

DANIEL ŻUROMSKI¹

Thinking and Morality as a Form of Cooperation in the Light of the Conception of Michael Tomasello

We can't give in to every gushy urge nature's burdened upon our species!
Skipper²

ABSTRACT

In his work *A Natural History of Human Thinking*, Michael Tomasello depicts thinking as a form of cooperation. Presenting at the same time a conceptual schema enriched with empirical data, he outlines a natural history of thinking in particular, indicating how the process of socialization and new, unique manifestations of human interaction alter the forms of thinking, from the ones we share with primates, through increasingly complex forms characteristic of the primitive man, to these of the contemporary man. In *A Natural History of Human Morality* Tomasello presents a similar structure, showing morality as a form of human cooperation in which, according to Tomasello, *Homo sapiens*, seen as “ultra-social primates”, developed new and uniquely human forms of social interaction and organization which, as a result, required new and also very specific for *Homo sapiens* psychological mechanisms in cognitive processes, social interaction and self-control. While in *A Natural History of Human Thinking* Tomasello's main hypothesis is the Shared Intentionality Hypothesis, in *A Natural History of Human Morality* it is the Interdependence Hypothesis. Thus, this unique structure of abilities and motivation is the feature which distinguishes us from other primates. This essay aims to extract and outline this structure, focusing more on *A Natural History of Human Morality*.³

Keywords:

the Interdependence Hypothesis, the Shared Intentionality Hypothesis, Michael Tomasello, the natural history of human morality

¹ Department of Cognitive Science and Epistemology, Institute of Philosophy, Faculty of Humanities, Nicolaus Copernicus University in Toruń, Poland, E-MAIL: d.zuromski@umk.pl.

² A character from the show *The Penguins of Madagascar*.

³ The author's overview of all main theses of *A Natural History of Human Thinking* is to be found in Żuromski (2016).

INTRODUCTION

The question concerning the origins of morality whether it is, for instance, a matter of culture or rather of nature, or else whether it determines the “uniqueness” of human abilities or it is a result of a certain “continuity” and abilities which we share with other animals (or at least with our closest relatives, primates), has been one of the most basic philosophical questions. However, the dynamic development of the empirical sciences has led to a significant increase in demand that the answer to this question should be of content that is *beyond* philosophy. This kind of approach is favoured, for example, in the opinion-forming magazine *The Economist* where the author of the article forms the following, provocative thesis:

Whence morality? That is a question which has troubled philosophers since their subject was invented. Two and a half millennia of debate have, however, failed to produce a satisfactory answer. So now it is time for someone else to have a go... Perhaps [biologists] can eventually do what philosophers have never managed, and explain moral behavior in an intellectually satisfying way (FitzPatrick, 2014).

Although the attitude of biologists themselves appear to be that of a more moderate engagement, here is a statement of one of today’s leading primatologists, Frans De Waal:

The debate with my colleagues made me think of Wilson’s recommendation three decades ago that “the time has come for ethics to be removed temporarily from the hands of philosophers and biologicized.” We currently seem in the middle of this process, not by pushing philosophers aside but by including them, so that the evolutionary basis of human morality can be illuminated from a variety of disciplinary angles (de Waal, 2006, p. 181).

Frans de Waal’s thesis on the need for an interdisciplinary approach to research into the evolutionary basis of human morality seems to be a moderate demand. It is exemplified in *Primates and Philosophers: How Morality Evolved*, composed of the core text of Frans de Waal who sympathizes here with the thesis of “continuity” (“all of human morality is continuous with primate sociality,” de Waal 2006, p. 167),⁴ as well as of the comments written by prominent philosophers and theorists of ethics and morality, such as Christine M. Korsgaard, Peter Singer, Philip Kitcher and Robert Wright. The work shows how difficult it is to formulate

⁴ Obviously, it is a great simplification to attribute the above-mentioned statement to Waal. His view is more complex, indeed because he distinguishes three levels of morality, and on each of these levels abilities of humans and great apes with respect to moral behaviour are compared.

and justify this very thesis of “continuity” and common origins of morality in a convincing and detailed way.

Hereunder, I would like to focus on Tomasello’s latest proposal of the concept of morality origins, *A Natural History of Human Morality* (Tomasello, 2016a). He is one of the most important contemporary researchers in the field of human cognition and cooperation. He also implements the demand for an interdisciplinary approach to research into the evolutionary foundations of human morality as his books are mostly a summary of dozens of articles of the entire research team which is led by Tomasello himself and which is interdisciplinary par excellence since it embraces with its work such areas of empirical knowledge as psychology, evolutionary psychology, economic psychology, developmental psychology, primatology, comparative psychology, and anthropology. Tomasello’s theses are also the result of the operationalization of concepts and philosophical theories.⁵

THINKING AS A FORM OF COOPERATION

Michael Tomasello’s position in *A Natural History of Human Morality* complements the one adopted in the 2014 book, *A Natural History of Human Thinking*. The main thesis of the latter work is that the unique trait of human thinking can be explained by the hypothesis of *shared intentionality*: “Thinking for co-operating. This, in broadest possible outline, is the shared intentionality hypothesis” (Tomasello, 2014, p. 125).⁶ Thinking is conceived here as a set of three abilities: the ability to have some kind of representation, ability to make conclusions and self-control. The cognitive system which has these three abilities is equipped with individual intentionality that includes:⁷

- (i) the ability to cognitively represent experiences to oneself “off-line”;
- (ii) the ability to simulate or make inferences transforming these representations causally, intentionally and/or logically; and
- (iii) the ability to self-monitor and evaluate how these simulated experiences might lead to specific behavioural outcomes – and so to make a thoughtful behavioural decision.

⁵ In particular, the concepts such as: shared intentionality, collective intentionality and joint commitment are the operationalization of the concepts of Bratman (1999), Searle (1995) and Gilbert (1989), respectively. Cf. Tuomela (2007).

⁶ The main theses of this position (along with the claim that this position exemplifies the naturalization program presented by Daniel D. Hutto and Glenda Satne) is to be found in Żuromski (2016).

⁷ All quotations from Tomasello (2014, p. 4; Cf. p. 140).

Tomasello presents the natural history of thinking, i.e., how the process of socialization along with new and unique manifestations of interaction alter the forms of some distinctive features of thinking (representation, inference and self-control), from the individual intentionality which we share with primates, through an increasingly complex form of *joint intentionality* characteristic of the primitive man, up to *collective intentionality*. The last two types of intentionality must fall within, according to Tomasello, a more general group which he calls *shared intentionality*, while collective intentionality being its most developed form, characteristic of the contemporary man. It was a general, theoretical description of the shared intentionality hypothesis. The empirical material includes the results and interpretations of experiments in field of developmental psychology, evolutionary psychology, primatology and comparative psychology.

In *A Natural History of Human Morality* Tomasello defines morality as a form of cooperation. In his view, *Homo sapiens* in particular, as “ultra-social primates”, developed new and uniquely human forms of social interaction and organization which in consequence required (new and also very specific for *Homo sapiens*) psychological mechanisms in cognitive processes, social interaction and self-control (Cf. Tomasello, 2016a, pp. 2–3). The main aims of the author of *A Natural History of Human Morality* are as follows:

- (i) to determine on the basis of the empirical research results how humans’ interaction differs from the interaction of primates, their closest relatives, and
- (ii) to create a convincing evolutionary scenario of how this unique form of human co-operation gave rise to human morality (Tomasello, 2016a, p. 3).

The outline of this thesis is similar to that presented in *A Natural History of Human Thinking*, which is confirmed in a more general thesis that thinking (at least in the form which is embedded in human thinking) and morality are forms of interaction and cooperation. As for *thinking*, this outline consists (as presented above in (i)) of the main characteristic of primates’ thinking process, i.e., individual intentionality. Subsequently, the main differences between individual intentionality of primates and shared intentionality of humans are pointed out, the process mostly based on empirical research in the field of primatology,⁸ developmental psychology and anthropology. The evolutionary scenario is two-step. It shows how, as a result of the various environmental pressures (mainly demographic), new and unique forms of cooperation emerged. The first stage involved the transformation of individual

⁸ Cf. Tomasello & Call (1997), and Tomasello (1999). It is worth mentioning, though, that both of these works, especially *Primate Cognition*, need updating and revision in terms of primatologist research.

intentionality into perspectival-recursive-second-personal thinking (joint intentionality) when “some early humans created new forms of social coordination, perhaps in the context of collaborative foraging” (Tomasello, 2014, p. 33).

The model for these forms of coordination is Tomasello’s concept, presented by B. Skyrms in *The Stag Hunt and the Evolution of Sociality*, the scenario of two huntsmen hunting a stag (Cf. Skyrms, 2004). This new form of cooperation:

Early humans’ new form of collaborative activity was unique among primates because it was structured by joint goals and joint attention into a kind of second-personal joint intentionality of the moment, a “we” intentionality with a particular other, within which each participant had an individual role and an individual perspective (Cf. Tomasello, 2014, p. 33).

This cognitive model is of dual-level structure: *jointness* and *individuality* (Tomasello, 2014, p. 46, 69), where at the level of in cooperation there is a structure of *joint* goal and *individual* roles, while at the second level of attention-based activity there is a structure of joint attention and *individual* perspectives. The model enables social coordination on the common ground. Such coordination required new forms of cooperative communication, such as pointing gestures and pantomimes to coordinate and manipulate roles and perspectives in order to achieve common goals.

In Tomasello’s opinion, this overall structure became an element of selective pressure. On the one hand, such primitive communities aimed at collaboration which resulted in rejecting those individuals who were not cooperative. Hence, members of such communities were aware of the fact that they were judged according to their ability to cooperate which, in turn, resulted in new forms of self-control. On the other hand, it was internalized in the process of ontogenesis during which new forms of representation, inference and self-control could arise.

Then in the second stage, this last form of thinking (owing to subsequent ecological pressures) evolves into collective intentionality. With the population growth, the issue arose with regard to coordination and cooperation with unknown individuals (but still members of the group):

with whom one had little or no personal common ground. The solution on the behavioral level was the creation of group-wide, agent-neutral conventions, norms, and institutions, to which everyone expected everyone, in cultural common ground, to conform (Tomasello, 2014, p. 113).

Thus, this stage is about the creation of conventional cultural practices in which thinking is directed towards the group as a whole. These practices also enable new forms of cultural transmission such as *cumulative cultural evolution*

as well as the so-called “ratchet effect.” New forms of cooperation required a new form of communication, i.e., conventionalized language communication. The rules and cultural norms no longer had the second-personal form but developed into impartial and “objective” norms and imperatives. Due to their internalisation in the process of ontogenesis, thinking of the contemporary man evolved into objective-reflective-normative thinking.

MORALITY AS A FORM OF COOPERATION

According to Tomasello, human morality takes two forms:

- a morality of sympathy where the motives for acting are compassion, concern and benevolence, and
- a morality of fairness where “interacting individuals may seek a way for all to benefit in a more balanced manner based on such impartial motives as fairness, equity, and justice” (Tomasello, 2016a, p. 1).

Whereas the morality of sympathy is of a more basic kind and a necessary condition for the occurrence of other forms of morality. Both forms of morality correspond respectively to two analogous forms of cooperation: altruistic helping where an individual makes sacrifices for the benefit of another individual, and mutualistic collaboration from which all involved parties benefit in a similar way.

At least two Tomasello’s general theses on morality as a co-operation can be distinguished. First of all, “human morality is a form of cooperation, specifically, the form that has emerged as humans have adapted to new and species-unique manifestations of social interaction and organization” (Tomasello, 2016a, p. 2). Whereas the second thesis reads as follows: “cooperation is based mainly on the principle of interdependence” (Tomasello, 2016a, p. 20). While in *A Natural History of Human Thinking* Tomasello’s main hypothesis is the *Shared Intentionality Hypothesis*, the main thesis in *A Natural History of Human Morality* is the *Interdependence Hypothesis*. However, before we attempt to discuss it, we shall return to the first above-mentioned thesis.

According to Tomasello, “acting morally means interacting with others cooperatively by means of and through certain psychological processes” (Tomasello, 2016a, p. 20). This way of perceiving morality is at the same time the purpose of the research, i.e., identifying evolutionary-stable patterns of cooperation. In particular, it is to recognize psychological processes (cognitive, social-motivational and self-regulative) underlying these standards, as well as to define the adapta-

tion conditions in which a fertile ground for these psychological processes to take place was provided. Namely, the conditions in which the processes were isolated through the process of natural selection.

Tomasello distinguishes three levels at which one can identify evolutionary-stable patterns of cooperation. The most basic process in the evolution of cooperation, and at the same time the one which is well-known, is kin selection which takes place at the level of gene. Although it explains many different and intriguing behaviours in animals living in communities, such as ants and bees, "kin selection was not a likely breeding ground for many complex cognitive distinctions and judgments underlying human morality" (Tomasello, 2016a, p. 11). Though, kin selection is responsible for the most fundamental dimension of morality, i.e., the basic prosocial emotion of sympathy the origins of which could be recognized in the context of the parent-offspring relation. This fundamental kind of morality, the morality of sympathy, is essential for the development of basic emotional bonds and behaviours such as helping our relatives. Tomasello's basic thesis is that the morality of sympathy characterizes the explanation of great ape cooperation, but it is not limited only to their kin. It also refers to individuals outside the circle of relatives, i.e., "friends" (Tomasello, 2016a, p. 12).

The next level is group selection which takes place within social groups. Although group selection may not play a significant role in the evolution of human cooperation (Tomasello, 2016a, p. 12), its distinctive cultural kind, that is cultural group selection, is of key importance in the concept of Tomasello's cultural evolution. However, it plays an important role at a later stage in history in which it develops and supports cooperation through social norms and institutions.

Yet the most important level in Tomasello's concept is the level of mutualism and reciprocity that are realised in individuals. But still, Tomasello offers the reconceptualization of mutualism and reciprocity (Tomasello, 2016a, p. 20), and suggests replacing them with the notion of interdependencies.

According to Tomasello, all the official theories of evolution of cooperation define an individual as "an asocial monad in constant competition with other members of its species in a struggle to pass along its genes" (Tomasello, 2016a, p. 14). This image is, however, of limited use because it does not include socially and cognitively complex organisms along with their basic psychological mechanisms. The attempt to capture the meaning of cooperation, altruism or morality through concepts based on mutualism and reciprocity (the Prisoner's dilemma, for example) does not reveal some basic psychological mechanisms such as motivation, to name the one. The basic concept that Tomasello puts forward is the concept of interdependencies: "cognitively and socially complex organisms are enmeshed in

many and varied social relationships and interdependencies with others, and this means [...] that helping or cooperating with those others, reciprocally or otherwise, is not a sacrifice but an investment” (Tomasello, 2016a, p. 14). Thus, the core of the natural history of human morality is the Interdependence Hypothesis which reads that human morality derives from strengthening (as a result of environmental pressures) of interdependencies⁹ through new forms of cooperation, and also from developing certain capabilities and motivation in order to coordinate the cooperation. At this level one can consider the Interdependence Hypothesis as a two-step process.

The starting point is the last common ancestor of the great apes and humans, the one who lived about six million years ago. It is assumed that it is modelled on present knowledge of chimpanzees and bonobo. This forebear lived in a community the members of which depended on each other as for survival and reproduction. Similarly to the contemporary great apes, the ancestor was a part of complex societies capable of forming coalitions and indicating affiliation, adopting prosocial attitudes and developing sympathy-based motivation towards relatives and “friends.” Therefore, morality of the great apes is a very basic dimension of morality, i.e., the morality of sympathy. Tomasello argues that, contrary to what, for example, Frans de Waal states, the great apes have no sense of fairness. Their cooperation is based on competing for valuable assets as well as partners. Although they have the ability to understand and anticipate intentional states and decisions made by others, they also do so for competition. Their cognitive apparatus, constituted by complex individual intentionality and instrumental rationality, is directed towards rivalry.

The changes in the environment and adaptation about two million years ago, with the appearance of Homo species, are considered to be the first step in the natural history of morality. At that point, due to the need to gather food (and a number of other processes, such as self-domestication, for example), new forms of cooperation emerged. It resulted in the strengthening of the interdependence among the members of the species, and in consequence, the awareness of this interdependence developed as well. The primitive man evolved some specific and unique abilities to motivate and coordinate this form of cooperation. That is exactly the above-mentioned cooperation, described in the cognitive model of the dual-level cooperation structure of joint intentionality. Tomasello assumes that the adequate psychological model of the primitive man’s behaviours is the behaviour of children at the age of three as they are able to create social relationships with

⁹ At a later stage it was also developing the awareness of interdependence.

some specific individuals and already have abilities characteristic for our species, however, they are not the part of social conventions, norms and institutions yet (Tomasello, 2016a, p. 41). The most critical moment at this stage of growth is the ability to develop, through collaborative actions, the new plural-agent “we”. It is considered superior to the structure of the individual “I” and “you”. This fact is of such importance for the development of morality because the plural-agent “we” was self-regulative in relation to “I” and “you”. Only at the level of the plural-agent “we” joint commitment to collaborate (along with its normative character) could be made (Cf. Tomasello, 2016a, pp. 53, 64).

The second step in the natural history of morality is associated here with the appearance of *Homo sapiens sapiens* about 150,000 years ago. Also in this case, it happened owing to environmental changes, in particular, the demographic ones which involved social groups becoming larger but forming smaller, homogeneous communities (Tomasello, 2016a, pp. 85, 88). Those communities evolved cultural practices accompanied with new, specific capabilities for their coordination by means of concepts, norms and institutions, i.e., collective intentionality:

Conventional cultural practices had role ideals that were fully “objective” in the sense that everyone knew in cultural common ground how anyone who would be one of “us” had to play those roles for collective success. They represented the right and wrong ways to do things (Tomasello, 2016a, p. 5.).

At that stage, the ability to form the plural-agent was, thanks to collective intentionality, replaced with the ability to form the cultural “we” and collective commitment which had “objectively” normative character.

One of the outcomes of Tomasello’s work is not only to show the natural history of human morality or its psychological mechanisms, but also to give the insight into the nature of moral dilemmas. Although Tomasello does not elaborate on this issue, some moral dilemmas arise, according to his conception, as a result of not just a conflict of “mind” and “feelings”, but rather in consequence of the existence of three different forms (or levels) of morality (Tomasello, 2016a, pp. 6–7, 126–128):

- Morality of sympathy which is considered to be a specific emotional relation with family members and friends (My wife is the first person I will save from a burning building.),
- Second-Personal Morality or joint morality of collaboration which is considered to be a specific *relation based responsibility* for certain individuals (and due to which one forms the self-regulative “we”) under certain specific cir-

cumstances¹⁰ (My workmate who is the fireman is the first person I will save from a burning building.),

- “Objective” Morality, “impersonal collective morality of cultural norms and institutions in which all members of the cultural group are equally valuable” (Tomasello, 2016a, p. 7) (The doctor as the most valuable member of the community is the first person I will save from a burning building.).

Nonetheless, it is easy to imagine a situation in which our choices made at different levels of morality can exclude each other like for instance in the Antigone’s Dilemma or, for example, in a certain version of the Runaway Trolley Dilemma: Should I push my friend onto the railway tracks to save three people?

THE UNIQUENESS OF HUMAN COGNITIVE ABILITIES AND MORALITY

But is it the ability of and motivation for a specific type of cooperation what makes humans’ moral cognitive abilities so unique? An alternative answer to this question was offered by Elizabeth Spelke, the author of the concept of *core knowledge*. Spelke believes that it is not social relationships but the language that is the source of our unique (human) cognitive abilities (Spelke, 2009, p. 152). Language plays an important role in Tomasello’ concept, however, only at a later stage of explaining, during ontogenesis as well as phylogenesis. It is the hypothesis of *shared intentionality* that, according to Tomasello, explains the acquisition of language. On the basis of the research in developmental and comparative psychology, Spelke distinguishes five representational systems which constitute core knowledge in human young offspring. The systems represent:

- (1) inanimate, material objects and their motions,
- (2) intentional agents and their goal-directed actions,
- (3) places in the navigable environment and their geometric relations to one another,
- (4) sets of objects or events and their numerical relationships of ordering and arithmetic,
- (5) social partners who engage with the infant in reciprocal interactions (Spelke, 2009, p. 153).

These systems form innate modules which, as a matter of fact, remain unchanged throughout the entire ontogenetic development. However, they may be combined, which is a phenomenon related to the acquisition of language. In other

¹⁰ Whereas the Second-Personal Morality and “Objective” Morality together form the morality of fairness.

words, in the process of language acquisition, we learn how to combine the content categorized in each module. In this case, however, the acquisition refers to the performance in gathering information about objects and activities, namely the information from two different modules. At this point, children begin to use objects as tools very effectively. A significant difference between two-year-olds, younger children and adult apes can be noticed at this very stage (Cf. Spelke, 2009, p. 159). Therefore, the acquisition of the language and the ability to combine the modules of core knowledge, are responsible for the development of uniquely human cognitive abilities.

Tomasello's concept of morality and its three-level structure may also be controversial in the context of primatological studies as it does not correspond with de Waal's concept and research. The author of *Primates and Philosophers: How Morality Evolved* distinguishes three levels of human morality, respectively: moral sentiments, social pressure and judgment, and reasoning, and because "the upper levels cannot exist without the lower ones, all of human morality is continuous with primate sociality" (de Wall, 2006, p. 167). At the first level there are the psychological 'building blocks' morality, such as the capacity for empathy, a tendency for reciprocity, a sense of fairness, and the ability to harmonize relationships. According to de Waal, it is empirically proved that these features can also be displayed by other primates. The second level is the level of social pressure exerted (by using rewards, punishment and reputation building) on every member of the community to make them support common goals and obey the social rules. In de Waal's view, social pressure, understood in such a way, though displayed by other primates as well, is demonstrated to a limited extent. The core meaning of this level is *community concern*. De Waal claims that in these categories one can understand the behaviour of females (at very high ranks in the social hierarchy) who reconcile rivaling males by grooming, stroking or kissing so as to restore peace in the community (de Wall, 2006, p. 167). Although various aspects of social pressure can be encountered among other primates, they are not as common as among humans: they are not so systematic and focused less on the goals set by the community as a whole. The third level is the level of judgment and reasoning, and it is almost exclusively for humans. This level of "the logic of moral discourse" includes moral reasoning, judging ourselves (and others) for evaluating the intentions and beliefs, the desire for an internally consistent moral framework.

Although in the above-mentioned division there are many analogies with the Tomasello's concept, the cases of behavioural primacy, examined by de Waal in terms of a sense of fairness and social pressure, are considered by Tomasello to be far-reaching (Cf. Tomasello, 2016a, pp. 14, 24–25, 36). Although both of them

agree that human morality and cognition must be explained as an outcome of evolutionary continuity between humans and other primates, Tomasello places particular emphasis on differences, while de Waal's intention is to lay emphasis on similarities.

In his article *Ethics and Evolution: How to Get Here from There* (Kitcher, 2006, p. 131), the philosopher Philip Kitcher points out that de Waal's well-known example of capuchin monkeys with a cucumber and grapes, seen as the evidence for the existence of a sense of fairness, is, in his opinion, unconvincing. In addition, he draws our attention to similar interpretation problems in relation to altruism.

CONCLUSIONS

Tomasello's concept that the most remarkable human abilities, both cognitive and moral, have their origins in our uniquely human ability and motivation to cooperate, however, in some areas a speculative concept, it is based on strong empirical foundations. The demonstration of its uniqueness is also expressed in Tomasello's own statement that "the resulting theoretical account thus represents an application of philosophical concepts of shared intentionality to empirical phenomena" (Tomasello, 2016c, p. 60).

Most of all, it appears crucial to emphasize the social influence of human cognitive abilities in explaining the importance of these abilities. In the existing literature on the exploratory role of representation in the elucidation of cognitive abilities, our attention is drawn to the meaning of distinguishing the explanation levels. Among the levels, the personal and sub-personal level can be distinguished. Tomasello's theories show that we should also adopt the third level, i.e., interpersonal, through which it is possible to explain such complex social relations as morality and altruistic attitudes as well as cognitive structures such as joint intentionality and collective intentionality.

References:

- Bratman, M. (1999). *Faces of Intention: Selected Essays on Intention and Agency*. Cambridge: Cambridge University Press.
- de Waal, F. (2006). *Primates and Philosophers: How Morality Evolved*. Princeton: Princeton University Press.
- Gilbert, M. (1989). *On Social Facts*. Princeton: Princeton University Press.
- FitzPatrick, W. (2014). Morality and Evolutionary Biology. In: E.N. Zalta (Ed.), *The Stanford Encyclopaedia of Philosophy*. Retrieved from: <https://plato.stanford.edu/archives/spr2016/entries/morality-biology/>

- Kitcher, Ph. (2006). Ethics and Evolution: How to Get Here from There. In: F. de Waal, *Primates and Philosophers: How Morality Evolved* (pp. 120–139). Princeton: Princeton University Press.
- Schweikard, D.P., & Schmid, H.B. (2013). Collective Intentionality. In: E.N. Zalta (Ed.), *The Stanford Encyclopaedia of Philosophy*. Retrieved from: <http://plato.stanford.edu/entries/collective-intentionality/>
- Searle, J. (1995). *The Construction of Social Reality*. New York: Free Press.
- Skyrms, B. (2004). *The Stag Hunt and the Evolution of Sociality*. Cambridge: Cambridge University Press.
- Spelke, E.S. (2009). Forum: Elizabeth S. Spelke. In: M. Tomasello, *Why We Cooperate* (pp. 149–172). Cambridge, MA: The MIT Press.
- Spelke, E.S. (2016). Core Knowledge and Conceptual Change: A Perspective on Social Cognition. In: D. Barner, & A.S. Baron (Eds.), *Core Knowledge and Conceptual Change*. New York: Oxford University Press.
- Tomasello, M., & Call, J. (1997). *Primate Cognition*. Oxford: Oxford University Press.
- Tomasello, M. (1999). *The Cultural Origins of Human Cognition*. Cambridge, MA: Harvard University Press
- Tomasello, M., & Rakoczy, H. (2003). What Makes Human Cognition Unique? From Individual to Shared to Collective Intentionality, *Mind & Language*, 18(2), pp. 121–147.
- Tomasello, M. (2003). *Constructing a Language: A Usage-Based Theory of Language Acquisition*. Cambridge, MA: Harvard University Press.
- Tomasello, M., Carpenter, M., Call, J., Behne, T., & Moll, H. (2005). Understanding and Sharing Intentions: The Origins of Cultural Cognition, *Behavioural and Brain Sciences*, 28(5), pp. 675–691.
- Tomasello, M. (2008). *Origins of Human Communication*. Cambridge, MA: The MIT Press.
- Tomasello, M. (2014). *A Natural History of Human Thinking*. Cambridge, MA: Harvard University Press.
- Tomasello, M. (2016a). *A Natural History of Human Morality*. Cambridge, MA: Harvard University Press.
- Tomasello, M. (2016b). Precís of a Natural History of Human Thinking, *Journal of Social Ontology*, 2(1), pp. 59–64.
- Tomasello, M. (2016c). Response to Commentators, *Journal of Social Ontology*, 2(1), pp. 117–123.
- Tuomela, R. (2007). *The Philosophy of Sociality: The Shared Point of View*. Oxford: Oxford University Press.
- Żuromski, D. (2016). Towards Explanation of the Natural Origins of Content, *Kultura i Edukacja*, 2, pp. 112–127.