hill, 2009). Studies with 15 to 18-year-old subjects suggest a strong connection between moral personality / identity and the ideal self, understood as determining the person that the subject wants to become. This moral ideal self, in turn, positively predicts prosocial behavior and negatively predicts aggressive behavior (see Hardy, Walker, Olsen, Woodbury, and Hickman, 2014).

Aside from individual differences the mosaic of human moral competence importantly exhibits multiple variegated differences at a cultural level. It has been shown that, in general, culture-unique values, environments, and practices do shape moral competence in children (see Super and Harkness, 1997 and 2002).

In a twenty-year-long project studying socialization practices with infants and their effects in prosocial reasoning and behavior in six different cultures – Kenya, Japan, India, the Phillipines, Mexico, and the United States – the Whittings and their colleagues (see Whitting and Whitting, 1975; Whitting and Edwards, 1988) found that levels of prosocial behavior varied across cultures, with higher levels being found in cultures with larger families and with a greater importance for women. As expected, children were exposed to different levels and forms of prosocial behavior across cultures, resulting in differences in moral reasoning and judgment.

A series of comparative studies with Mexican –Americans and European Americans show that Mexican Americas prefer cooperative behavior to a greater extent than European Americans (see Knight, Bernal, and Carlo, 1995). Mexican Americans also intend to inculcate a sense of collectivism and a great moral relevance for the family while European Americans do not (see Ramirez and Castaneda, 1974; Steward and Steward, 1973). High-income Mexican American families valued more what others did to help them than high-income European American families (see Williams, 1991). These differences are reflected in adolescent moral reasoning and judgment, with Mexican American children and adolescents exhibiting a greater preference for cooperative over competitive behavior than European Americans (see Eisenberg and Fabes, 1998). Furhter studies have shown, more generally, that parental values and practices that value of family identity and family ties, predict pro-family social behavior in U.S. Latino population (see Knight and Carlo, 2012).

Studies of other minority groups in the United States confirm the relevance of cultural structuring for moral development and prosocial behavior. A recent study with 241 U.S. Jewish 14 to 17-year-olds showed that group exclusion of outside members was considered acceptable in the community context but not in the peer context. Yet the degree of acceptability of group exclusion varied according to how much intergroup contact the subjects had (see Brenick and Killen, 2014).

The variety of human moral reasoning, thought, and judgment is of course much more diverse than what has been here described. There is moral diversity across cultural groups. But cultural groups are themselves constituted by diverse individuals, and the same happens within families and other social clusters. This immense diversity is commonly used as evidence against moral realism (see Mackie, 1977) as moral diversity is associated with some kind of intractable disagreement across diverse moral views. Such disagreement, it is argued, is importantly distinct

from disagreement about factual matters (see Stevenson, 1944 and 1963), giving us reasons to think that there are no objective moral facts to begin with. For if there were such facts, we would be forced – alleges the anti-realist – to claim that some human groups have better epistemic access to the moral facts than others, thus explaining the diversity and disagreement of moral views. Alternatively, the argument goes, we can accept that morality is relative to the "way of life" - whatever that may be – that each human group endorses (see Mackie, 1977), or that morality is mainly about expressing one's emotions and getting others to act accordingly (see Stevenson, 1944 and 1963). There are, of course, multiple replies from a diverse group of moral realists, some rejecting the claim that there is so much cultural and group-based moral variation, others arguing that such variation can be explained by a realist view (see Brink, 1984; Shafer-Landau, 1994; Loeb, 1998; Lillehammer, 2004; and Doris and Plakias, 2008). I believe, however, that we need an account that both endorses this immense variation while not only explaining it but also predicting it. We can get such explanation, as I have just described, by looking into moral cognition. If it can be shown that this very same cognitive capacity, capable of developing into a mature, competent form of adult cognition with such a diverse judgments, is also capable of delivering moral knowledge, it will thereby constitute the basis of a more satisfactory account of moral diversity and, *a fortiori*, a more satisfactory version of naturalistic moral realism. I will describe how this can be done in what remains of this chapter. I will try to show that moral knowledge is better understood in terms of moral competent cognition. According to the evidence just reviewed, this cognitive ability is the result of evolutionarily endowed prelinguistic moral capacities, including prelinguistic moral principles, social evaluation capabilities, mental representational and intentional understanding of others, as well as emotion understanding and early empathic attunement. Understood as moral competence, moral knowledge is the result of

moral development, which is itself a product of cognitive development and maturation and not so much a matter of factual and empirical research and discovery.

7.3 The Language Analogy

The empirical studies briefly presented deliver a detailed and substantial understanding of moral cognition, its nature and function. On this understanding, moral cognition is constituted by an evolutionarily endowed, unlearned cognitive apparatus that changes along the developmental path through the lifespan. From early on in infancy, this cognitive apparatus includes evaluative abilities, prelinguistic moral principles of cognition, a context sensitive capacity to understand action as goal-directed, and an early affective capacity for empathy. Since these cognitive apparatus gives form to the thought and cognition of very young prelinguistic infants, it is fair to say that it is universal. Specially with respect to the prelinguistic moral principles, no matter how many distinct ones turn out to be, all human infants have them. The evidence also suggests that moral cognition is heavily mentalistic, given the presence of intention understanding, ToM, and emotion understanding in early infancy. As such, these mentalistic elements of moral cognition are also universal across human subjects.

Taken together, the evidence seems to describe an intricate higher order cognitive ability that recruits resources from multiple domains – such as ToM, social evaluation, emotion understanding, and prelinguistic moral principles – and benefits from their interaction. The evidence also presents further results that are of consequence for the philosophical debate about the nature of morality. First, it is clear that morality is unlearned in that human infants do not require guidance to learn it and that, even though they may learn morality through social interaction, this is not the only way for them to acquire moral understanding as they are already endowed with some of it, and with the necessary means to acquire more. Second, children can easily acquire different moralities, or different moral codes. Children, in particular, may do so

from other children, without the presence or instruction of an adult. Third, and last, when this moral cognitive apparatus is fully developed, as it typically is in adult moral competence, subjects are capable of encountering countless new scenarios that they will recognize as morally relevant and demanding for moral reasoning and judgment.

These three features are reminiscent of what Chomsky (1959) famously points out about natural language. Chomsky (1959) complaints against the behaviorist for having a narrow understanding of how linguistic behavior is to be studied. On this narrow conception, claims Chomsky, the goal is "to provide a to predict and control verbal behavior by observing and manipulating the physical environment of the speaker." [Chomsky, 1959:26] Yet, continues Chomsky

> One would naturally expect that prediction of the behavior of a complex organism (or machine) would require, in addition to information about external stimulation, knowledge of the internal structure of the organism, the ways in which it processes input information and organizes its own behavior. These characteristics of the organism are in general a complicated product of inborn structure, the genetically determined course of maturation, and past experience." [Chomsky, 1959:27]

There are further reasons to reject the narrow methodology of the behaviorist, such as the fact that young infants have an unlearned understanding of language; the fact that infants can easily acquire a complete understanding of any natural language, even without the meticulous care of adults; and the fact that, when this linguistic capacity is fully developed, as happens in adulthood, competent subjects have the wherewithal to encounter un unlimited number of new linguistic structures that they will nonetheless recognize and understand without hesitation.

"These abilities indicate", Chomsky famously argues, "that there must be fundamental processes at work quite independently of 'feedback' from the environment." [Chomsky, 1959:42]

The evidence on human moral cognition shows that something similar to what Chomsky (1959) claims about natural language is true about human morality. This is true both in a methodological and a psychological sense. Methodologically speaking, as happens with natural language (see chapters 3 and 4), if we want to properly understand morality and gain some predictive power, knowledge of the internal (morally relevant) workings of the human mind is required. This methodological demand is not only generally accepted in cognitive psychology, it is also explicitly endorsed by the *cognition first* methodology of *open compositionality* (see section 4.4). Psychologically, or cognitively, speaking there is, as I will show, a strong analogy between language and morality. And this language analogy is an illuminating one, as there seem to be no deep metaphysical, epistemological and semantic qualms with the idea of knowledge of language, as there are with the very idea of moral knowledge.

Let me now present the dimensions within which I claim that language and morality are cognitively analogous. To begin with, both linguistic and moral cognition are products of human evolutionary cognitive endowment and, consequently, both are already exercised in early infancy. There is prelinguistic preparedness for both, language and morality, including prelinguistic (grammatical and moral) principles that will help an infant acquire the language – or the moral code – of her peers.

Second, moral competence is analogous to linguistic competence not only in terms of acquisition but also in terms of development. Moral development results from the interaction between several domain general cognitive mechanisms. Surprisingly, a good number of these appear to be central for both, language and morality, including an understanding of mental states, an ability to identify intentions, to participate in joint attention, and to use practical reasoning.

Fundamental to both moral and linguistic competence are social interactions and a substantial mentalistic understanding of others. And just as linguistic competence, moral competence is a product of higher order cognition, involving multiple cognitive mechanisms. As such, it may be considered a supermodular cognitive ability in the same sense as natural language (see section 4.2) The close relation between moral and linguistic cognitive development is further substantiated by studies on abnormal cognition, both moral and linguistic. Multiple studies on autism have shown that this cognitive impairment exhibits problems in prosociality and theory of ind (ToM) (see Leslie, 1987). Recent studies have confirmed that ToM competence directly determines moral development, and that ToM, mediated by linguistic competence, determines moral development in autism (see Peterson, Slaughter, Moore, and Wellman, 2016). Other studies have shown that ToM competence is not only predictive of moral development, but also of linguistic competence (see Bloom, 2000; Sabbagh and Baldwin, 2001). It seems that, at least in cases of autism, an impairment of ToM has serious effects for both linguistic and moral cognitive development (see Tager-Flusberg, 2007).

Third, there is a similar degree individual and socio-cultural variability in both moral and linguistic competence. As with morality, natural languages exhibit a substantial and multi-dimensional variability. Individual differences in language acquisition and development have been studied profusely and appear pretty much in every area of language development (see Hoff and Shatz, 2007 for a general overview). Socio-cultural differences in linguistic competence are self-evident. Not only are there obvious differences across different cultures – e.g., differences between Japanese, Spanish, Basque, Hungarian, and Mandarin– but there also differences within what may be ordinarily considered to be the same natural language – e.g., differences between Australian and U.S. English; differences between Mexican, Rioplatense, and Peninsular Spanish; etc. Mayan, English, and Basque differ radically from each other even though they result from

the same human cognitive ability (or set of abilities). This, however, does not imply some kind of linguistic relativism precluding subjects from possessing a substantial knowledge of language. Sociocultural variations do not turn natural languages into something less natural. The same should be said, or so I contend, of sociocultural variations in moral cognition. There is some degree to which both, language and morality, exhibit something like Whorfian cultural relativity. Yet it is also clear that both are, to a very substantial and important degree, universal across humans. Different natural moralities – or distinct moral codes, if you prefer – appear to be the product of social conventions. But so are natural languages to a substantial degree (see Lewis, 1989). This makes natural languages population-relative. But it does not render them futile. Similarly, moral codes (those one can find among human populations) appear to be partly the result of abiding by certain conventions. This makes them population-relative. But it does not render them useless or mistaken. And, lastly, as happens among natural languages, the conventionality of moral codes does not preclude any specific morality, or moral code associated to a given population, from being based on universal principles common to all other moral codes. In both cases, morality and language, we can find shared prelinguistic (perhaps innate) principles that partially determine development as well as the shape of a given moral code or natural language.

Fourth, moral and linguistic cognition are normative in a similar sense. They are both principle-based forms of cognition. The principles, upon which they are based, both linguistic and moral, may be of different sorts. They maybe unlearned, and so fully universal, or acquired and even population-relative. They may be fully general and abstract, and so fully grammatical or purely moral, or constitute a more frugal and context sensitive heuristic set (see section 4.3; see also Gigerenzer, 2008b). Yet all such principles are of central importance to both linguistic and moral cognition, as they help perform an essential cognitive function, namely, that of eliciting

automatic judgments of acceptability / unacceptability about their subject matter (whether linguistic or moral), and they have a direct say on the sort of behavior (linguistic or moral) that corresponds to such judgments.

Aside from these four substantial cognitive similarities between moral and linguistic cognition, there are others that correspond to how competence is viewed by the subjects themselves. They are worth mentioning insofar as they reflect a common underlying mechanism. First, it is not common to see subjects correcting each other's moral or linguistic behavior. Subjects are simply not expected to fail – they are not expected to say something linguistically unacceptable, or to draw a morally unacceptable judgment. Second, when they exist, most such corrections are directed to infants and young children, whose moral and linguistic cognition is still far from fully developed. Third, if addressed to what is taken to be a normal and competent adult, are usually felt as inappropriate and perhaps even diminishing, since corrected adults are thereby treated as children. Fourth, whenever it happens, moral or linguistic failure is commonly taken to be a matter of incompetence, not of factual ignorance – though, of course, there may be mistakes that result from ignoring certain information, but they are not usually considered to be moral or linguistic failures.

Finally, there are two potential, yet non-troubling dissimilarities between language and morality from the point of view of competent subjects. First, some seem to think or have the impression that there is more ordinary moral talk and discourse than a corresponding linguistic one. Engaging in linguistic discourse presupposes specialized theoretical education, and this is not so with moral discourse. Apparently, the impression goes, people ordinarily talk about morality even if they have not received any sort of theoretical education about it. Second, it is not surprising that there are gaps between competence and performance. Subjects may competently know a language and still fail to perform linguistically (for any sort of reason). If morality is like

language, then we may also find such competence-performance gaps. Intuitively, however, it seems as if there is a substantial difference between moral and linguistic failures to perform. Moral gaps between competence and performance seem to be serious trouble, whereas linguistic ones are not. These alleged dissimilarities between competent subjects' views about morality and language have, to my mind, a very simple and unproblematic explanation: morality matters more for ordinary life than language. Ordinary talk is usually about what matters most in ordinary life; and moral behavior is much more important for our practical everyday life – even more, it is more important for the species' survival – than linguistic behavior.

Language and morality are, I have argued, substantially similar. Like linguistic competence, moral competence is widespread and universal among humans. Human infants already exhibit moral understanding, suggesting that moral competence does not demand any kind of explicit education or learning. And moral competence, like linguistic competence, bestows competent subjects with the needed equipment to identify, understand and respond to an unlimited set of new morally relevant scenarios. Indeed, once we look at their cognitive nature, morality and language appear to be even closer. They have similar initial conditions, as they both have an evolutionarily endowed apparatus, including higher order cognitive abilities such as ToM, and intention understanding, as well as prelinguistic principles of cognition for the linguistic or moral domain. They have similar developmental trajectories, benefitting from substantial interaction among multiple domain general mechanisms (in both cases), as well as from social interaction. They both give place to an enormous and multi-dimensional set of individual and sociocultural variations. And, lastly, they both have an important normative function to perform, for which they carry their own set of principles.

I believe this is good news for the philosopher concerned with the nature of morality, and more particularly for the naturalistic moral realist who thinks there is moral knowledge and the

corresponding moral truths, and that the latter are warranted by moral facts and properties of a naturalistic kind which enjoy a min-independent existence. If the language analogy with morality is as substantial and strong as I have described, then we can only benefit from viewing morality from a point of view that approaches language theorizing. Among students of language, no one seriously doubts that there is knowledge of language, and that it is objective even though natural languages differ substantially across socio-cultural groups. And, finally, no theorist seriously doubts the naturalness of Spanish, English, Japanese or Mandarin, or that each one of these gives place to its own set of linguistic truths. Languages, like morality, appear too early in human ontogeny for them to be considered cultural or social products that result from embracing a certain way of life. I believe the language analogy greatly illuminates our philosophical understanding of morality, suggesting an account of the latter that may avoid the philosophical problems described at the beginning of this chapter. In what remains of this last chapter, I will sketch such an account and describe how it may solve or avoid the said problems.

7.4 Moral Knowledge as Moral Competence

If morality is to be understood by analogy to language, then it seems that the psychological hypothesis about moral knowledge is correct (see section 7.2).

Psychological hypothesis: moral knowledge, at individual and social levels, is determined by the nature – i.e., *qua* species – and state of a subject's psychology.

But if this hypothesis is correct, in what sense is there knowledge of morality? Which are the moral truths? What is the metaphysical nature of these truths? How can these truths be known? Are there any universal moral truths? Are moral truths objective? Are moral truths arbitrary? How can these truths be normative? What is the meaning of moral terms such as

‘good’, ‘right’, and ‘wrong’? And finally, how can knowledge of these truths have any motivational force? Let me try to answer these questions one by one. In so doing I will be presenting the blueprint of a satisfactory account of morality, an account that can be understood as a cognitive, naturalistic moral realism.

In what sense is there knowledge of morality? Following the language analogy it seems natural to say that knowledge of morality is better understood in terms of moral competence. Like knowledge of language, moral knowledge is the capacity to exercise competent moral cognition, which involves a complex set of abilities including emotion understanding, ToM, social evaluation, and reasoning under moral principles. Subjects are said to know morality in virtue of possessing such principle-based cognitive ability as part of their moral cognitive machinery. This knowledge is importantly subpersonal in that subjects need not know *that* they possess such moral principles and other cognitive abilities in order to be competent moral subjects. Possessing these principles endows competent subjects with the capacity to apply those moral principles in multiple contexts and situations. Competent subjects know how to engage in moral thinking and acting.

Since Ryle (1946) it is common to distinguish between two kinds of knowledge, *knowledge that* and *knowledge how*. The former constitutes knowledge of propositions, things that can be true or false – e.g., knowing that helping others is the right thing to do. The latter is rather concerned with how to do something – e.g., knowing how to morally evaluate a certain situation. As such, on the view I am presenting, knowledge of morality is a kind of *knowledge how*. Most realist views of morality, however, assume that moral knowledge is a kind of *knowledge that*, since there are moral truths to be known (see Kitcher, 2011, for a know-how account of moral knowledge).[i] Yet, even though the very idea of competence seems closer to some kind of knowledge how, the specific nature of moral competence cannot be reduced to just

another instance of knowledge how. Moral competence includes not only cognitive abilities but also informational / representational states chiefly constituted by principles of moral cognition (see Hamlin, 2013; Geraci and Surian, 2011). As such moral competence also serves as the foundation for propositional moral knowledge, as the principles of moral cognition may ground the truth of some or other proposition. For example, according to this view young infants *know how* to distribute scarce resources among parties in part because they are endowed with a prelinguistic principle of fairness (see Geraci and Surian, 2011). In virtue of the latter may it also be said that 12-month-olds *know that* equal distributions are the right ones? Surely, we may (and do) attribute implicit propositional knowledge to competent subjects; but besides this point, adult subjects may, given enough reflection and theoretical training, come to know it explicitly. Thus, even though moral competence is a kind of *know how*, there is also a corresponding *know that* (see Bengson and Moffet, 2012, for a review of the debate on the *know how – know that* relation).

Which are the moral truths? Given that for each moral judgment there is a corresponding truth-evaluable proposition, by claiming that moral truths are grounded or justified by the moral principles of moral cognition, this view is open to the existence of different kinds of moral truths, at least as many as there are kinds of moral principles to justify them. Moral truths that are justified by unlearned, prelinguistic moral principles will be fully universal ones. Those that are only supported by culture-relative principles may only be considered as culture-relative moral truths. And those that are justified by both, universal and culture-relative principles may be considered to be conditional moral truths. Of course, some kind of consistency between universal and culture-relative truths should be expected since it is by means of the former, in interaction with the rest of moral cognition, that the latter are obtained. There is a basic “innate moral core” (as Hamlin, 2013 puts it) that is not negotiable. Perhaps there are other principles of moral

cognition that also play a foundational or structural role. This can only be determined through empirical research.

What is the metaphysical nature of these truths? Moral facts, facts about what is right and wrong, are determined by the nature of human moral cognition. Human moral cognition, like the rest of human cognition, is as natural as any other biologically endowed human trait genetically bestowed from one generation to the other. Once again, moral cognition is not metaphysically distinct from linguistic or visual cognition in humans. They are all metaphysically on a par. As such, moral truths and the principles justifying them meet Railton's (1986) *reality* criteria of independence and feedback (see section 7.1).

Independence: it exists and has certain determinate features independent of whether we think it exists or has those features, independent, even, of whether we have good reasons to think this;

Feedback: it is such – and we are such – that we are able to interact with it, and this interaction exerts the relevant sort of shaping influence or control upon our perceptions, thought, and action. [Railton, 1986: 172]

Moral principles of cognition exist with all their features independently of whether we think they exist, and have whichever features they have independently of whether we have good reasons to think they have them. They are whatever it is that they are as a result of evolutionary processes on human cognition. If they were evolutionarily selected it is because these principles, and the role they play with the other elements of moral cognition, have exerted an indispensable role in shaping and influencing human thought, perception and, of course behavior in ways that

have contributed to the survival of the species. Moral truths and the moral principles of cognition upon which they stand are very real and very natural metaphysically speaking (see Kumar, 2015).

How can these truths be known? A detailed answer to this question can be drawn from a detailed and long review of empirical studies on moral cognition and development. For a brief and partial look at it, go back to section 7.2. A short answer should be clear by now. Human infants are born with a biologically endowed moral cognitive apparatus. Prelinguistic moral principles are an integral part of it. Thus, we know these truths simply because we are born with them or, if you prefer, we are born with the capability of knowing them with enough reflection and enough development of our cognitive apparatus in general. Other moral truths are not evolutionarily delivered to us. Some of these truths may be objective –and perhaps even universal across humans, not evolutionarily but developmentally so – while some other may merely be culture-relative. All of them are knowable as a result of the exercise and development of our moral cognitive apparatus , including its interaction with cognitive mechanisms and abilities of a general domain – i.e, practical reasoning, statistical analysis, and general knowledge.

Are there any universal moral truths? Yes there are. As I have said already, some moral truths are universal in virtue of there being moral principles of cognition that *all humans* posses as a necessary constituent of human moral cognition. To find out exactly which are these we must inevitable engage in empirical research. Rest assured that all such principles of which there is evidence among prelinguistic infants are universal. Moral truths that stand on such principles will be equally universal.

Are moral truths objective? On the view I am presenting, those moral truths that are based on universal moral principles *are* objective. Street (2006) argues against this by presenting a dilemma. Either normative facts are naturalistic or they are objective, but they cannot be both. This is so because for them to be naturalistic, they must have been the result of non-normative

evolutionary processes. Yet to find out which are the normative facts that result from such processes we must use our evaluative judgment – i.e., we must use moral theory to determine which are the moral facts. If so, then the normative facts that will be so identified will not be *independent* from our evaluative judgments, and so they will not be objective. Street's (2006) dilemma poses no threat to the view I am here suggesting. Objective normative truths and facts are facts about a biologically endowed human moral cognition. And, unlike Railton's (1984) relational moral properties, we do not need idealized and fully informed evaluative judgment to identify them; we only need careful empirical testing, cognitive psychological testing that is, not evaluative judgment. The resulting *prelinguistic* moral principles are completely *independent* of which moral views the experimenter holds. Hamlin and her colleagues have clearly not used their evaluative judgment to identify them. As such, prelinguistic moral principles are objective in Street's robust sense, since they hold "independently of all our evaluative attitudes" whether we have them already or would have them under ideal conditions (see Railton, 1986).

Street's objection is based on a false assumption, namely, that "clearly it is implausible to think that the acceptance of a *full-fledged evaluative judgment* with a given content – for example, the acceptance of the judgment that "one ought to help those who help you" – is a genetically heritable trait." [Street, 2006:118-119]. The empirical evidence directly falsifies street's "clear" assumption of implausibility. As Hamlin, Ullman, Tenenbaum, Goodman, and Baker (2013) show, very young prelinguistic infants already show an understanding and endorsement of some such principles, precisely of the kind and content that Street presents as an example. 10-month-old infants already distinguish between helpers and hinderers and prefer the former to the latter.

Are moral truths arbitrary? Moral truths and moral principles are meant to solve coordination problems. Following Lewis (see Lewis, 1969 and 1975) it may be said that a given

solution to a coordination problem is arbitrary if, first, there is at least one other alternative solution, second, this other solution is equally well-suited to solve the problem, and, third, because of this there is no good reason to prefer one solution instead of the other. So, for example, driving on the right-hand side of the road is an arbitrary solution to the problem of avoiding head-on collisions. There is at least one alternative – i.e., driving on the right-hand side of the road – that is equally well-suited to solve the problem and there is no good reason to prefer one solution instead of the other. On this account of arbitrariness, objective and universal moral truths turn out *not* to be arbitrary, whereas culture-relative ones may be.

Prelinguistic moral principles, those justifying universal and objective moral truths, are *not* arbitrary because there are no alternative solutions that are equally well-suited to solve the problem. Those principles are part of our cognitive biological endowment precisely because they were the best such solution – given human limitations, of course. Furthermore, they are uniquely well justified, as they are the ones resulting from natural selection. Culture-relative moral truths are not as uniquely well justified and the enormous variety of them across human groups strongly suggests that there is a great number of equally well suited and well justified alternatives. If so, then they will be properly considered as arbitrary, which is as it should be.

How can these truths be normative? Moral principles of cognition *are* normative just as all other principles of cognition are, they regulate the way in which the relevant task is to be performed. Linguistic principles regulate the way in which sentences are produced and processed; and visual principles regulate the way in which photonic stimuli is to be processed. Similarly, moral principles determine the way in which intentional goal-directed behavior is to performed and evaluated. The difference between moral and other cognitive principles lies chiefly in the different tasks they are meant to regulate. In performing their regulatory cognitive function moral principles of cognition distinguish between acceptable / unacceptable, commendable /

reproachable, praiseworthy / despicable behavior, and eliciting the corresponding judgments and accompanying positive or negative motivation. As such, principles of cognition are both *natural* and *normative*. Moral principles of cognition are no exception. Contrary to what recent views defend (see Joyce, 2006), satisfactory evolutionary accounts of morality do not make the normativity of moral principles of cognition redundant. Rahter, they are necessary if we want to properly account for the evidence (see section 7.2).

There are two remaining problems that have proven to be unmanageable for naturalistic moral realist accounts (see section 7.1). These are the problems of explaining the motivational force of moral truths and moral judgments and of offering an acceptable semantics for moral terms. I will conclude this chapter by showing how they turn into unproblematic features of the view I am presenting.

How can knowledge of moral truths, or moral judgment itself, have any associated motivational force? Naturalistic and realist accounts of moral truths usually have problems accounting for the associated motivational force precisely because moral facts are taken to be non-psychological and external. As such, it is hard to see any normativity *or* motivational force in them. The existence and characteristics of moral facts so conceived has no obvious bearing on a subject's psychology. Even if they are meant to have relational, dispositional properties (see Railton, 1986; and Lewis, 1989) it is, at best, merely assumed that external non-psychological objects may have such an extraordinary psychological effect, without any satisfactory explanation of why that might be so. Without the help of some internally motivating state – it is argued following Hume (2007) – there is no reason to think that knowledge of an external state of affairs will somehow exert a motivational force. It should be clear that these problems do not arise for the naturalistic moral realism here sketched. Moral facts, to begin with, are psychological facts. Knowing them is, first and foremost, a matter of having a certain

competence, moral competence, to perform in such and such a way – i.e., to evaluate certain scenarios thusly, and to respond to certain judgments properly. As the evidence shows, (see section 7.2) moral competence makes use of a complex set of psychological abilities, including emotion understanding and affective attunement, among others. Thus, moral knowledge may be accompanied by a host of internal, psychological, and intrinsically motivating mental states. After all, being morally competent is also a matter of having the appropriate emotional response to a given scenario. Being motivated or unmotivated may simply be another element of moral cognition. This account of the, allegedly, intrinsic motivational force of moral knowledge is fully compatible with the idea that moral facts– at least those that are universal and objective – are attitude-independent yet internal psychological entities.

Finally, what is the meaning of moral terms such as 'good', 'right', and 'wrong'? Naturalistic and realistic views of moral discourse also tend to have problems with the meaning of moral terms. This is so because moral facts – those that are assumed to instantiate the alleged moral properties denoted by moral terms – are typically considered to be natural *and* non-normative facts. If so, then it follows from these views that a normative term such as 'good', 'right', or 'wrong', turn out to denote non-normative properties, such as *being approved of by ideal social rationality* (see Railton, 1986). Non-normative accounts of the meaning of normative terms, such as Railton's, inevitably stumble against Moore's open question arguments. Moore (1903) famously points out that if such accounts of meaning for moral terms were correct, it would be odd to ask something of the form "I know that doing such and such is F, but is it good?" where 'F' stands for the naturalistic non-normative property allegedly denoted by moral terms. The problem is that such questions do not seem to be odd at all. As Railton (1986) recognizes, it does not seem odd to ask "I know that doing such and such is approved of by ideal social rationality, but is it good?" (see Railton, 1986:204-207).

On the view I am here describing, there is no need to identify a non-normative property as the meaning, or denotation, of a normative term. Moral facts are both natural and normative in virtue of being cognitive psychological entities, more precisely, principles of moral cognition. These principles *determine* what is going to be good, right, wrong, praiseworthy, despicable, etc. Thus, we can keep an ordinary, unanalyzed meaning of, say, 'good' and claim that performing this or that goal-directed action is good if it is so determined by the objective and universal moral principles. It certainly seems odd to ask "I know that our objective and universal moral principles determine that doing such and such a thing is good, but is it good?"

In this chapter I have tried to offer a mere picture of what moral knowledge would look like by following the *cognition-first* methodology (see section 4.4). The empirical studies on human moral cognitive development strongly suggest that the psychological hypothesis is correct.

Psychological hypothesis: moral knowledge, at individual and social levels, is determined by the nature – i.e., *qua* species – and state of a subject's psychology.

I have also argued that there is a strong analogy between language and morality cognitively speaking. Like linguistic competence, moral competence is widespread and universal among humans, appearing from early on in infancy. Moral competence, like linguistic competence, bestows competent subjects with the tools to understand and respond to an ever changing moral scenario. Language and morality exhibit parallel initial conditions in infancy and also similar developmental trajectories. They both give place to an enormously diverse set of individual and sociocultural variations. And they both have an important normative function to perform, for which they carry their own set of principles.

This analogy strongly suggests that what is special about morality is moral cognition, not the existence of moral facts or properties. To properly account for the evidence we need a dedicated set of cognitive resources aimed at processing moral information and (at least partly) guiding behavior. Moral knowledge is, on this view, a consequence of competently using this cognitive capacity. Moral objectivity is a result of moral evolution (human cognitive evolution), and moral variability is a consequence of moral development. Like natural language, morality will flourish differently across different populations. If the special features of normativity are features of moral cognition, then there is no need to postulate them as features of the non-psychological part of the world. There is, thus, no need for dispositional mind-external properties and, much less, for *sui generis* mind-external supernatural properties (see Enoch, 2011).

I have tried to describe how such a view of moral knowledge would look like. What I have offered is little more than a picture, the blueprint, if I may, of an account. A fully developed account is certainly desirable, but I am afraid it would require a book of its own.

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[i] It is important to distinguish this proposal from what Kitcher (2011) dubs "pragmatic naturalism", the view that moral knowledge is a kind of *know how* with no associated *know that* – there are no moral truths on this view – which humans have inherited through some kind of cultural descent – on Kitcher's view "our remote ancestors (…) *invented* ethics." [Kitcher, 2011:3] Morality, according to pragmatic naturalism, is matter of knowing how to live in society. The view here proposed differs radically from pragmatic naturalism. There are moral truths and, thus, there is moral *know that;* and nobody invented morality, even our remote ancestors had it already as they were young infants. Morality *is* transmitted through biological descent; cultural transmittance is made possible thanks to it.