

Developing an understanding of social norms and games: Emotional engagement, nonverbal agreement, and conversation

Theory & Psychology
2014, Vol. 24(6) 737–754
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sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/0959354314555792
tap.sagepub.com



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Abstract

The first part of the article examines some recent studies on the early development of social norms that examine young children's understanding of codified rule games. It is argued that the constitutive rules that define the games cannot be identified with social norms and therefore the studies provide limited evidence about socio-normative development. The second part reviews data on children's play in natural settings that show that children do not understand norms as codified or rules of obligation, and that the norms that guide social interaction are dynamic, situated, and heterogeneous. It is argued that normativity is intersubjective and negotiable and starts to develop in the first year, emerging as a practical skill that depends on participatory engagement. Three sources of compliance are discussed: emotional engagement, nonverbal agreement, and conversation.

Keywords

constitutive rule, development, intersubjectivity, norms, social cognition

Testing children's understanding of norms

In a series of studies, Hannes Rakoczy and his colleagues investigated young children's understanding of norms in pretend play using a new experimental paradigm, which tests for the understanding of constitutive rules (Rakoczy, 2006, 2007; Rakoczy, Warneken, & Tomasello, 2008; Wyman, Rakoczy, & Tomasello, 2009). The idea behind the paradigm is that constitutive rules, as opposed to regulative rules, are typical of human forms of life. The theoretical framework of the experiments comes from philosopher John Searle. Constitutive

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rules introduce novel social and institutional facts into a community or group of people (Searle, 1969, 2005). In contrast, regulative rules guide activities or practices that depend on means–end relations and in principle could occur independently of rules (Searle, 1969).

The studies aim to determine at what age young children appreciate the basic normative structure of rule games and games of pretence and examine their awareness of the context-relativity of normative rules (Rakoczy, Brosche, Warneken, & Tomasello, 2009; Wyman et al., 2009). The experiments rely on the assumption that children’s rule games and games of pretence share the normative structure of social reality (Rakoczy et al., 2009). The suggestion is that if a child understands how rules or norms function in play, then she understands how social norms function at large in society. Rakoczy et al. (2009) claim that the normative structure of games underlies the whole of institutional reality. If true, this claim justifies the belief that investigating children’s awareness of the normative structure of rule games is central to explaining the development of normative understanding. But why think that the structure of rule games and pretence is the same as that of social reality? And why think that this structure is normative?

There is something puzzling about Rakoczy’s suggestion that rule games and the human social world share the same normative structure. Indeed, it is doubtful whether the fundamental ontological structure of social reality at all is normative. Searle himself (1995, 2008, 2010) argues that human social reality is a construction of objective, non-normative social facts, some of which are institutional and arbitrary. He holds that social facts are created by a group’s collective assignment of conventional status functions to objects, events, and individuals by way of constitutive rules. He does not claim that these rules are normative. The rules *constitute* or *define* social facts.

Constitutive rules are declarative speech acts of the form “X counts as (constitutes) Y in context C.” They tell us that in a certain context (say, a game of football), an action of type Y (say, scoring) can be performed by means of an action of a different type X (say, kicking the ball into the goal), and an entity of type X can count as an entity of a different type Y. As an example of how a constitutive rule creates an institutional fact, consider the declaration

(CR_{money}) This kind of piece of paper <euro note> counts as money in Europe

uttered while demonstrating a euro note. Systems of constitutive rules bring human institutions into existence, such as money, government, education, and legal structures.

Rakoczy’s claim that children’s games and social reality share the normative structure revolves around the presupposition that constitutive rules are normative, that is, they do not merely define a form of activity (say, a game), but *prescribe* behaviour. Rakoczy et al. (2009) argue that the *normative* structure of games depends on the collective assignment of status function to entities by constitutive rules, and the experiments target social norms that regulate the interaction between agents or groups of agents. However, because the experiments are designed to test the understanding of constitutive rules in the exact form that Searle gives to such rules, the outcome is other than predicted (Brinck, in press). The experiments determine at what age children understand constitutive rules—not the social norms that regulate the ensuing interaction once a social fact such as a game has been created. To see this, consider the following experiment which tests for children’s capacity to understand what it means to “dax” (Rakoczy et al., 2008).

In the model phase, an adult shows 2- and 3-year-old children new game actions according to the schema “Action X counts as activity (game) Y in context C.” The adult performs actions A1 and A2. A1 is marked as “daxing,” A2 as an accidental mistake. In the action phase, it is the child’s turn to play the game of daxing and learn how to dax. In the test phase, a third person (a puppet) enters and announces: “I’m gonna dax now!” In the target condition, the puppet performs an action that is mistaken, given the structure of the game. Children’s responses to such mistaken actions, in particular protest and correction, are taken as indicators of their awareness of the normative structure of the game.

According to Rakoczy and his colleagues, the 3-year-olds, but not the 2-year-olds, saw the puppet’s actions as not conforming to the social norm of daxing, and enforced the norm, telling the puppet how to act. They take the experiments to show that 3-year-olds understand social norms. However, notice that the experiments test the understanding of constitutive rules, whereas the conclusion concerns the understanding of social norms. Identifying constitutive rules with social norms is a crucial step in the argument, one that it is likely that Searle himself would resist. The question is whether it is valid. Next, it will be argued that constitutive rules are not identical to social norms and therefore the argument is invalid.

What the experiments show

A constitutive rule specifies a social fact by declaring what an action, object, or individual counts as, or constitutes. The declarative utterance involves a demonstration (e.g., an act of pointing or showing) of the object, event, or person that the rule concerns and specifies the context in which the definition holds. Declaratives bring social facts into existence by mere definition, as in the following examples:

(Ex. 1) This [beanbag] counts as a chair in Denmark.

(Ex. 2) This [move] counts as checkmate in the game of chess.

Searle (1969) denies that constitutive rules are prescriptive and constitute norms that may be violated and of which violations are penalized. Rhetorically, he asks: “[A]fter all, what penalty is there for violating the rule that baseball is played with nine men on a side?” (1969, p. 41).

Constitutive rules determine what counts as doing Y, but do not commit nor entitle anybody to perform the action Y. For instance, none of the rules of football commits the players to scoring a goal, nor to not scoring a goal. The rules determine what *counts as* scoring a goal (*what it means* to score a goal), but do not determine that the players *should* score. Thus, constitutive rules do not enforce, but create social facts. They define and so identify and introduce new activities. By using constitutive rules to ascribe status functions relative to contexts, humans create novel states of the world (Searle, 1995). Once declared, the rule opens up for the possibility to enforce it or create a policy for its implementation. Generally, constitutive rules reveal new domains of action and interaction that then require regulation. Usually, social facts come with commitments or powers. They do not themselves bring about powers, but are embedded in shared practices that are normative.

Millikan (2014) makes the same point as Searle, arguing that constitutive rules such as those of chess do not mandate behaviour or tell you what to do. She argues that constitutive rules are “constitutive” only in the purely verbal sense; they define what is called “playing chess” and that is all they do. Suppose you agree to play chess with somebody but get tired and stop half way through, or because of pity refuse to pronounce the other player checkmate although you are in the position to do so. Have you then broken the agreement? There is a social or normative mandate not to break it, but this mandate does not concern the game itself, but the players and their mutual expectations. The set of constitutive rules that defines the game of chess does not also force or oblige you to show certain manners or adhere to certain etiquette.

Searle and Millikan show that we need to distinguish between rules that define a given social fact, say, the game of daxing, and those that subsequently will guide or prescribe *how to behave while daxing*. The latter kind of rule is normative and not in the strict sense entailed by constitutive rules, but has to be introduced separately. Constitutive rules *per se* are not normative, but the fact that a given constitutive rule is *enforced in a certain way* embeds the rule in normativity. How prescriptive rules or norms emerge is another issue, whether by decree, habit, or tradition. Searle holds that in the case of arbitrary institutional facts, the normative force of constitutive rules is derivative of a policy or regulation. In themselves, institutional facts do not determine which norms follow from them. Any norm could be made to agree with the facts. This is why there is a need for explicit policies.

The following analysis of what it entails to misunderstand a constitutive rule as compared to a social norm, explains the difference between constitutive rules and social norms in detail. Let us introduce the following constitutive rule:

(CR_{school teacher}) A person with background B <specification of the required education, age, competence, etc.> counts as a schoolteacher in England.

The rule defines the concept of a teacher. Once there is a rule that does this job, we can use it to appoint individual teachers, that is, to classify individuals as schoolteachers. Now suppose that the university diploma of a person who is working as a schoolteacher turns out to be a forgery. Then, that person will no longer be considered a teacher, but lose the status function that comes with the diploma (and probably his or her job too). Using a fabricated diploma for the purpose of passing as a schoolteacher and nominating an unqualified person both count as violations of the constitutive rule. If a person acquires the function of a teacher without meeting the criteria, then the constitutive rule has *misfired*, or failed, and the appointment went wrong (Austin, 1975). Compare with the case when the violation concerns the social norms that regulate the import of the constitutive rule in real-life contexts. Suppose that a person has acquired the status function of a teacher by satisfying the criteria, but neglects a teacher's obligations (turns up late for school, is playing computer games during working hours, or does not teach what he or she is supposed to do). Then the social norms that regulate how a teacher ought to behave are *abused* (Austin, 1975), or misused. The person may be punished, but still will count as a teacher and retain that function. The consequences of abusing the norms that surround a given constitutive rule are quite different from those that result from failing to use the constitutive rule itself.

That constitutive rules and social norms are distinct means that a crucial step in the line of reasoning which bolsters the design of Rakoczy's and his colleagues' experiments is invalid. To repeat, the experiments are built around the constitutive rule for daxing. The adult declares that action A1 counts as daxing. Then, the puppet enters the scene and exclaims "I'm gonna dax now!," but performs an action other than A1, that is to say, an action other than the one that counts as daxing. Does the puppet's behaviour constitute a misfire or an abuse—a misunderstanding of the constitutive rule or violation of a social norm?

When the puppet performs *the wrong action*, that is, an action other than A1, the stipulated one, this is a case of misunderstanding, and the act *misfires*. The action will not count as daxing, because it does not meet the criteria for daxing. The puppet will not be daxing at all, and needs to be told that this is the case, and furthermore, merits an explanation of how to dax. However, when the puppet performs A1 but *in an irregular way*, for example, while hiding from the other player or playing with its back to him or her, or is playing in a scary way or to hurt other players, this constitutes an *abuse*, a violation of the norms for daxing. Norms determine how the action, once defined and created, ought to be implemented and applied in social contexts. How to apply the action of daxing is constrained by the policy of the game, for example, that we play daxing together, play peacefully, etc. The puppet is daxing, but inappropriately, and so is blameworthy.

Which is the correct interpretation of the data? Remember that first, the puppet performs the wrong action, then, the children protest and try to correct the puppet. In view of the previous discussion, the children are reacting to the puppet's misunderstanding of the constitutive rule, that is, what it means to dax. A *mistaken* action is based in error, not manipulation or misuse. Even if purposive, it is not blameworthy and does not deserve punishment. Accordingly, the children attempt to show the puppet what counts as daxing, viz., what constitutes daxing, and are not punishing the puppet. Utterances from the video-recordings confirm the present hypothesis; they say "You can't do that! It is wrong!" and "I'll show you, this is how you dax!"

I submit that the experiments do not demonstrate that the children think that the puppet is violating the norms for daxing, but that the puppet is not daxing at all. Given that Rakoczy has modelled the experiments on Searle's notion of a constitutive rule, it is not surprising that the experiments do not tell the whole story about how children understand social norms. This is not to contest that the experiments highlight a central aspect of human life—that constitutive rules are essential for having institutional facts. They show something about children's understanding of social life, which is in itself interesting and important: By 3 years of age, children have acquired the linguistic abilities necessary for understanding constitutive rules and creating institutional facts, and also appreciate the structure of codified rule games.

The criticism of earlier accounts of normative development for focusing on regulative rules appears misguided: to understand the development of social norms, it is not more appropriate to focus on constitutive than regulative rules. The two approaches sooner call for integration. As argued above, constitutive rules acquire a normative dimension when they occur with a set of commitments and obligations that prescribe how to apply or implement them. Understanding the norms that regulate social interaction over time is as essential to normativity and human life as understanding the constitutive rules that define what social institutions and activities there are.

The emergence of normativity in contexts of spontaneous play

Laboratory experiments do not constitute the only way to gain an understanding of the development of normativity. Observational studies of children's spontaneous play in natural settings can tell us a great deal. Thus, children's pretence games have names or descriptions (Let's play Doctor! Let's play Family! Let's play Batman! Let's play Seek and Find!) that subsume the kind of activity that constitutes the game and assign certain roles and functions to those who play it and the artefacts that appear in it (e.g., I'm the doctor! This is the scalpel! You are the patient!). What individual actions are appropriate and permissible is determined locally in the context of play. There is a major difference between pretence games and rule games such as Monopoly, Poker, cricket, and football: The actions of pretence games such as Doctor or Family are negotiable, but those that pertain to rule games in principle are not so. For instance, you can play Doctor individually as well as socially, and make-up and change the rules as you go along, whereas playing Monopoly requires following the codified rules that define the game.

It is important to recognize that the concepts of a role (or function) and a rule are distinct. Assigning somebody the role or function of Nurse or Doctor does not entail a determinate set of rules. Paglieri's (2005) distinction between three types of play clarifies this issue. In solitary play, the child assigns her or himself roles within a frame of make-believe, but sets the boundaries of the game as the activity proceeds in real time. In social symbolic play, the players explicitly co-create and negotiate their individual make-believe situations and specify rules for how to proceed during the play. The rules are transient. Rule games, finally, rely on a pre-codified system of rules that players must accept to play the game at all.

The fact that symbolic play relies on pretence and imagination reduces the importance of codified rules for spontaneous play and the everyday normativity that it involves. Pretence is pivotal to all symbolic play, solitary or social: the child pretends that an object is other than what it really is, or that he or she is a different person than he or she really is (Sinha, 2009). Imaginary cognitive and symbolic values are projected onto entities and relationships in the immediate environment. The entities may be objects (the stick becomes a gun, the doll is made to speak), social roles (mother, cowboy), and entire settings that contain both people and artefacts.

Play episodes endure through time. In the process of symbolic play, the narrative is continuously updated; as the storyline develops, new characters and artefacts appear and others disappear (the gun becomes a sword, the doll a knight and then a witch). From early to middle childhood, children elaborate skills for narrative structure and socio-dramatic play (Sinha, 2009; cf. Piaget, 1962). They are not disposed to play rule games strictly, by enforcing the rules, until late childhood. Then it becomes a central concern to play in the conventional way, by following the rules of the game and aspiring to win.

One reason why children do not focus on codified rules at a younger age may be that they do not see the point in following rules strictly, but find it more useful and rewarding to adapt the rules to the situation and constraints at hand, thus ensuring that the game goes on without pauses or delay. Rakoczy et al. have shown that by the age of 3 children understand that there are constitutive rules that define fixed activities. Yet, observational studies suggest that from an early age children prefer to engage both in solitary play and

with peers in a more dynamic manner, expanding the activity in unforeseen ways. Thus, in a study of play among 2- and 3-year-olds at two day-care centres, Alvestad (2012) reports that playing successfully demands that those sharing the play are prepared for negotiations about social relations, play materials, and the content of the play. Play from early to middle childhood is a situated activity that typically rewards fluency and elaboration of action instead of adequacy to standards and rules. Children practise reconstruction of ongoing play in real time, responding to environmental challenges, or making room for new impressions and ideas.

Another reason why younger children do not play by the book may be that they do not automatically make the connection between constitutive rules and social norms. Although they recognize the function of constitutive rules, they do not understand that constitutive rules usually are accompanied by a policy that prescribes how to act and holds universally, for every player (Brinck, in press). This suggestion further illustrates the point made above, that there is a fundamental difference between constitutive rules and prescriptive norms. The former do not (conceptually) entail the latter, but you have to *learn* to appreciate the connection and its meaningfulness. For instance, the game of football does not merely comprise kicking a ball of a certain kind with your feet and legs and thereby getting it into the goal of the opposing team, but there also are regulations that prescribe how the game ought to be played and how the constitutive rules should be implemented. These regulations do not leave room for individual players to invent new ways of playing or adopt any manners they wish.

Children as old as 9 years do not consistently play rule games as prescribed, but sometimes behave as in social symbolic play. A study of children playing rule games in after-school care shows that children who play in the absence of adults tend to change the prescribed rules to make the game more amenable and less complicated, and compensate for each player's individual capacities and weaknesses (Harvard, in press). If they are uncertain about how to go on or do not agree about it, they negotiate how to play and invent new rules together. However, when one of the players is an adult, the tendency is to renounce the initiative, ask the adult about the rules, and then follow them without questioning. Adults who function as authorities introduce another structure to the activity. By this age, children certainly are aware that there is a prescribed manner of playing that players are supposed to follow, and the presence of an authority seems to increase their motivation to comply. They expect adults to take the role of an authority and maintain order. In contrast, when among peers, they feel free to set the policy aside, and flexibly design the game in a way that suits everybody involved and will maintain the interaction. That the game no longer corresponds to Monopoly does not seem to matter to them.

The children in the study demonstrate strong cooperative and creative skills that are inherently intersubjective. Harvard's observations suggest that reaching an agreement by taking contextual factors into account is more central to children's play than are codes and constitutive rules that once and for all lay down what to do and how to proceed. Dialogue and negotiation contribute to solve emerging coordination problems, and solutions sometimes are transitory, soon to be replaced by new agreements.

Winther-Lindqvist's (2009) observations of a group of 5-year-old kindergarten boys playing football unsupervised by adults, point in the same direction. Winther-Lindqvist uses Hughes' (1991) distinction between explicit game rules (i.e., constitutive rules),

implicit rules of the social context (i.e., social norms), and higher-order gaming rules (“rules for rules”) to analyse the structure of play. Rules for rules establish how, when, and why other rules should be deployed. She reports that the local football rules that the boys actually were using were continuously re-negotiated. They were inspired by both the conventional game rules and terminology and the boys’ ideas about good behaviour, friendship, and justice, and sometimes contradicted the conventional rules.

A spontaneous play episode of three 5–6-year-old girls transcribed by Smolka, de Goes, and Pino (1997) and further discussed in Sinha and Rodríguez (2008), illustrates the equally collaborative and creative character of social symbolic play. Roles and functions of the individuals change as the interaction goes on to develop the narrative or solve problems that emerge in the interaction. In the transcribed episode that Sinha and Rodríguez discuss, the children are initially playing Family (one has the role of daughter, another the role of mother, the third girl does not yet have a role). A hat falls of a shelf, one of the girls pick it up, and the hat, which is a replica of a hat from a famous character in a theme park, becomes the centre of the new game that spontaneously emerges and will involve all three girls. Sinha and Rodríguez stress that social interaction is central to children’s play, referring to a study by de Oliveira (1998) to substantiate their claim. Roles, identities, and conventions are continually re-negotiated against the background of socially shared norms and representations (cf. Winther-Lindqvist, 2009). As Sinha and Rodríguez argue, social norms are not exclusively verbal, but subsist in the material setting, in artefacts where conceptual and material structure blend (cf. Hutchins, 2005). Normativity is “materially instantiated in the artefactual objects that are most frequently implicated in early triadic engagements” (Sinha, 2009, p. 167). Toys and other artefacts are entrenched in a web of procedures or routines—nonverbal and verbal interactions—that give them meaning. Children learn how to handle artefacts together with others by socialization from birth onwards (Rodríguez & Moro, 2008; Sinha, 2005), and internalize norms for individual and joint action without reflection. Sørensen (2012) presents a strategy that may be fruitful for clarifying how normativity is distributed across human minds and bodies, material entities, activities, and technologies in space and for explaining its development. It involves considering how normativity materializes in concrete contexts and permits comparison of different age groups. Sørensen approaches knowing (in the present case, of norms) as a spatial pattern that re-enacts an available infrastructure, and argues that knowing takes different spatial patterns in different practices and depending on the circumstances can be less or more distributed.

Social norms are transmitted and enacted in everyday activities. Normativity is part of the procedure. The following real life episode exemplifies how adults teach children to share and encourage them to solve problems together. At a birthday party, 4-year-old Albin is crying beside 5-year-old Tina’s model railroad because he does not know how to play with it. Tina is playing by herself, having a lot of fun. Then Albin’s mother tells him to ask Tina how to play. Thereby she both makes Albin stop crying and involves Tina with him in a way that will let him play too.

Another episode from the same setting illustrates how young children play with social norms and test the limits for how far they can go in enforcing norms. One of the parents puts on some music and encourages both parents and children to dance. Five-year-old Emma tells her friend Eve and the adults around her that you have to warm up first and you cannot dance any way you like. She shows how to do the warm-up and explains for

how long, then tells everybody to go through the procedure with her. The reactions Emma gets and the dialogue she engages in with Eve, her mother, and other adults makes it possible for her to assess her own authority and try out and test the strength of norms that she previously has encountered in other social contexts (at dance and aerobics classes).

In everyday life, social norms are far from codified rules, neither do they have the form of rules of obligation. Rather, social norms are dynamic and heterogeneous, apply to concrete situations, and are tweaked to temporary conditions, guiding the interaction while it is unfolding. This raises a host of questions concerning compliance and conformity. How do young children perceive of conformity? In what ways, to what extent, and when do they start to comply with norms and prescriptions? The remainder of the article traces compliance to three sources: emotional engagement, nonverbal agreement, and conversation.

The sources of compliance: Emotional engagement

On the view advocated here, *social norms are interaction patterns*, grounded in interpersonal relations. The primary relation is emotional engagement (cf. Reddy 2010a, 2010b). Emotional engagement that consists in the coordinated interaction of display of primarily positive affect provides the desire and incentive for joint action and maintaining interaction over time and also promotes the development of shared values. In the specific form of interaffectivity, intersubjectivity constitutes the foundation of normativity and prepares for compliance by motivating the agent to develop shared routines with close others, routines that embody knowledge of how you ought to do and behave. Interaffectivity first emerges via emotional contagion, and the infant soon develops skills for identifying and sharing the emotions of self and other. Stern (1985, p. 132) describes interaffectivity as the infant's matching his or her own "feeling state as experienced within" with the feeling state "seen 'on' or 'in' another," which means that it involves emotional convergence. Stern associates it with positive and negative attitude and evaluation. Importantly, the affective communication that results from emotional engagement also changes the emotional experiences and behaviour of the participants. Conceiving of affect and emotion as cross-modal, embodied, and relational explains how affective communication may occur by imitation, synchronization, and variation of facial expression, movement, posture, and vocalization. Active participation in interpersonal relations from birth onwards is integral to the development of conventional social norms. In a longitudinal, cross-cultural study of compliance with directives in the first year, Reddy, Liebal, Hicks, Jonnalagadda, and Chintalapuri (2013) found that cooperation with requests develops from 6 months of age and is situationally embedded and based on practice. The study shows that normativity develops from shared routines when infant and adult together create ways of doing things and manners of behaving relative to particular contexts, and that learning to follow objective rules is marginal to early normative development. A study of mother–infant dyads during diaper change presents a dynamic analysis of a similar process (Rączaszek-Leonardi, Nomikou, & Rohlfing, 2013). The study describes how regularities gradually arise from the interaction and constrain the way in which the next action is to take place. These regularities cause expectations of specific behaviour that eventually enable the emergence of routines and conventionalized forms of interaction.

Reddy et al. (2013) emphasize the intense parental involvement in infant actions in the second year. Over time, parents and infants push the routines they are creating in independent directions, causing the expansion of learning what normativity is and how to deal with it as an enlarging circle or spiral of forward movement. Normative development unfolds in time because of joint effort. Reddy et al. suggest that directing and complying need to be “redefined as continuous, emergent, and mutually enlarging rather than categorical and separate phenomena” (p. 1760). They promote a different approach to normative development than found in the experimental paradigm of Rakoczy and his colleagues, an approach that has much in common with the one put forward here.

I have stressed the motivating function of emotional engagement for normative development. Rossano (2012) emphasizes that norms are connected to values and that values are first experienced as emotions. He claims that the caregiver embodies social and cultural values to which the infant becomes emotionally committed via early ritualized interaction. The research on psychopathy shows that emotions are developmentally necessary for the capacity for making moral judgements (Prinz, 2006, p. 31f.). Prinz (2006) argues that emotions are sufficient for moral appraisal, say, for judging an action as wrong: we can form the belief that something is morally wrong by simply having a negative emotion directed towards it. Decety and Svetlova (2012) supply neuropsychological evidence that young children understand the normative implications of emotions and that empathy has deep evolutionary roots. They hold that empathy is necessary to perceive and respond appropriately to other people’s evaluative and normative attitudes, arguing that it depends on core mechanisms associated with affective communication, social attachment, and parental care.

Very likely, openness and respect for other people’s preferences and the construction of a normative framework of one’s own build on processes that emerge very early in infancy in interaction with others. Primary and secondary intersubjectivity (Trevarthen, 1979; Trevarthen & Hubley, 1978) and the relations and values that arise through emotional engagement (or the lack of it) forge a person’s normative profile from the first months in life and continue to do so throughout life. Because social cognition is fundamentally different when we interact with others as opposed to observing them or acting on our own (Becchio, Sartori, & Castiello, 2010; Schilbach et al., 2013), the quality and quantity of early exposure to intersubjectivity will have a profound impact on future social functioning.

From an early age, infants tend to engage with a number of people (e.g., relatives and friends of the parents). Communication is not confined to the dyad but can include several people at once (adults or infants) and involve multiple simultaneous engagements (Bradley & Selby, 2004). As a consequence, infants participate in a variety of sometimes quite complex forms of sense-making and learn that similar behaviour can acquire different senses in different contexts and with different people.

Infants have a solid motivation to interact and *align* themselves with others and share experiences (Carpenter, 2009; Carpenter & Liebal, 2011; Reddy, 2008). This motivation constitutes an impetus towards conformity and expresses a *desire to be and do like others*, which surfaces in imitation games. Carpenter (2011; Over & Carpenter, 2013) draws attention to the fact that imitation can convey mutuality and understanding, as a feeling of pure sharing and togetherness, of being similar or of the same kind. In the present context, we can *think of imitation as a display of conformity*.

In situations that involve teasing, imitation instead constitutes a way of testing boundaries and norms for interaction (Reddy, 2000, 2003, 2008). Testing behaviour occurs when the infant, while oriented toward an imitating adult, systematically modulates an object-directed action to check whether the adult is following what the infant does and will copy the action (Agnetta & Rochat, 2004). Keltner, Capps, Kring, Young, and Heerey (2001) define it as a playful provocation in which a person comments on something relevant to the target of imitation. By 9 months, teasing typically occurs in the reversal of newly mastered social gestures, for example, request, or in actions that are directly obstructive to the adult (Reddy, 2010a). Reddy explains how infants in their first year already start to play with social routines to test the limits. For instance, they can pretend to respond to a request for an object but then withdraw the object, repeatedly throwing the toy back on the floor as soon as the parent has picked it up and handed it to the child, or they show provocative noncompliance concerning actions that they know are forbidden. Norm violation and conflict prompt teasing also in middle and late childhood (Keltner et al., 2001). Teasing continues to be a strategy for learning about norms and challenging boundaries throughout childhood and adolescence (Keltner, Young, Heerey, Oemig, & Monarch, 1998).

The primordial desire to be like and do as others removes the need for rules of obligation in the early development of normativity. According to Bicchieri (2006, p. 8), social norms are not necessarily codified or supported by formal sanctions, and do not entail enforcement. Rather, understanding social norms as rules of obligation presupposes understanding (“perceiving”) that others’ expectations of one’s own behaviour are legitimate expectations of compliance (Bicchieri, 2006, p. 42). A person will feel an obligation to obey social norms and recognize their legitimacy when they become part of his or her system of values. How do social norms become part of a person’s system of values? The present discussion suggests that concern and engagement as implicated in interaffectivity motivate conformity in increasing the subjects’ willingness to comply with directives. Unless children feel that a given norm has a bearing on what they are up to and it makes sense in their own framework, they will not be motivated to act in accordance with it (Glüer & Wikforss, 2010); they may not even notice or attend to it.

Studies on play in natural settings indicate that children do not primarily conceive of social norms as rules of obligation in the strong, formal, or codified sense that you obey no matter what. As argued above, rules and norms provide guidance of action in a loose sense that opens up for new behaviour. They are starting points for a problem-solving activity that occurs whenever ongoing interaction breaks down and needs repair. Such activity also occurs when children need to agree on the preliminaries for playing together, for instance, about what game they will play, how roles and functions will be distributed, what actions are relevant, and what props may be used. When the players feel that the rules they started out with have outplayed their role, they change them. There are no limits for what direction a game can take, as long as everybody is in.

The sources of compliance: Nonverbal agreement

Many philosophers and social scientists hold that social norms and conventions are arbitrary and involve some form of behavioural regularity towards which people orient themselves (cf. Lewis, 1969). However, regularity may not be essential (Millikan, 2014).

What matters is that behaviour patterns reproduce, or repeat themselves regularly or not, and that there is arbitrariness about the means by which the convention or norm fulfils its function in the sense that there are alternative ways of reaching the same goal. The question remains what actually causes people to orient themselves to and share a certain behaviour pattern, viz., to conform. Sinha (2009) suggests that social norms are negotiable and involve verbal or nonverbal agreement, whether transitory or not, between two or more persons. Indeed, whereas interaffectivity in the form of emotional engagement enables and motivates normativity generally, agreement can explain how compliance is established and negotiated in the individual case.

The notion of verbal agreement has an intuitive meaning in everyday talk. The notion of nonverbal agreement, perhaps more central to development, is less straightforward. Pettit (2002) explains it in terms of agents' nonverbal attitudes towards each other: among a group of people, mutual approval (or disapproval) of each other's behaviour turns a behaviour pattern into a social norm, and lies behind the general conformity with the behaviour. Pettit (2002) describes people's attitudes towards each other as "involuntarily or nonconsciously formed attitudes of esteem and inesteem" (p. 280). People are personally motivated to conform because they are rewarded by being thought well of and punished by being thought badly of, and external sanctions are not necessary.

Emotional forms of reward and punishment are known to reinforce behaviour. Millikan (2005, 2014) too explains conformity in terms of reward, making it clear that rewarding behaviour reproduces without anyone's having to think about anyone else's thoughts. Basically, people copy behaviour that has been successful in achieving wanted results (Millikan, 2014). Normativity involves the dynamic, interactive coordination of behaviour, where emotion and affect in the guise of embodied perceivable attitudes play a guiding role, sometimes on levels below conscious awareness.

Millikan's and Pettit's accounts differ from those that conceive of social norms as strict rules of obligation, the deviation from which motivates formal or institutionalized kinds of punishment or reward. Whereas regulated formal sanctions intended to deter behaviour rarely provide a strong personal motivation, one may be personally motivated to act in a certain way by how people react to the self, especially if one has a close relation to these people (they may be family members, friends, or co-workers). Motivation does not depend on reason, but can be purely affective and implicit. Interestingly, implicit preferences for ingroups and dominant groups that play a significant role for conformity emerge rapidly in young children and remain stable across development (Dunham, Baron, & Banaji, 2008).

In contrast to a view that appeals to emotion, Carpenter (2009) promotes a rational account of the development of agreement in joint action that requires that each partner intends to perform the joint action together "in accordance with and because of meshing subplans" (Bratman, 1992, p. 338), and this needs to be common knowledge between the participants. Joint action involves rational choices between action plans and presupposes an understanding of others' intentions as genuine psychological, representational states. Carpenter (2009, p. 388) maintains that by 3 years of age, children begin to feel some of the commitments and obligations inherent in joint action, as when they excuse themselves when they wish to leave a joint action. She furthermore argues that 1-year-olds have the social-cognitive prerequisites needed to participate in joint action, viz., basic understanding of others' goals and intentions and common knowledge, and the ability and motivation to help others achieve their goals.

Clearly, infants understand others' action goals and goal intentions and seem to agree nonverbally. The question is if it is reasonable to explain these abilities in terms of complex representational states. The philosophical theories that Carpenter (2009) relies on have been developed to explain adult human cognition in quite complicated situations of choice and decision-making, and there is no independent empirical evidence in support of using them to explain infant behaviour or the early development of normativity. As Carpenter herself points out, there are other, more parsimonious and less costly explanations (cf. Sebanz, Bekkering, & Knoblich, 2006) that *prima facie* are just as plausible in the kind of situation Carpenter considers.

From a biological perspective, a bottom-up approach that focuses on how basic processes work and how complex functions develop from simpler mechanisms is preferable. Like evolutionary complexity, one may expect developmental complexity and specialization to arise over time as the result of the interaction between a variety of processes at lower levels and shorter time scales and via feedback from the environment (de Waal & Ferrari, 2010). Cognitive capacities integrate a range of mechanisms, many of them shared across a number of species. Consequently, it makes sense to search for the developmental sources of conformity elsewhere, than where rational accounts search.

In line with this, Carpenter and Liebal (2011) present a lean account of common knowledge in terms of states of knowing-together that arise by visual joint attention. Their account is useful for explaining nonverbal agreement in terms of the sharing and exchange of attitudes that underlie joint action in secondary intersubjectivity and, later, symbolic play. According to Carpenter and Liebal, so-called sharing looks (by having eye contact) are meaningful and communicate the fact that both agents share the experience of sharing (cf. Hobson & Hobson, 2007), in short, that they are attending together. Such looks can be used to establish a form of common knowledge that does not require higher-order intentions about one's own and others' mental states. Sharing looks make it public that agents have the same action goals in ongoing joint activities such as social symbolic play. Because they wear their message on their sleeve, so-to-speak, they can contribute to establish local norms in the form of shared behaviour patterns in ongoing interaction. That people can perceive and act on each other's mental states directly (cf. Gallagher, 2001, 2008) makes nonverbal agreement possible. Whereas gaze expresses interest and goal-intention, facial expression of emotion communicates attitude and evaluation (Brinck, 2008; Reddy, 2008). Fundamentally, everyday interaction is sensory-motor and contextual, and people attune effortlessly to the meaningful perception of each other's emotion, attention, and intention in real time (Schilbach, Eickhoff, Rotarska-Jagiela, Fink, & Vogeley, 2008).

The sources of compliance: Conversation

Conscious concern and explicit emotional empathy surface in the second year of life. In a study that compared responses of infants to a distressed peer, Nichols, Svetlova, and Brownell (2009) found that 12-month-olds did not show interest or concern in the peer, 18-month-olds showed high levels of social interest, whereas 24-month-olds showed greater empathy, concern, and pro-social responsiveness. By 2 years, self-awareness begins to develop that allows the child to take a normative attitude to the self, as in shame. When she realizes she has not behaved as socially expected this causes her to

experience shame. Shame relies on experiencing oneself through the eyes of others. By the middle of the second year, triadic exchanges take a new form and children begin to engage in active, explicit negotiation regarding the values of things co-experienced with others (Rochat, Passos-Ferreira, & Salem, 2009). Then children manifest a sense of *shared experience* that rests on complex ongoing exchanges unfolding over time, and start to express secondary emotions such as embarrassment or guilt. Guilt and resentment signal that a public social norm has been established—that there is a set of shared expectations that the subjects together understand should be met (Bicchieri, 2006).

The question is to what extent secondary emotions depend on verbal skill. Sinha (2009) maintains that participatory engagements with adults in infancy and early childhood pave the way for the folk psychological capacities that emerge in middle childhood, and thus for grasping the normativity inherent in requesting, proffering, and inferring reasons. According to Sinha, ascriptions of reasons for actions typically are simultaneously judgements of normative validity and intelligibility that children hear from adults and older children when participating in play and everyday activities. The conflation of (individual) reason with (social) normativity in everyday talk (e.g., “She is running that way because she wants to score a goal”) both constrains the space of possible reasons, and affords the child a first, practical grasp of normativity.

Gallagher and Hutto (2008) argue that children learn to judge an action’s social appropriateness by engaging with narratives. Narratives involve a wide range of emotive and interactive abilities and suggest how to create shared routines. Actually, the quality of parents’ talk about emotions with their toddlers has been shown to have significant impact on the development of pro-social behaviour. Thus, Brownell, Svetlova, Anderson, Nichols, and Drummond (2013) provide evidence that parents’ discourse about others’ emotions with young children is an important socialization mechanism. They report two studies on how parents’ reading picture books to their children affects sharing in 18- and 24-month-olds, and instrumental and empathy-based helping in 18- and 30-month-olds. The studies showed that children who helped and shared more quickly and more often, especially in tasks that required complex emotion understanding, had parents who more often asked them to label and explain the emotions depicted in the books. Parents’ elicitation of children’s talk about emotions was the strongest indicator of pro-social behaviour.

In a longitudinal study of children aged 14 to 36 months, Rhee et al. (2013) report that language skills have a specific role in the development of concern for others distinct from that of general cognitive ability. They point out that conversation is important for learning to identify a wide range of emotions and for the accurate interpretation of parents’ normative reasoning. Conversation does not only give feedback on the appropriateness of the child’s own behaviour but also on his or her normative responses to others’ actions. Hence, verbal skills that are a prerequisite for conversation do play a significant role for developing rational conformity, specifically, for having the words for mental states and normative attitudes and so the means to learn how to conceptualize and reason about them in a way that can feed into proper decision-making procedures. Moreover, language and the capacity to engage in narratives seem crucial for eventually making sense of the idea that the self and others belong to the same deontic universe, having similar duties and rights.

Nevertheless, that social norms are anchored in interaffectivity and there is a continuous negotiation of values in joint action suggest that normative understanding in many cases consists in a pragmatic ability to act appropriately in particular situations (cf. de

Jaegher, di Paolo, & Gallagher, 2010; Hodges, 2014). To act appropriately means to behave as expected but also to be productive, or behave in a way that maintains the interaction by advancing it, even if this sometimes means to diverge. Normativity is a practical skill also in adults that often does not require verbalizing reasons for action. Hence it seems more correct to think of the understanding of social norms as emerging from processes such as participatory sense-making (de Jaegher & di Paolo, 2007) or participatory engagement (Sinha & Rodriguez, 2008) than from the declarative speech acts that lie behind constitutive rules.

In social cognition, the emphasis lies on the relation—concerning normativity, on how norms are co-constructed and given content in and through ongoing interaction. Meaningfulness arises in practical engagement (cf. Rączaszek-Leonardi et al., 2013). Yet, verbal skills, doubtless, help to identify the mental states that are involved in normativity and to discern their socially accepted, public function in institutional contexts. Narratives are instrumental for making sense of and justifying actions in retrospect and for the verbal negotiation of ongoing and future joint actions. Moreover, conversation grants social norms both a history and an afterlife.

Acknowledgements

Special thanks to the members of NORMCON. I also wish to thank the members of DRUST and of the Centre for Cognitive Semiotics in Lund for valuable suggestions.

Funding

This work was supported by The European Science Foundation grant number 429-2010-7181.

References

- Agnetta, B., & Rochat, P. (2004). Imitative games by 9-, 14-, and 18-month-old infants. *Infancy*, 6, 1–36.
- Alvestad, T. (2012). Young children's negotiations about their play. *Issues in Early Education*, 16, 68–77.
- Austin, J. L. (1975). *How to do things with words* (2nd ed.). Oxford, UK: Oxford University Press.
- Becchio, C., Sartori, L., & Castiello, U. (2010). Towards you: The social side of actions. *Current Directions in Psychological Science*, 19, 183–188.
- Bicchieri, C. (2006). *The grammar of society: The nature and dynamics of social norms*. New York, NY: Cambridge University Press.
- Bradley, B. S., & Selby, J. M. (2004). Observing infants in groups: The clan revisited. *Infant Observation*, 7, 107–122.
- Bratman, M. E. (1992). Shared cooperative activity. *The Philosophical Review*, 101, 327–341.
- Brinck, I. (2008). The role of intersubjectivity in the development of intentional communication. In J. Zlatev, T. P. Racine, C. Sinha, & E. Itkonen (Eds.), *The shared mind: Perspectives on intersubjectivity* (pp. 39–66). Amsterdam, the Netherlands: John Benjamins.
- Brinck, I. (in press). On the early development of social norms and constitutive rules. *Phenomenology and the Cognitive Sciences*.
- Brownell, C. A., Svetlova, M., Anderson, R., Nichols, S. R., & Drummond, J. (2013). Socialization of early prosocial behavior: Parents' talk about emotions is associated with sharing and helping in toddlers. *Infancy*, 1, 91–119.
- Carpenter, M. (2009). Just how joint is joint action in infancy? *Topics in Cognitive Science*, 1, 380–392.

- Carpenter, M. (2011). Social cognition and social motivation in infancy. In U. Goswami (Ed.), *The Wiley-Blackwell handbook of childhood cognitive development* (2nd rev. ed., pp. 106–128). Chichester, UK: Blackwell-Wiley.
- Carpenter, M., & Liebal, K. (2011). Joint attention, communication, and knowing together in infancy. In A. Seemann (Ed.), *Joint attention: New developments in psychology, philosophy of mind, and social neuroscience* (pp. 159–181). Cambridge, MA: MIT Press.
- Decety, J., & Svetlova, M. (2012). Putting together phylogenetic and ontogenetic perspectives on empathy. *Developmental Cognitive Neuroscience, 2*, 1–24.
- de Jaegher, H., & di Paolo, E. (2007). Participatory sense-making: An enactive approach to social cognition. *Phenomenology and the Cognitive Sciences, 6*, 485–507.
- de Jaegher, H., di Paolo, E., & Gallagher, S. (2010). Can social interaction constitute social cognition? *Trends in Cognitive Sciences, 14*, 441–447.
- de Oliveira, Z. (1998). Peer interactions and the appropriation of gender representations by young children. In M. Lyra & J. Valsiner (Eds.), *Construction of psychological processes in interpersonal communications* (pp. 103–115). London, UK: Ablex.
- de Waal, F. B., & Ferrari, P. F. (2010). Towards a bottom-up perspective on animal and human cognition. *Trends in Cognitive Science, 14*, 201–207.
- Dunham, Y., Baron, A. S., & Banaji, M. R. (2008). The development of implicit intergroup cognition. *Trends in Cognitive Science, 12*, 248–253.
- Gallagher, S. (2001). The practice of mind: Theory, simulation, or interaction? *Journal of Consciousness Studies, 8*, 83–107.
- Gallagher, S. (2008). Inference or interaction: Social cognition without precursors. *Philosophical Explorations, 11*, 163–174.
- Gallagher, S., & Hutto, D. (2008). Understanding others through primary interaction and narrative practice. In J. Zlatev, T. Racine, C. Sinha, & E. Itkonen (Eds.), *The shared mind: Perspectives on intersubjectivity* (pp. 106–128). Amsterdam, the Netherlands: John Benjamins.
- Glüer, K., & Wikforss, Å. (2010). Es braucht die Regel nicht: Wittgenstein on rules and meaning. In D. Whiting (Ed.), *The later Wittgenstein on meaning* (pp. 148–166). Basingstoke, UK: Palgrave Macmillan.
- Harvard, Å. (in press). Norms and games: Research report. *Lund University Cognitive Studies*.
- Hobson, J. A., & Hobson, R. P. (2007). Identification: The missing link between joint attention and imitation? *Development and Psychopathology, 19*, 411–431.
- Hodges, B. H. (2014, July 8). Rethinking conformity and imitation: Divergence, convergence, and social understanding. *Frontiers in Psychology, 5*(726). doi:10.3389/fpsyg.2014.00726
- Hughes, L. A. (1991). A conceptual framework for the study of children's gaming. *Play and Culture, 4*, 284–301.
- Hutchins, E. (2005). Material anchors for conceptual blends. *Journal of Pragmatics, 37*, 1555–1577.
- Keltner, D., Capps, L., Kring, A. M., Young, R. C., & Heerey, E. A. (2001). Just teasing: A conceptual analysis and empirical review. *Psychological Bulletin, 127*, 229–248.
- Keltner, D., Young, R. C., Heerey, E. A., Oemig, C., & Monarch, N. D. (1998). Teasing in hierarchical and intimate relations. *Journal of Personality and Social Psychology, 75*, 1231–1247.
- Lewis, D. (1969). *Convention: A philosophical study*. Cambridge, MA: Harvard University Press.
- Millikan, R. (2005). *Language: A biological model*. Oxford, UK: Oxford University Press.
- Millikan, R. (2014). What do thoughts do to the world? Deflating socially constituted objects. In M. Gallotti & J. Michael (Eds.), *Studies in the philosophy of sociality: Vol. IV* (pp. 27–39). Heidelberg, Germany: Springer.
- Nichols, S., Svetlova, M., & Brownell, C. (2009). The role of social understanding and empathic disposition in young children's responsiveness to distress in parents and peers. *Cognition, Brain, Behavior: An Interdisciplinary Journal, 13*, 449–478.

- Over, H., & Carpenter, M. (2013). The social side of imitation. *Child Development Perspectives*, 7, 6–11.
- Paglieri, F. (2005). Playing by and with the rules: Norms and morality in play development. *Topoi*, 24, 149–167.
- Pettit, P. (2002). *Rules, reasons, and norms*. Oxford, UK: Oxford University Press.
- Piaget, J. (1962). *Play, dreams and imitation in childhood*. New York, NY: W. W. Norton & Company.
- Prinz, J. (2006). The emotional basis of moral judgements. *Philosophical Explorations*, 9, 29–43.
- Rączaszek-Leonardi, J., Nomikou, I., & Rohlfing, K. (2013). Young children's dialogical actions: The beginnings of purposeful intersubjectivity. *IEEE Transactions on Autonomous Mental Development*, 5, 210–221.
- Rakoczy, H. (2006). Pretend play and the development of collective intentionality. *Cognitive Systems Research*, 7, 113–127.
- Rakoczy, H. (2007). Play, games, and the development of collective intentionality. In C. Kalish & M. Sabbagh (Eds.), *Conventionality in cognitive development: How children acquire representations in language, thought and action. New directions in child and adolescent development* (No. 115, pp. 53–67). San Francisco, CA: Jossey-Bass.
- Rakoczy, H., Brosche, N., Warneken, F., & Tomasello, M. (2009). Young children's understanding of the context relativity of normative rules in conventional games. *British Journal of Developmental Psychology*, 27, 445–456.
- Rakoczy, H., Warneken, F., & Tomasello, M. (2008). The sources of normativity: Young children's awareness of the normative structure of games. *Developmental Psychology*, 44, 875–881.
- Reddy, V. (2000). Coyness in early infancy. *Developmental Science*, 3, 186–192.
- Reddy, V. (2003). On being the object of attention: Implications for self-other consciousness. *Trends in Cognitive Sciences*, 7, 397–402.
- Reddy, V. (2008). *How infants know minds*. Cambridge, MA: Harvard University Press.
- Reddy, V. (2010a). Cultures and minds. In M. Payne & J. Rae Barbera (Eds.), *A dictionary of cultural and critical theory* (2nd ed., pp. 172–176). Oxford, UK: Wiley-Blackwell.
- Reddy, V. (2010b). Engaging minds in the first year: The developing awareness of attention and intention. In J. G. Bremner & T. D. Wachs (Eds.), *The Wiley-Blackwell handbook of infant development* (2nd rev. ed., pp. 365–393). Chichester, UK: Wiley-Blackwell.
- Reddy, V., Liebal, K., Hicks, K., Jonnalagadda, S., & Chintalapuri, B. (2013). The emergent practice of infant compliance: An exploration in two cultures. *Developmental Psychology*, 49, 1754–1762.
- Rhee, S. H., Boeldt, D. L., Friedman, N. P., Corley, R. P., Hewitt, J. K., Young, S. E., & ... Zahn-Waxler, C. (2013). The role of language in concern and disregard for others in the first years of life. *Developmental Psychology*, 49, 197–214.
- Rochat, P., Passos-Ferreira, C., & Salem, P. (2009). Three levels of intersubjectivity in early development. In A. Carassa, F. Morganti, & G. Riva (Eds.), *Enacting intersubjectivity: Paving the way for a dialogue between cognitive science, social cognition and neuroscience* (pp. 173–190). Lugano, Switzerland: Università della Svizzera Italiana.
- Rodriguez, C., & Moro, C. (2008). Coming to agreement: Object use by infants and adults. In J. Zlatev, T. P. Racine, C. Sinha, & E. Itkonen (Eds.), *The shared mind: Perspectives on intersubjectivity* (pp. 89–114). Amsterdam, the Netherlands: John Benjamins.
- Rossano, M. J. (2012). The essential role of ritual in the transmission and reinforcement of social norms. *Psychological Bulletin*, 138, 529–549.
- Schilbach, L., Eickhoff, S. B., Rotarska-Jagiela, A., Fink, G. R., & Vogeley, K. (2008). Minds at rest? Social cognition as the default mode of cognizing and its putative relationship to the “default system” of the brain. *Consciousness and Cognition*, 17, 457–467.

- Schilbach, L., Timmermans, B., Reddy, V., Costall, A., Bente, G., Schlicht, T., & Voegeley, K. (2013). Toward a second-person neuroscience. *Behavioral and Brain Sciences*, *36*, 393–414.
- Searle, J. R. (1969). *Speech acts: An essay on the philosophy of language*. Cambridge, MA: Cambridge University Press.
- Searle, J. R. (1995). *The construction of social reality*. New York, NY: Free Press.
- Searle, J. R. (2005). What is an institution? *Journal of Institutional Economics*, *1*, 1–22.
- Searle, J. R. (2008). Language and social ontology. *Theory and Society*, *37*, 443–459.
- Searle, J. R. (2010). *Making the social world: The structure of human civilization*. Oxford, UK: Oxford University Press.
- Sebanz, N., Bekkering, H., & Knoblich, G. (2006). Joint action: Bodies and minds moving together. *Trends in Cognitive Sciences*, *10*, 70–76.
- Sinha, C. (2005). Blending out of the background: Play, props and staging in the material world. *Journal of Pragmatics*, *37*, 1537–1554.
- Sinha, C. (2009). Objects in a storied world: Materiality, narrativity and normativity. *Journal of Consciousness Studies*, *16*, 167–190.
- Sinha, C., & Rodríguez, C. (2008). Language and the signifying object: From convention to imagination. In J. Zlatev, T. P. Racine, C. Sinha, & E. Itkonen, *The shared mind: Perspectives on intersubjectivity* (pp. 357–378). Amsterdam, the Netherlands: John Benjamins.
- Smolka, A.-L., de Goes, M., & Pino, A. (1997). (In)determinacy and the semiotic constitution of subjectivity. In A. Fogel, M. Lyra, & J. Valsiner (Eds.), *Dynamics and indeterminism in developmental and social processes* (pp. 153–164). Mahwah, NJ: Erlbaum.
- Sørensen, E. (2012). The mind and distributed cognition: The place of knowing in a maths class. *Theory & Psychology*, *22*, 717–737. doi:10.1177/0959354312436869
- Stern, D. N. (1985). *The interpersonal world of the infant*. New York, NY: Basic Books.
- Trevarthen, C. (1979). Communication and cooperation in early infancy: A description of primary intersubjectivity. In M. Bullowa (Ed.), *Before speech* (pp. 321–347). Cambridge, UK: Cambridge University Press.
- Trevarthen, C., & Hubley, P. (1978). Secondary intersubjectivity: Confidence, confiding, and acts of meaning in the first year. In A. Lock (Ed.), *Action, gesture, and symbol: The emergence of language* (pp. 183–229). London, UK: Academic Press.
- Winther-Lindqvist, D. (2009). Game playing: Negotiating rules and identities. *American Journal of Play*, *2*, 60–85.
- Wyman, E., Rakoczy, H., & Tomasello, M. (2009). Normativity and context in young children's pretend play. *Cognitive Development*, *24*, 146–155.

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