

# Origins of Human Normativity

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## ABSTRACT

The chapter discusses basic aspects of human normativity in light of developmental research. As psychologists and developmental scientists, we ask what children have to tell us about norms and normative reasoning. What is the developmental origin of normativity and what appear to be major changes in the normativity expressed in children from birth to approximately 8 years of age? Three major developmental steps are described leading the child from an implicit level to an explicit level of normativity.

## KEYWORDS

normativity, psychology of normativity, normativity in human development, moral development

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## 1. *Origins of human normativity*

What do we understand by normativity and what are the origins of norms in human development? As developmental psychologists, those are the questions we want to address in this chapter. Our goal is to show that standards of behavior and expectations are deeply rooted in development. Standards and expectations find their roots in infancy, at an implicit level. They develop to become explicit, re-described with the emergence of language, self-consciousness, the sense of reputation and theory of mind. We want to show also that the explicit re-description of implicit standards and expectations in development operates in parallel with the increase in moral autonomy (PIAGET 1932; KOHLBERG 1981) and the emergence of an ethical stance manifested from around 3-5 years of age (ROBBINS & ROCHAT 2011). By the time children start socializing in schools, they begin to internalize, enforce, follow, but also protest rules and norms. From this point on, children become explicitly “moral” or normative in relation to standards that are shared with others. What is particularly interesting is the fact that with this explicit re-description, new concepts emerge with complex shared values attached to them. We try to show that these concepts are just veneer extensions or explicit re-descriptions of primordial motives guiding behavior from infancy. They are expressed by newborns at an implicit level, including the notions of “trust”, “promise”, as well as “obligation”. We try to make the case that these concepts find their roots in the implicit motives that guide much of newborns’ behavior and cognition.

The plan of the chapter is as follows. We first try to define what we understand by normativity. We then review progress of the past fifty years in infant studies, focusing on the way early competencies were discovered by researchers using new and clever experimental paradigms that revolutionized the field of developmental psychology. We briefly discuss this scientific leap showing that it was made possible by tapping into the natural propensity of infants, who from birth engage in renewed exploration when something deviates from what they expect, what they putatively perceive and memorize as “standards”. From the outset, there is indeed a natural inclination of the mind to detect sameness and deviation from it in relation to standards. We propose that this inclination may be the natural roots of human normativity, its “cognitive cradle”. For the rest of the chapter, we discuss how early standards of behavior develop to become eventually explicit with the emergence of language and how rules and norms may start to be spontaneously enforced as well as a source of protests in childhood, for better (good trouble) or for worse (bad trouble).

## 2. *What is normativity?*

In the most generic sense, a norm is a standard that is used to judge and evaluate. It refers to a benchmark representation that can be explicitly codified as in a book of laws (thou shall not kill),

but also implicitly expressed in gut feeling reactions like the disgust and rejection of spoiled, poisonous food. Being normative, thus, is expressing such standards in our evaluation and judgement of things, be they implicit or explicit. Accordingly, *normativity* is the phenomenon that surrounds any reference to standards in the evaluation of actions and outcomes as good, permissible, laudable; or inversely as bad, intolerable, condemnable, etc and human morality is centered around adhering to the former and avoiding the latter. Aside from being either implicit or explicit, standards of judgement and evaluation are of different kinds. They may be cultural (e.g. eating fish on Friday); logical (e.g., A is larger than C if it is also larger than B and B is larger than C); societal (e.g. all have to pay taxes); or legal (first degree vs. second degree homicide). Thus norms may vary and may be arbitrary. They may be considered as more or less rigid and changeable, more or less viewed as set in stone, hence more or less debatable. Thus, from a psychological viewpoint, normativity also refers to how one lives and abide to norms, question and feel the obligation to follow norms. Inversely, it also refers to how one may be judged and evaluated by others based on what they see as obligations, promises, and expectations. Being normative is having expectations and knowing that others may expect us to behave and think in a certain way. Likewise, being morally good is living up to these expectations.

As mentioned above, normativity may be implicit or explicit, expressed in uncontrollable approach/avoidance gut feeling reactions, or cogently articulated and reasoned as in a political argument or in the defense of a lawyer in front of a jury. Normativity covers all of these levels of “standard” awareness, against which value judgments are expressed either verbally or implicitly enacted in approach/avoidance behaviors. Looking at normativity in development illustrates and helps us to sort out the multi-layer aspect of what it means to be normative and abide to standards.

### 3. *From embodied to abstract normativity*

It can be said that normativity is pervasive at all levels of nature. Norms and standards are expressed everywhere, across all that is living, as any organism survives by maintaining homeostasis or stable balance within the internal and in relation to the external environment. At all levels of the living, there are set points or “standards” against which balance is maintained. It also seems kind of costly and redundant to invent new rules and standards for the millions of transactions and encounters we make everyday at an individual level. In that sense, the set benchmark and rule serves as quick heuristic to get by. Take the regulation of hunger or thirst for example. Deviation from a given homeostatic standard triggers complex motivated behavior triggering goal-oriented behavior in the organism in search of food or liquid. Drinking and eating brings back the system to a standard point of equilibrium in the organism, analog to a thermostat regulating ambient temperature.

However, there is obviously a fundamental difference between physiological, embodied normativity and cognitive normativity, i.e., the normativity that shapes our decisions (implicitly or explicitly) and that we may either enforce or protest. The latter is incommensurably more open and variable depending on the age of individuals and their cultural circumstances, in general depending on experience. True that the need to drink or eat also varies with age (metabolism) and culture (food habits), but not to the extent that an individual or groups of individuals may abide or not abide to rules and normative laws of their culture. Basic functional analogy aside, there is clearly a fundamental difference between the two. The developmental question is then: how does cognitive normativity emerge in human ontogeny, on top or in parallel to the physiological, embodied normativity (homeostasis) that allows any living organisms to survive. That is the question of we want to address, i.e., “the origins of human normativity”.

#### 4. *Sameness detection*

It is now well established that newborn infants, even fetuses are not just reflex machines functioning as close-loop systems that would be comparable to thermostats. Even before birth, at least by the third trimester of gestation, fetuses learn and memorize (DECASPER & FIFER 1980). They habituate to repeated stimulations, showing for example significantly less startling responses to a repeated loud sound. More importantly, they tend to recover attention as indexed by renewed startling responses when the sound is suddenly novel, with a different pitch or frequency for example (LECANUET et al. 1988).

This simple, highly reliable observation found in the context of audition, but also smell or repeated tactile (vibro-acoustic) stimulation, indicates that fetuses are *de facto* already learning to discriminate the old (same) from the new (different). They somehow notice the difference of the novel sound as an event that deviates from what they learned before, via habituation. It is novel by virtue of the fact that it implicitly violates a learned standard (loud sound of a particular pitch). It also demonstrates that already prenatally, we are capable of building implicit expectations about what is of the same. Inversely, from infancy onward, we are programmed to notice what *deviates* from the standard we learned. Such detection of a deviation from learned standard is a fundamental law of learning and memory, from the most elementary (habituation, conditioning), to the most complex (mental inference, deductive and logical reasoning). At the most basic level, they all entail some comparison with a standard that has somehow been stored in memory.

As Willam James writes, “Sameness detection is the backbone of the mind”. Inversely, such detection necessarily also entails the ability to detect what deviates from what would be normally expected (i.e., sameness). The rudimentary learning process of habituation and dishabituation that is expressed in most, if not all living creatures, including human fetuses, demonstrates a natural inclination to compare against an implicitly memorized standard. Without such comparison, no *learning* could take place. However, and this is crucial, what changes in the perspective of both phylogeny and ontogeny, is the nature of the standard, namely the level of its representation by the organism. This representation may be just sensory in the beginning. However, with development, it becomes perceptual and entails much higher cognitive processes, such as those contained in the practice of law, protests, explicit rule enforcement. We are interested here to capture the different levels of standard representation (i.e. levels of normativity) expressed in the development of children from birth to approximately 8 years of age.

Sameness detection is an active process from birth, not just taking place in passive contemplation of the surrounding world. Infants from birth show a propensity to actively imitate others (MELTZOFF & MOORE 1977), presumably not just by simple contagion as in the case of yawning for example, but with what is documented as a deliberate attempt at reproducing sameness of behavior, others used as the standard they try to mirror. Neonatal imitation is an embodied primary precursor of the explicit manifestation of conformity that is well documented as emerging by 3-5 years of age as part of what we will describe here as self-consciousness and *tertiary normativity* (see below).

#### 5. *Primary (embodied) normativity*

Infants are born surrounded by implicit and explicit values. These values are held by their caretakers in terms of good parenting and child care, values and beliefs that may greatly vary across cultures.

Aside from values associated with the particular culture of their surroundings, newborns are innately driven by values that are part of their evolved, genetically determined biological make-

up. From birth, they manifest highly predictable approach or avoidance toward particular stimulation as well as complex features of the environment. All newborns react negatively, with aversive emotional expressions (disgust) when dispensed with a drop of salty water on their tongue. Likewise, they manifest avoidant head turns and negative facial expressions when a cotton swab impregnated with citrus scent is brought close to their nostrils (ROSENSTEIN, OSTER 1988). Inversely, they engage in sucking with a relax expression when a drop of water with 5% sucrose is poured on their tongue or when they smell the sweet odor of their mother's milk. Animal models demonstrate that sweet taste and sweet smell are associated with the triggering of the brain's endorphin/opioid system that has analgesic power associated with a powerful experience of pleasure. As a case in point, circumcised newborns are documented to cry significantly less during circumcision if given drops of sweet water prior to surgery. Specific sensory and experiential values drive infants from birth within a simple approach-avoidance polarity of action. Infants are thus born biased and oriented toward certain qualities of experience in their encounter with the environment outside of the womb. They are born attracted to some aspects of the environment and avoidant of others. This approach avoidant polarity is not expressed only in relation to proximal sensory stimulations like touch or taste, but also in relation to complex perceptual features like face or eyes. Newborns are shown to pay particular attention and track more canonical face-like displays, and significantly less to faces with scrambled eyes, nose, and mouth. Immediately after birth, they prefer to look at a face looking straight in the eyes than avoiding their gaze, sensitive to pupil to pupil contacts (FARRONI et al. 2002). All these sensory and perceptual inclinations on display immediately after birth demonstrate that infants are not born as a "tabula rasa" in need of experience to learn values. We are born with values that are built-in the organism, expressed at birth and even prior, while still in the confine of pregnancy. These values are part of newborns' inherited preparedness evolved by the species. They motivate, orient, and jumpstart early development. They also constitute a primordial or *primary normativity*, an ensemble of motives and standards that all animals must possess in order to survive.

## 6. *Secondary (experience-based) normativity*

Within the first 6-9 months, infants quickly enrich their embodied primary normativity they inherit from birth with the elaboration of new, experience-based standards, here referred to as secondary normativity. Beyond birth, infants learn to discriminate and group things encountered in the environment based not only on their direct surface resemblance or direct experiences they might trigger, but also based on indirect, more abstract inferences such as whether it is more or less familiar or unfamiliar, pro-social or anti-social, intentional or accidental. They start to infer increasingly abstract non-obvious characteristics with the elaboration of new implicit standards helping them to sort out and chunk into distinct categories the zillions of new objects and things they keep encountering in the environment. In the language domain, for example, it is now well established that up to 7 months, infants are capable of discriminating and learning to discriminate almost any phonemes of any spoken languages (MAURER & WERKER 2014). However, by the end of the first year, infants are shown to lose such capacity as they learn to discriminate only among the limited class of phonemes that are relevant to the language of their culture. By the end of the first year, for example, Japanese infants, become deaf to the difference between phonemes like /RA/ and /LA/, as for their native Japanese speaker parents. They do detect the difference early in the first year. An analog of such perceptual narrowing during the first year is also documented in relation to faces and ethnicity. Young infants are first capable of discriminate any faces, even the faces of other species (monkeys). By the end of the first year, however, they narrowed their ability to faces of their own ethnicity. Implicit perceptual standards have changed and infants'

grouping of speech sounds as well as faces is modified based on exposure. Primary normativity is enriched by experience-based categorization, a secondary kind of normativity that blossoms in the first months after birth.

By being categorical, shifting their grouping criteria (standards of same/different), infants express implicit normativity, yet a normativity that goes above and beyond the primordial, embodied normativity that infants are born with and that jumpstarts post-natal development with a set of pre-determined and motivated action systems (feeding system, protective system, temperature regulation system). Early categorization is an experience-dependent learning of new standards and norms, what we label *secondary normativity*.

### 7. Tertiary (symbolic and self-conscious) normativity

Symbolic functioning and language acquisition are the cardinal developmental threshold separating human infancy from childhood. By becoming symbolic children also become self-conscious in the sense that they start representing how they are perceived and evaluated by others. With self-consciousness children start to contemplate and assess their own value in the mind of others. They begin to care about their own *reputation*, literally calculating (from the Latin verb *putare*) how they present themselves to others in public and to themselves privately. As they acquire language and become symbolic with the work of their own imagination, they also develop what we can coin a *reputable sense of self* or *identity*.

In this process, the standards against which children start to measure themselves become essentially subjective, leaving room for much delusion regarding how they are being perceived, and how they perceive others as evaluators of them. Standards and norms become symbolic. They stand for tertiary constructs like obligation, promise, or trust (see below). The normativity of the child becomes also moral. In the same way that experience-based categorical *secondary* normativity enriched the implicit *primary* normativity of newborns by developing new standards of grouping and same/different implicit judgments, self-conscious *tertiary* normativity enriches the latter by developing more abstract and conceptual standards of judgments that with the emergence of language become explicit. Standards and norms are now explicitly stated and enforced by authorities inside and outside the family environment (e.g., school). Entering school in particular, or any extrafamilial group activities, children find themselves surrounded by explicit new rules and norms they memorize and treat as standards, avoiding sanctions from immanent adult authority (PIAGET 1932; KOHLBERG 1981). Eventually, children will realize that all rules are not set in stone and that there is always a relative “arbitrary-ness” attached to rules that may be revised or rejected, even protested in open negotiation with others. As the child’s mind grows to become symbolic, tertiary normativity emerges, opening up standards and norms to politics, political judgments, jurisprudence, and other highly codified and abstract moral assessments. It opens up the potential for questioning standards, eventually protest and decisions to engage in “good” or “bad” troubles with the establishment (see § 5).

### 8. Obligation, promise and trust

As already mentioned, with tertiary normativity, standards and norms become highly abstract and subjective. They are more than just based on direct perceptual inference as in the case of early speech sound or face categorization (see above experienced based categorization and secondary normativity). Tertiary standards and norms, although potentially expressed at a “gut” level as in well documented racial or gender stereotypes and other implicit biases, they are mainly explicit, symbolically represented in language and in our minds. That is why the main

characteristic of tertiary standards is that they are negotiable in exchange and in collaboration with others. They are negotiable via debate and politics as in any parliament or any court of law legislating obligation, promise, and trust of the individual toward society—and inversely—of society toward the individual.

With the emergence of self-consciousness and symbolic *tertiary* normativity, as they cross the symbolic threshold in their development, children start in synchrony to express new feeling experiences such as the emotions of guilt, shame, pride, hubris or embarrassment. Those correspond to what is described as “self-conscious” emotions, all typically starting to be expressed from the middle of the second year as children begin to recognize themselves in mirrors and start using personal pronouns and adjectives like, I, me, and especially “mine!” to assert possession and control over things (this is mine, hence not yours...). With this, they manifest a new conceptual level of self-awareness which is less embodied and more abstract, an explicit self-concept that extends to possessions (ROCHAT 2014; ROCHAT 2018).

With self-concept and self-conscious emotions, the relation of the child with others is re-described to allow for new levels of collaboration and exchanges. Children will start to cooperate with others in accomplishing shared goals that imply shared intentionality in order to accomplish such goals (TOMASELLO & CARPENTER 2007). They begin to have an explicit understanding of rules that are shared with others and they may begin to protest when the rule is broken. In fact, young children (from 2 or 3 years of age) not only follow norms and rules in their actions but also enforce these same norms on others by spontaneously and normatively sanctioning mistakes through third-party protest, critique, and teaching in response to norm transgressions (RAKOCZY et al. 2008; RAKOCZY & SCHMIDT 2012; SCHMIDT et al. 2012; RAKOCZY et al. 2009; WYMAN et al. 2009). They correct others if they violate an agreement all *should* abide to. We may say that from this point on (2-3 years), children become moral proper, starting their moral career in relation to standards and norms that are now explicit, and enforceable, the ground for judgments and moral reasoning. From this point on, in the context of new collaborations children develop an explicit sense of obligation, promise, and trust: the triumvirate abstract constructs of human morality.

These constructs depend on both language and self-consciousness emerging by the middle of the second year. They are symbolic enrichment of primary and secondary normativity developing in infancy. Obligation corresponds to what one implicitly and explicitly “ought to do”. Promise corresponds to what one is “expected to do”. Trust is what one can count on others to do, accordingly. This triumvirate of moral constructs correspond to the foundation of further highly abstract moral rules and explicit social norms that children develop primarily by collaborating with others as they play, learn to share, cooperate, and engage in group learning with adults and peers (school).

## 9. *Equity, fairness, and collaboration*

Natural observations of family life demonstrate that the great majority of conflicts among siblings surrounds issues of possession and sharing (“Why did you get a larger piece of cake?” “No, this is my toy!” etc.). It is typical for parents and adults to intercede and impose their rule and rationale for justice distribution, not unlike judges in a court of law. From 2-3 years of age, children are prompt to detect and explicitly complain about what they perceive as an unfair distribution of resources or being unfairly treated. Although they may not be able yet to articulate it, the spontaneous, primary detection of what is unjust indicates that already by 2 years, the child has some implicit notions of fairness and how resources should be distributed. The question, however, is what may constitute such abstract notion and where does it originate from? Is it adult pressure and interventions, or is it something that may be more instinctive and

innate? It makes sense to think that the sense of possession and unfairness is a pre-requisite for adults to intervene and apply pressure on the child in order to resolve conflicts. It is after the fact that parents may become explicit regarding fairness principles. Thus conflicts necessarily precede the fairness rationale expressed by adults in their intervention. So, what drive young children to engage in possession conflicts and to be so prompt at detecting what they experience as “unfair”? What kind of implicit sense of fairness hides behind such prompt detection? Asking these questions gets to the heart of what might be the original source of the moral normativity surrounding the fundamental notion of equity.

From around 3 years of age, as children become more fluent speakers, they start also to engage in more tit-for-tat bartering and sharing of objects for which they claim ownership. At this early age, while they are prompt to detect and complain about unfair distribution, when they themselves are asked to share, they tend systematically to give more to themselves. Across all cultures, 3 year-olds show a strong propensity toward self-maximizing (ROCHAT et al. 2009). They create the state of unfairness yet, they are so prompt to detect when they are on the short end of a distribution (“why did she get a larger piece of the cake?”).

By 5 years, children start to take a more equitable and ethical stance as both recipients and actors of resource distribution. Compared to 3 year-olds, they are more coherent and more vocal in the manifestation of an *inequity aversion*. They take an explicit ethical stance, for example, by refusing to distribute unequal quantities of food or stickers to third party protagonists, be they peers or puppet dolls. They are even willing to sacrifice some of their own resources to assert principles of equity and fairness. They begin to engage in costly punishment. Furthermore, and more telling of a genuinely moral normativity behind their expression of inequity aversion, from 7-8 years of age children start to express an equal aversion toward inequity even when it is advantageous to them. They choose to distribute equally between themselves and another child although they are presented with the option of distributing more to themselves and less to the other (advantageous inequity) and reject distributions that are advantageous to them because it is unfair to the other (BLAKE & MCAULIFFE 2011).

In short, it appears that the sense of inequity is deeply rooted in child development, expressed as children develop a conceptual sense of themselves (self-consciousness) and an explicit sense of what they own (possessions). The development of inequity aversion between 3 and 8 years of age is transcultural. It might also be a universal foundation of human moral normativity from which the triumvirate feelings of obligation, promise, and trust may derive. From an instinctive (innate) aversion to unequal distribution, de facto a deviance from the ingrained detection of “sameness” that infants express from birth (see above), children may develop an explicit sense of what one is naturally owed (obligation), what one should naturally expect (promise), and what one can naturally count on (trust). However, such development takes place within the larger context of growing joint actions of the child with others.

There is indeed a necessary precursor to the act of sharing and the expression of inequity aversion. This precursor is the drive to perform with others; to collaborate and engage together in joint actions, the drive to affiliate. It is also the drive to share resources, share rules in a game, to join force in order to achieve a goal that could not be reached alone, to engage in reciprocal barter exchanges with others, etc. It is in the context of developing joint actions that inequity aversion may find its roots and become solidified in its expression, that inequity will be felt if one for example gets same rewards for less efforts. Free loaders may be detected and a basic sense of injustice may be first naturally felt and reasoned by the child in the context of developing collaboration and joint actions with others (TOMASELLO 2016).

By engaging in joint actions, trying to solve problems with others or playing according to rules, the child is increasingly co-conscious of shared goals and intentions. It is in this collaborative context that from 2-3 years children would naturally derive a sense of mutual obligation, hence also a sense of mutual promise and trust.



The development of collaboration and co-consciousness may thus be a primary terrain for the growth of both implicit and explicit moral normativity, the main soil for the development of the mental constructs of the moral triumvirate that are obligation, promise, and trust. It may be the main soil for the growth of what one ought to do, is expected to do, and can count on others of doing. It is also within this collaborative context that the growth of inequity aversion, both advantageous and disadvantageous, may find their roots.

Beyond 5 years, children begin to manifest increasing autonomy in their moral judgments, not simply abiding to the rules that are dictated by the authority of an adult or a majority. They develop to stand on their own moral principles and defend their own moral values, what they consider should be standards of obligation, promise, and trust. They begin to understand the relativity and arbitrary dimension of rules and norms, an understanding that may invite them to engage in good or bad troubles with the establishment.

We now turn to this development, starting from around 5 years of age but continuing all through the lifespan as we judge, defend values as well as the interests of our own community, making daily ethical decisions and navigating the politics of our social worlds.

## 10. *Good and bad troubles in children*

Explicit normativity help children adapt to the local contexts they are placed in, including their families, schools and culture. They come to internalize and acquire norms, and enforce them on others while adjusting the domain of applicability—some rules and norms that apply in school don't apply at home and vice-versa, one cannot wear swimwear to a funeral or harming someone is bad everywhere (TURIEL 1983; NUCCI 2001; SMETANA et al. 2012; 2018; JAMBON & SMETANA 2019). Even though normativity finds its roots in collaboration and development of co-consciousness, children do not perceive rules and norms to be a process of co-creation until 5-6 years of age. They see them set in stone and transgressions of any kind to be met with sanctions and punishment. So strict are their principles and expectations of normativity from themselves and others that they rigidly apply norms on others and follow them at the cost of their own preferences and desires (BERNARD et al. 2015; LI et al. 2021). However, at 5, like we discussed above, there emerges an autonomous morality and a nuanced understanding of rules and norms—they are seen as co-created by people and hence, both arbitrary and flexible. When a couple of 5 year olds are put together to formulate rules for a game, they negotiate, deliberate upon and cooperate in the task and when they are asked to teach these rules to novices, children use normative language (should, ought to) to express the rules (GÖCKERITZ et al. 2014; HARDECKER et al. 2016). This tells us two crucial things—that children understand rules are made upon consent and hence are changeable yet, once formulated they are normatively binding.

This shift in the kind of normativity—from strict rule following and avoiding sanctions to an autonomous ethical stance that children come to take at around 5-6 years of age, is cardinal to the development of normativity and normative reasoning, the latter bringing with it the emergence of *good trouble* in children. Good Trouble is simply challenging the status quo i.e. existing rules and norms if they are unfair. In short, it is making trouble for good, something better. Children at 3 years of age do question unfairness, however, it is only when they receive a smaller share. They find themselves surrounded by rules and norms, dictated by adults and hence, do not deem it necessary to make trouble to change the status quo, or find themselves incapable of doing so. This begins to change at about 5-6 years of age, when children have shown to make a sacrifice (give up on their own valued objects) to punish another who has violated fairness norms. In addition to that, children also express a preference to restore stolen items to their rightful owners when asked between punishing the thief or restoring the objects to the victim (YANG et al. 2021).

We are now starting to probe what may trigger the perception and evaluation of *good trouble* in children (AGARWAL & ROCHAT, in preparation). Because children may begin to conceive rules as not set in stone, they may also start showing appreciation for someone who challenges an unfair rule. In other words, they may start to value those protesting rules that are arbitrary and unfair, beginning to value good as opposed to bad trouble.

In an on-going study, we present children with stories based on a fictional town occupied by two groups of people, both depicted as strict rule abiders. In a series of different vignettes, children are told that the town's rules vary. For example, one of the rules is that one group gets less food than the other. Alternatively, the rule may be that both should get the same amount of food (egalitarian control condition). There are thus instances (experimental condition) where the ruling brings one of the 2 groups at a blatant disadvantage regarding privileges and resource distribution. Following each of the various vignettes, the child is then told that a member of the disadvantaged group is protesting, expressing strong *disagreement* with the established rule. Likewise, is also told that a protagonist from the advantaged group is expressing strong *agreement* with the rule, thus countering the protester of the other group by insisting that the rule must be followed because it is the rule. The child is then asked to evaluate each of the two (protesting vs. rule abiding) protagonists. Their evaluation is used as an index of their relative value of good vs. bad trouble. Preliminary findings confirm that there is a significant age-related shift from around 6 years of age, a majority of children starting to value *good* as opposed to *bad* trouble. They tend to evaluate more positively those who are ready to question authority and oppose arbitrary rules that they judge unfair.

### 11. Summary and conclusion: From implicit to explicit normativity in children

Human social life rests upon an edifice of rules and norms. Based on common language, a norm refers to a standard or a benchmark for comparison. From this generic definition, we reasoned that at the root of normativity lies the idea of expectations—what we think we and others *ought* to do in a given situation, in other words an obligatory force to follow norms and rules. With that in mind, norms and normativity beg the question of their developmental origins. In this chapter, we tried to address the question of when and how do children come to acquire norms and shared behavioral standards. What is the authority behind a norm and what may be the source of the general consent that makes it become a benchmark of *standard* for social and other comparisons?

As a first step, we considered how normativity, as defined, may manifest itself *implicitly* early in life, at birth or even before. Based on established empirical evidence, we proposed that implicit norms and reasoning around norms (implicit normative reasoning) is an early fact of life, for humans but also for any creatures that are capable of memory and learning.

From birth and even prior to birth, we showed that infants and fetuses are capable of memorizing standards and to discriminate at an implicit level between familiar (standard) and unfamiliar (non-standard) perceptual events. A substantial amount of evidence from experiments show that long before they speak, children show expectations for familiar events and react to those that deviate from the familiar standard. Studies with infants demonstrate that from birth, they react with regained attention and surprise to things that are unfamiliar relative to what they store as representation of past memorized experiences. Thus, from the outset, we tried to show that they are rudiments of norms and normative reasoning, at least at an implicit (i.e., non linguistic) level of abstraction.

In general, implicit norms early in life are primarily dictated by evolved built-in mechanisms and action systems babies are endowed with from birth with attached to them an implicit grammar of *approach and avoidant values*. We insisted that babies are indeed born in a world of implicit values. These values are attached to their evolved preparedness to act and respond to

the world in order to survive. We discuss the implicit norms and standards expressed by newborns and how they rapidly develop in the course of the first 18 months of life (from *primary* embodied to *secondary* experience-based normativity), prior to linguistic fluency and self-consciousness (*tertiary* normativity).

The second step in constructing a developmental model of norms and normativity is to describe major changes occurring from birth and in particular from the middle of the second year (18 months) as children, in parallel to their acquisition of symbolic and syntactic language, manifestation of an explicit care for their own reputation and self-concept (the emergence of social emotions like pride, hubris, or guilt). From this point on, we tried to show that children express more than the internalization of implicit standards. They do become explicit about what is right or wrong, just or unjust, correct or incorrect in reference to standards they start to articulate in both implicit and explicit communication with others. We reviewed research showing that from 3 years children rigidly apply norms in social interactions and become explicit in protesting when someone does not abide to an agreed upon rules or deviate from them.

We further discussed that between 3 and 5 years, normative thinking and reasoning undergoes changes—from avoiding sanctions to gaining increasingly autonomous moral standards, starting to take an ethical stance even if it is at a personal cost. We discussed this transition toward children's progressive moral autonomy in their judgments and abiding to norms that lead them eventually to value "good" as opposed to "bad" troubles in the face of either unfair or fair rules and norms. This last step, linked to the growth of moral autonomy in children's reasoning about values. It opens up a whole new realm of exchanges and engagement with others, consensus building and negotiation around flexible rules that in many ways are analogous to the fundamentals of politics, including jurisprudence and adult legal reasoning.

## References

- AGARWAL & ROCHAT, in preparation. *Emerging Sense of 'Good Trouble' in Children*.
- BERNARD S., CLÉMENT F., KAUFMANN L. 2015. *Rules Trump Desires in Preschoolers' Predictions of Group Behavior*, in «Social Development», 25, 2, 453 ff. Available on: <https://doi.org/10.1111/sode.12150>.
- BLAKE P.R., MCAULIFFE K. 2011. "I Had So Much It Didn't Seem Fair": *Eight-Year-Olds Reject Two Forms of Inequity*, in «Cognition», 120, 2, 2011, 215 ff. Available on: <https://doi.org/10.1016/j.cognition.2011.04.006>.
- DECASPER A.J., FIFER W.P. 1980. *Of Human Bonding: Newborns Prefer Their Mother's Voices*, in «Science», 208, 1174 ff.
- FARRONI T., CSIBRA G., SIMION F., JOHNSON M. H. 2002. *Eye Contact Detection in Humans from Birth*, in «Proceedings of the National Academy of Sciences», 99, 14, 9602-9605.
- GÖCKERITZ S., SCHMIDT M.F., TOMASELLO M. 2014. *Young Children's Creation and Transmission of Social Norms*, in «Cognitive Development», 30, 81 ff. Available on: <https://doi.org/10.1016/j.cogdev.2014.01.003>.
- JAMBON M., SMETANA G. 2019. *Socialization of Moral Judgments and Reasoning*, in LAIBLE D.J., CARLO G., PADILLA-WALKER L.M. (eds.), *The Oxford Handbook of Parenting and Moral Development*, Oxford University Press, 374 ff.
- HARDECKER S., SCHMIDT M.F.H., TOMASELLO M. 2016. *Children's Developing Understanding of the Conventionality of Rules*, in «Journal of Cognition and Development», 18, 2, 163 ff. Available on: <https://doi.org/10.1080/15248372.2016.1255624>.
- KOHLBERG L. 1981. *The Philosophy of Moral Development: Moral Stages and the Idea of Justice (Essays on Moral Development, Volume 1)* (1<sup>st</sup> Ed.), Harper & Row.
- LECANUET J.P., GRANIER-DEFERRE C., BUSNEL M.C. 1988. *Fetal Cardiac and Motor Responses to Octave-band Noises as a Function of Central Frequency, Intensity and Heartrate Variability*, in «Early Human Development», 18, 81 ff.
- LI L., BRITVAN B., TOMASELLO M. 2021. *Young Children Conform More to Norms Than to Preferences*, in «PLOS ONE», 16, 5, e0251228. Available on: <https://doi.org/10.1371/journal.pone.0251228>.
- MAURER D., WERKER J.F. 2014. *Perceptual Narrowing During Infancy: A Comparison of Language and Faces*, in «Developmental psychobiology», 56, 2, 154 ff.
- MELTZOFF A.N., MOORE M.K. 1977. *Imitation of Facial and Manual Gestures by Human Neonates*, in «Science», 198, 4312, 75 ff.
- NUCCI L.P. 2001. *Education in the Moral Domain*, Cambridge University Press.
- PIAGET J. 1932. *The Moral Judgment of the Child*, Harcourt Brace.
- RAKOCZY H., BROSCHE N., WARNEKEN F., TOMASELLO M. 2009. *Young Children's Understanding of the Context-Relativity of Normative Rules in Conventional Games*, in «British Journal of Developmental Psychology», 27, 2, 445 ff. Available on: <https://doi.org/10.1348/026151008x337752>.
- RAKOCZY H., SCHMIDT M.F.H. 2012. *The Early Ontogeny of Social Norms*, in «Child Development Perspectives», 7, 1, 17 ff. Available on: <https://doi.org/10.1111/cdep.12010>.
- RAKOCZY H., WARNEKEN F., TOMASELLO M. 2008. *The Sources of Normativity: Young Children's Awareness of the Normative Structure of Games*, in «Developmental Psychology», 44, 3, 875 ff. Available on: <https://doi.org/10.1037/0012-1649.44.3.875>.

- ROBBINS E., ROCHAT P. 2011. *Emerging Signs of Strong Reciprocity in Human Ontogeny*, in «Frontiers in Psychology», 2. Available on: <https://doi.org/10.3389/fpsyg.2011.00353>.
- ROCHAT P. 2014. *Origins of Possession: Owning and Sharing in Development*, Cambridge University Press.
- ROCHAT P. 2018. *The Ontogeny of Human Self-Consciousness*, in «Current Directions in Psychological Science», 27, 5, 345 ff.
- ROCHAT P., DIAS M.D.G., GUO L., BROESCH T., PASSOS-FERREIRA C., WINNING A., BERG B. 2009. *Fairness in Distributive Justice by 3- and 5-Year-Olds across 7 Cultures*, in «Journal of Cross-Cultural Psychology», 40, 3, 416 ff.
- ROSENSTEIN D., OSTER H. 1988. *Differential Facial Responses to Four Basic Tastes in Newborns*, in «Child development», 59, 6, 1555 ff.
- SCHMIDT M.F., RAKOCZY H., TOMASELLO M. 2012. *Young Children Enforce Social Norms Selectively Depending on the Violator's Group Affiliation*, in «Cognition», 124, 3, 325 ff. Available on: <https://doi.org/10.1016/j.cognition.2012.06.004>.
- SMETANA J.G., ROTE W.M., JAMBON M., TASOPOULOS-CHAN M., VILLALOBOS M., COMER J. 2012. *Developmental Changes and Individual Differences in Young Children's Moral Judgments*, in «Child Development», 83, 2, 683 ff.
- SMETANA J.C., BALL C.L., JAMBON M., YOO H.N. 2018. *Are Young Children's Preferences and Evaluations of Moral and Conventional Transgressors Associated with Domain Distinctions in Judgments?*, in «Journal of Experimental Child Psychology», 173, 284 ff.
- TOMASELLO M. 2016. *A Natural History of Human Morality*, Harvard University Press.
- TOMASELLO M., CARPENTER M. 2007. *Shared Intentionality*, in «Developmental science», 10, 1, 121 ff.
- TURIEL E. 1983. *The Development of Social Knowledge*, Cambridge University Press
- WYMAN E., RAKOCZY H., TOMASELLO M. 2009. *Normativity and Context in Young Children's Pretend Play*, in «Cognitive Development», 24, 2, 146 ff. Available on: <https://doi.org/10.1016/j.cogdev.2009.01.003>.
- YANG X., WU Z., DUNHAM Y. 2021. *Children's Restorative Justice in an Intergroup Context*, in «Social Development», 30, 3, 663 ff. Available on: <https://doi.org/10.1111/sode.12508>.