

## Critical Notice: Michael Tomasello on the “Prosocial” Human Animal

Steen Nepper Larsen

*GNOSIS–Mind and Thinking, Aarhus University, Tuborgvej 164, Copenhagen NV,  
DK-2400, Denmark  
E-mail: stla@dpu.dk*

**KEYWORDS** Michael Tomasello. Prosocial Animal. Joint Intention. Shared Intentions. Altruism. Naturalist Approaches

**ABSTRACT** According to Michael Tomasello humans cannot help but be informative. Apes, like chimps, do not point at each other, only humans do so in order to attract attention, that is, to (get) help, play and share experiences. In shared cooperative activities, individual rationality is transformed into social rationality. A feeling of ‘we-ness’ is being born, a ‘we’ intentionality. It is Tomasello’s claim that in shared cooperative activities, the collaborators must first all be mutually responsive to each other’s intentional states. In *The Cultural Origins of Human Cognition* he states that human infants are very social from the moment they are born, if not before, and that intention reading and human beings’ inborn capability to identify with conspecifics are the clues to the unique human interaction and joint attention. The four theses of this article are: (1) the idea of the prosocial nature of the infant lacks convincing arguments; (2) Tomasello reflects and honours the *zeitgeist* (that is, the hope that we will see a scientific shift away from predominant methodological individualism towards more ‘social’ and ‘emphatic’-oriented approach); (3) his concepts of language as a tool and linguistic interaction as a derived form of pointing gestures are very limited; and (4) he underestimates the power and ‘nature’ of unforeseen events. Social synchronisation creates the possibility for joint attention and not intention reading. New forms of social interaction do *not* spring from cognitive intention reading processes *inside* the brain. Humans have certain biological predispositions, but they cannot explain joint attention patterns.

### THE MYTH OF THE PROSOCIAL ANIMAL: AN INTRODUCTION TO THE PROBLEM

Humans seem to be and to have become members of an excess species, an outstanding and generous animal sphere, with a large register of options. Much of what we do, are engaged in and share with each other, is not just done out of sheer necessity. Life is often lived beyond instrumentality, functionality and causality. Without necessarily wanting to have sex, searching for food or striving for recognition and without explicit signs demonstrating our own distinct skills or personal distinctions, we often draw other people’s attention to things and events out of sheer joy and empathy– but also, of course, because social bonds have to be formed between us, and often we do things to achieve something. We point out something that we think the others will find interesting – or we simply cannot help but seek their attention. Curiously, we try to understand what others want and how they view the world, and little by little a common atmosphere of emotionally toned social patterns and mutually interested states is constituted. A whole range of processes and phenomena are at

work, including the desire to share the inviting narrative exchanges, the bodily gestures, the curious listening without ulterior motives, the common arousal and performative synchronisation and decentred ways of existence.

The evolutionary anthropologist, developmental psychologist and chimpanzee researcher Michael Tomasello and his research team have in numerous books and articles mapped and documented the human species’ *differentia specifica*: the unique human ability to share intentions and to form ‘we-intentions’ with which we come to understand, read and respect others’ intentions. Tomasello et al. scrutinize how we engage socially and ‘foster’ communities and mutual reference systems (for example, the feeling of ‘we-ness’ and the effect of acting in concert). This impressive and foundational research project grapples with the last of Immanuel Kant’s great philosophical questions<sup>1</sup>: What is man? According to Tomasello man (for example, very small kids) is first and foremost helpful and socially alert. In a series of studies Warneken and Tomasello (2007) found that 14-months-old infants to reliably offer to help with out-of-reach objects even when they do not get any benefits themselves. For example, the experimenter used

clothes-pin to hang towels on a line, when he ‘accidentally’ dropped a clothes-pin on the floor and ‘unsuccessfully’ reached for it. Some of the 14-month-olds exposed to this event picked up the clothespin and handed it to the experimenter.

Tomasello’s work transcends a mono-scientific approach and raises fundamental questions in a broad realm, combining a wide range of issues and sciences: behavioural studies (of infants and chimpanzees), linguistic and social interaction patterns in human communication and developmental psychology etc. His methods and research results challenge a number of research traditions and standard views in both the natural, human and social sciences. The work does enlighten and qualify the intellectual climate worldwide, but it is also able to break through to the general public.

But it is not sufficient to simply enjoy being informed by Tomasello and his productive co-workers. Tomasello’s project rests on a number of fundamental philosophical principles and epistemological assumptions that must be studied, debated and criticised. The work – and the mindset and the thinking framework that have made it possible – is characterised by a clear trend towards a normative and idyllic construction of ‘prosocial motives’/‘prosocial behaviours’, such as biological self-assuring *a priori*s of human action and social interaction.

Many passages and quotes from the oeuvre (1999-2009) can serve as evidence for this assertion. Here are three of the more notable ones. The human is portrayed as a social animal even *before* birth<sup>2</sup>, the prosocial motives are called fundamental, and it is argued that cooperation, helpfulness and trust precede lies and mistrust.

*“It is clear that human infants are very social creatures from the moment they are born, if not before.” (Tomasello 1999: 58)*

*“...human communicative acts are performed for fundamentally prosocial motives such as informing others of things helpfully and sharing emotions and attitudes with them freely...” (Tomasello 2008: 107)*

*“Of course children soon learn to lie, but that comes only some years later and presupposes pre-existing cooperation and trust. If people did not have a tendency to trust one another’s helpfulness, lying could never get off the ground.” (Tomasello et al. 2009: 21)*

Tomasello interprets and uses “Mutualism ...” as an explanatory factor (for example, Tomasello et al. 2009: 85) of the distinctively human forms of exchanges and social interactions. The reciprocal exchanges create a ‘we’ or ‘us’. The human is, above all, a ‘we-acting’ we and later, as it ‘grows’ and acquires the art of speech, it becomes a ‘we-saying’ animal. It is able – or perhaps biologically predestined and unconsciously controlled – to coordinate and generate binding targets and engage in joint actions. “In shared cooperative activities, we have a joint goal that creates an interdependence among us – indeed, creates an ‘us’” (Tomasello et al. 2009: 41). Tomasello does not forget or rule out that humans are also self-interested, but in the same breath they are determined to be altruistic. In an utmost and astonishing way, self-interest opens for both helpfulness and cooperation. Self-interest is lifted, so to speak, to a higher level of common interest. Hegel’s logic of *Aufhebung* could not have done it better or more convincing. Like Hegel Tomasello maintains three things at the same time: He negates, positivates and valorizes the concept of man’s social nature.

*“Human cooperativeness and helpfulness are, as it were, laid on top of this self-interested foundation.” (Tomasello et al. 2009: 5)*

*“Children are altruistic by nature and this is the predisposition that (because children are also naturally selfish) adults attempt to nurture.” (Tomasello et al. 2009: 47)*

Amid the empirically rich and example-loaded work there is a lack of a principled discussion of what it is that is social in the prosocial human (animal)<sup>3</sup>. Tomasello et al. become surprisingly speechless. In addition, the blindness of (or rather: the myths about) the prosocial, understood as an edifying state of man, arises out of: (1) obvious problems concerning the empirical work (that is, collecting data) and research methodology; (2) the absence of a self-critical and open exploratory philosophical argument for the existence of a human biological prosociality. The theoretical prosociality assumption is not formulated as a thesis, and it is never challenged or even falsified; (3) a strong affinity to the *zeitgeist*, which these days is breaking with the otherwise strong methodological individualism, which for a long time favoured and succeeded in putting its research take-off in the individual’s strategic horizon inside its intentionality, consciousness or mental representations or in

its genetic profile, or in its brain-related constitution. In other words, Tomasello et al. say goodbye to the primarily self-interested individual, to assumptions of the philosophy of consciousness, genetic reductionism and neurocentrism.<sup>4</sup>

#### ATTEMPTS TO BREAK WITH METHODOLOGICAL INDIVIDUALISM

Primarily, the *self-affirming kind of empirical research* makes use of simple settings that deftly seem to exclude the possibility that the toddler can be placed in a situation in which it can and must choose either to eat something, pick it up or share it with others. A toy switches places, and a person who did not see that this toy was removed enters the room and all the attention is now centred on the child's reactions and its pre-linguistic communicative utterances. Children are 'constructed' with a staged surplus, and it seems likely that the 'not yet language-competent' toddler at 3-6-9-15-18 months always already senses or even 'knows' what the adults (in this case: mother, father or experimenter) want or expect, for it is never the case that the child is in a free space without manifest intentions. It is a research-excited and carefully designed exam room that allows only very few and almost predestined types of acts, such as attracting the attention of the newly arrived and 'uninitiated' person, so that he/she learns where the toy is located now.

One may fear that empirical evidence, in this way, becomes unbalanced, so the human (child) appears to be more 'prosocial' than it actually is in 'real life' outside of the space in which research objects and subjects are constructed. In here, they meet each other in artificial and unitary exchanges that are very different from the social complexity in which people usually act and live and in which there usually are many more reasons, expectations, ambiguous 'transfers' and overbearing phenomena to confirm and take account of: discomfort, sibling jealousy, selfishness, anxiety, teasing, shyness, hunger, fear, love, disease, eating and playing habits, dreams, obsessions, fantasy, phobias, feelings<sup>5</sup>, and not least, experience etc. Although not all these possible sources of social complexity matter equally matter for the social world of the specific toddler, they need to be taken into consideration both as theoretical themes and empirical 'obstacles'.

Tomasello carries out an *unwarranted philosophical and arbitrary choice* of a Rousseauian thought figure, telling us to believe that the human is born good, social and sociable, and that human beings should be free of social bonds and ties (see Tomasello et al. 2009: 3: "Born to Help"). Hereby, he adopts absolute distance to the original sin of Christian and Hobbesian origins, viewing the human as one who is born evil and antisocial and, therefore, destined to find his/her place within the emperor's violence monopoly or as a small anxious and faithful cog in a well-oiled and disciplined religious machine. This way of presenting a standpoint and a historical narrative is not well founded and readers do not know why they even need to choose one pivotal philosophical credo which 'happens' to be historically overloaded and a too single-tracked speculation on human nature.

In Latin the prefix 'pro' means 'instead', 'on behalf of' and 'in exchange for' – in front of or following a word – as well as 'defending' and 'beneficial'.<sup>6</sup>

All three major meaning horizons are activated when Tomasello writes about the human, the 'prosocial' animal. The prosocial person is acting on behalf of a biologically designed 'logic' of humanity's self-realisation. The prosocial human is a pre-empirical reality, and even before we are born we contain sociality-creating impulses. The prosocial human being is both favoured and favourable, it defends the common human and favours humans as the social species – and Tomasello defends all this, while it favours and potentiates the narrative force of his research and writings. In various Latin-English dictionaries 'pro' also terms 'forward', 'forth' and 'forward and onward'. Tomasello is aware of the power of rhetoric and draws upon all the positive denotations and connotation of the prefix 'pro'.

One senses a clear echo of the American pragmatist philosopher Richard Rorty's famous dictum in *Philosophy and the Mirror of Nature* (1979) that took the count of traditional Western philosophical core values, like representational thinking and correspondence theory of truth: "Truth is what is better for us to believe." Tomasello launches in other words, a pragmatic, instrumental, functional and progress-optimistic theory that represents a good cause, praising everything at once: individualism and social consensus and reconciliation. For full blast both

the non-academic readers and the world's researchers encounter a perpetually burgeoning work that is purged of European doubts, concept-critical scepticism and self-criticism. The take-off – the philosophical starting point – is timeless, and the ambition much larger than grasping contemporary historical traits and being engaged in practical intervention in the human zoo. We are dealing with fundamental research that creates attention and earns accolades and great success<sup>7</sup>.

But it is also, as this paper will demonstrate, a naturalistic theory and a form of argument that through strong biological assumptions in some way deprives the human of an action space and of his/her status as a free agent in a social and cultural context. For when the social and cultural principle can be explained by and led back to something biological, namely the prosocial human nature, then there is no compelling reason to explore these otherwise inevitable and constitutive fields and phenomena of the humanities and the social sciences in their own right, much less for their own sake<sup>8</sup>. In addition, Tomasello does not seem to recognise that many of the social systems are not based on pretty and empathic exchanges, let alone allowing to be traced back to a prosocial biological 'logic'. Thus, the code of the economic system (profit/non-profit) and the code of the political system (power/non-power) are more or less completely indifferent to friendly pointing and gesticulating, and the cultural habits' adhesions with the life world, language games and interpretative horizons are not something that can be investigated via biological naturalisation.

Moreover, it is surprising that Tomasello is not inspired by Jean-Paul Sartre's brilliant gaze analysis in *L'Être et le Néant* (from 1943). Rather than see and interpret the little pointing child as a sovereign and tricking and intriguing one-way signalman and sublime entrepreneur, primarily, Tomasello could usefully have looked closer at the relationship between "Seeing the Other" and "Being-seen-by-the-Other"<sup>9</sup> and thereby focused at the complex (power) game that is played out when I, for instance, know that the other knows that I know that the other knows that I want to see what he does not want me to see; therefore, I look exactly at it and 'gaze' at the other with a force of another world, but it does not seem to be noticed by him, and so on. The complex and rich social interactions between

the eyes of the participants in Tomasello's research experiments do not get noticed nor are they presented for the readers.

In the optic of a *critical contemporary societal diagnostics* it must be considered if and how Tomasello's theory – that the human is born with a 'prosocial nature' that causes him/her to take a living interest and not only exhibit a utilitarian-instrumental approach to his/her fellow beings – fits almost too well with the need to produce a strong and hopeful contrast to the social Darwinian, rational choice theories<sup>10</sup>. The theories presuppose that conscious and strategic individual agents perform preference-driven behaviour as they are living and feeding in a state of absolute information, equipped with an ability to use its transparent reason to choose to engage or not in order to put the whole machinery of society in action or to let it stand still. The pointing subject and own will-transcending and attention-raising dynamics donate a beautiful and perhaps even compensatory counter-image of a reconciled and united humanity, fleshed out in a universal friendship, in a time when the global financial crisis, the intensified global competition, endless wars, hatred and terrorist attacks and struggles against a number of 'natural disasters' haunt the world and fill the media with fear-creating potentials and depressing and bewildered mental and political scenarios. Community founding works, as for example, Tomasello's, we would simply like to believe in<sup>11</sup>, and no one can be against the hope that emanates from them. The problem is simply that this pleasing consensus bypasses a number of discussions he could have benefitted from.

Tomasello's work blends into the major *break with methodological individualism*, which was not only initiated by phenomenological and hermeneutic philosophers in the early 20<sup>th</sup> century and continued by post-structuralist, deconstructive body-phenomenology, cognitive semantics and communication theory philosophers and sociologists at the end of the century. This potential critical awareness was also spread to parts of cognitive science, brain research, neurobiology and neuro-psychology. More and more researchers of scientific origins and persuasions are eager to explore and map the phenomena of *the social brain, social cognition*<sup>12</sup>, *joint attention, joint action*<sup>13</sup>, *group cognition*<sup>14</sup>, *cooperative behaviour, extended minds, swinging brains, synchronised heart*

*beats, embodied minds*<sup>15</sup>, *our embeddedness in the world, and social synchronisation*<sup>16</sup>.

### WHEN BIOLOGY BECOMES HYPOSTASIZED AS THE FIRST CAUSE

The presence of a manifest internalistic-constitutive biologically predisposed ‘trickster’ as the first cause – ‘intention reading’ with clear and altruistic sociality-constitutive perspectives – depicts itself clearly in Tomasello’s universe. Hereby, the question of motivation ‘behind’ this special human capacity/property becomes a privileged missing link, whereby all three parts of the *Münchhausen’s trilemma* get activated in the encounter with the writings of Tomasello, i.e. the assumption of: (1) a dogmatic assertion, (2) intertwinement in a ‘vicious’ circle and/or (3) infinite regress<sup>17</sup>. It is also possible to trace some truisms and tautologies in Tomasello’s basic idea, for biology is, of course, also in and/or under culture – could it be otherwise?

The basic argument goes that human biology is both a prosocial and a causal culture creating force. In a way, it looks as if ‘the social’ and ‘the cultural’ are projected backwards into the ‘biological’, or, in other words, biology becomes equipped with ‘the social’ and ‘the cultural’ slumbering and poised ‘inside themselves’. This is a strong and demanding assertion with many inputs and outputs. In return, redemption happens all by itself and as a phylogenetic reality:

“...individual human beings possess a biological inherited capacity for living culturally. This capacity – which I have characterized as the capacity to understand conspecifics as intentional/mental agents like the self – begins to become a reality at around nine month of age...” (Tomasello 1999: 53)

The readiness to act as a helpful and generous creature is apparently present in both the biological set-up in infants<sup>18</sup> and young children and in helping adults’ ‘third wheel agents’:

“...infants and young children come to culture ready to be helpful, informative, and generous in the right situations (but selfish in others of course)...” (Tomasello et al. 2009: 44)

“In a cooperative-breeding scenario, helpers – all those who are not the mother – often engage in a variety of pro-social behaviors such as active food provisioning and basic childcare.” (Tomasello et al. 2009: 84)

A somehow unique species-specific ability and a peculiar predisposition, which no other animal possesses, get ‘drawn’ in the works of Tomasello.

“...shared intentionality. We propose that the human beings, and only human beings, are biologically adapted for participating in collaborative activities involving shared goals and socially coordinated action plans (joint attentions).” (Tomasello et al. 2005: 676)

Even though the notion of a first cause is ambiguous in evolutionary explanations, because there is no given prime mover for man’s social nature, he seems to resorts to classical first-order logic (A implies B) that, at once, combines the theoretical ‘front grip’ and the empirical observations, without the reader, however, being able to envisage which of the two domains may constitute, ‘justify’, follow or entail smiling avidly at each other:

“...human children are already cooperative and helpful in many though obviously not all, situations. And they do not learn this from adults, it comes naturally. But later in ontogeny, children’s relatively indiscriminate cooperativeness becomes mediated...” (2009: 4)

Tomasello proclaims that everything in the human and cultural world is based on biologically-inborn social-cognitive abilities to participate in so-called conventions and to understand the use of symbols:

“...all human cultural institutions rest on the biologically inherited social-cognitive ability of all human individuals to create and use social conventions and symbols.” (Tomasello 1999: 216)

In other words: Culture and symbols are processed biology and are based on biology –which contains culture and symbols in its infancy. This infinite regress ‘explains’ itself with itself, but the result is a theoretical appraisal of human biology, which has the obvious advantage that not many would call it evil. Tomasello writes himself into these circular self-confirming loops, using non-argumentation; nevertheless, it should not be overruled or underestimated that his empirical observations have mapped and documented something unique with respect to the human animal. Neither should it be forgotten that all co-evolutionary stories seem to involve certain benign forms of causal circularity, so Tomasello is not the only one for which backwards projections and circularity is a problem.

But in the context of the scope of this article, the primary concern is ‘only’ to consider his concept of language and, hence, critically examine and ‘X-ray’ his way of thinking and reasoning philosophically.

But before the researcher goes further into Tomasello’s concept of language, there must equally be ‘something’ we might refer to as a discussion of a chicken and egg situation, but it can also be argued that ‘it’ is precisely at this point that his theory seems to be extremely vulnerable. As we have seen above, Tomasello lets the speechless, pointing and gesticulating child play the first violin when it comes to establishing human and social interaction: nothing less than the very possibility and reality of civilisation is thus placed upon the shoulders of the nascent child. But could it not be possible that it is the parent/parents who have the experience and anticipatory surplus-knowledge to see through the child’s tentative and perhaps ambiguous signs and then redeem(s) it the same way as Socrates and Menon?<sup>19</sup>

The researcher’s reverse thesis to Tomasello’s child-centred approach argues that the mediation between adults and children at once evokes the child’s *con-constitutive being-in-and-for-the-social*<sup>20</sup> and an adult-driven, redemptive force in the child. Both processes are woven into each other, and only analytically and semantically can they be told apart. Whether it - and quite the opposite of what Tomasello elsewhere is trying to tell us and wants to show in experiment after experiment - is the parents and the many years of training that constitute the chicken and the child the egg or whether the chicken (the parents’ active interplay) and the egg (small children pointing, trying and argumentative behaviour and thinking) always imply and co-constitute one another - if you ‘happen’ to feel convinced that you have to think in an evolutionary and civilisation perspective (otherwise there was only one generation shot in the ‘shotgun’) - must not be decided here. But it should be pointed out that it might be slightly too distorted an idea to put the entire ignition spark for the very possibility of the origin of the social human on the inborn and nascent prosocial biology of the small child. Tomasello acknowledges that “infants also need to be able to create shared conceptual spaces or common ground with other persons” (Tomasello 2008: 140), but his *pro-social nature-logic* prevents

him from wanting to see that this ‘common ground’ could spring from something physical, social, cultural and linguistic, which cannot be traced back to human biology *as such*<sup>21</sup>

Helpful, participatory and open-minded parents and tentative young children have encounters in Tomasello’s experiments. But prima facie, it seems that he only includes children in his experiments if their parents have enough good empathetic qualities. Screaming, introverted, hyper active, outward-reacting (‘violent’), shy, embarrassed and insecure children and dysfunctional parents are silently excluded or they are never contacted, as they hardly have anything that should have mended in an experimental set-up, if they are not proud of their life or offspring. The exhibition of the bodily and communicative utterances of a family requires a self-confident participation of parents and children<sup>22</sup>.

#### LANGUAGE IS NOT A SIMPLE ‘DEVICE’

Much of the work identifies and portrays young children’s language use and the delicate relations between linguistic and non-linguistic communication (identification, facial expressions, bodily emotions), but why does Tomasello play down the significance of language in favour of the clean operating and acquisition processes of the ‘technical apparatus’ (grammar, cultural tradition, training, imitation, perspective shift, etc.)? The book presents a very limited view of language: a mere ‘device’. Of course it has to be emphasized that Tomasello’s use-based, constructivist language approach departs from the Chomskyan code-based, nativist approach, but language is not merely a device or a tool; it is a way people ‘get’ a world<sup>23</sup>. Language is the ‘atmosphere’ that we breathe in and the narratives, meanings, interpretations and ways of thinking that we live by as utmost diverse philosophers have shown us from Friedrich Nietzsche, Martin Heidegger and Ludwig Wittgenstein to Jürgen Habermas, Michel Foucault, and Richard Rorty. Language is coordinating action, world-opening and historical remembering. Moreover, it is ‘Ich-los’ (without an ego, according to Gadamer 1967) and not a transparent phenomenon, but something we are woven into and pervaded by; it is not a window or ‘service-minded’ representational medium; not an instrument formed via intention and conscious decision; not an ‘object’ that can be fixed; not something we can put aside or take off (like a hammer or a raincoat);

and it is much less something we may be able to talk ourselves out of.

According to Tomasello, however, language is apparently something that is completed and ready to be picked up, although we are not biologically predetermined to acquire a specific linguistic structure; neither does he argue that humans are equipped with a universal grammar. Tomasello thus provides a convincing and empirically grounded critique of Noam Chomsky’s theory of an innate ‘universal grammar’:

“...the full cooperative infrastructure is basically in place before language acquisition has begun...” (Tomasello 2008: 165)

“Human beings are biologically prepared for language, but this may or may not involve the inheritance of specific linguistic structures.” (Tomasello 2003: 284-285)

For Tomasello, language is not a source or cause, but rather a product of the human’s unique way of cooperating and communicating<sup>24</sup>. Language acquisition is not a product of a particular genetic-specific faculty, but rather something that young children construct through use (see Tomasello 2003; Spelke in Tomasello et al. 2009: 165, and the phenomenon ‘protoconversations’ in Tomasello et al. 2005: 681). Language stems from gesticulating communication based on the prior pointing behaviour and other awareness raising means that the child uses in order to attract attention and be ‘heard’ and seen by the other (Tomasello 2008, see also Habermas 2009: 45).

“... Children do not learn language in such a vacuum; they learn it in the midst of meaningful social interactions in which they share common ground with their adult interlocutor.../.../ In the social-pragmatic view, then, children acquire linguistic symbols as a kind of by-product of social interactions with adults, in much the same way they learn many other cultural conventions.” (Tomasello 2003: 90)

Tomasello seems to be assured that language’s primary existence, its *raison d’être*, lies in the fact that it is a mutual tool for attracting and holding on to each other’s attention. He does not see language as a philosophical first principle, nor as the key to the social; instead the human’s prosocial being takes up this principal role. It is not just language that is interpreted as a ‘device’. Human’s cognitive abilities are also portrayed as ‘tools’, as were they like animals’ long necks and splendid collection of colourful feathers.

“Language is not the basic; it is derived. It rests on the same underlying cognitive and social skills that lead infants to point to things and show things to other people declaratively and informatively, in a way that other primates do not do, and that lead them to engage in collaborative and joint attentional activities with others of a kind that are also unique among primates. The general question is, what is language if not a set of coordination devices for directing the attention of others?” (Tomasello et al. 2005: 690)

“Human cognition sticks out like an elephant’s trunk, a giraffe’s neck, a peacock’s tail. It is one form of primate cognition, but it seems totally unique...” (Tomasello et al. 2005: 689)

Within Tomasello’s universe the ability to ‘share intentionality’ is the key feature of human prosocial nature and, thereby, one of the most important explanatory factors in human development and specific characteristics. This ability is more important than language (for example, communication theory), consciousness and the fact that the human brain, envisaged in an evolutionary light, ‘grew’ in size and was endowed with a stronger capacity and ability to maintain and do many things at once, due to its ‘larger working memory’ (2005: 690).

In *Constructing a Language*, there are several examples where Tomasello appears to be open to hypostasize language and the tool character of words. For example, he writes congenially with the late Wittgenstein:

“The meaning of many, if not most, words, is (...) not specifiable in isolation, but must be understood in the context of a larger set of cultural activity and entities.” (Tomasello 2003: 54)

Learning to point at and assign names to things gradually increases children’s world and vocabulary. In this respect, Tomasello and the writer of this article do not disagree. Practice and experience, not innate abstract grammatical components, are the key facilitators of language acquisition. And Tomasello seems to be on the verge of seeing language as something that is much more embedded, embodied and changeable – that is, a phenomenon in an ‘eternal’ process of becoming – than a pure instrument can be. Eventually, however, the view of language as a tool wins.

Loudly the researcher therefore once again wonder why Tomasello’s conception of language

is so narrow. Even though one he and other researchers have detected the existence of pre-linguistic forms of body-centred motor intentionality (for example, Liszkowski et al. 2012) the pre-linguistic body ‘language’ must precisely become linguistically organised in order to contribute to understanding processes and communicative meaning-driven exchanges between people ‘in the long run’, as Wittgenstein, Gadamer and Habermas (would) have argued. Body ‘language’ requires understanding, and understanding requires sense, and meaning requires some kind of semantics. Tomasello ends up in a *petitio principii* next to the tautologies in which he is already ‘entangled’. The pointing body ‘language’ gesture is not a definite proof, but an assumption and an uncertain premise, which does not speak for itself, let alone manages to act as or constitute a solid ground under human interaction without the existence of language comprehension and belief ‘in’, ‘under’ and ‘for’ the social. In other words, Tomasello *begs the question*. In addition, grammar distinctions – between I-you, I-what, you-what, I-we, you-we and we-what etc. – play a crucial role in ‘social traffic’<sup>25</sup>. Both the techniques to overcome and skip the distinctions between ‘I’ and ‘you’, in order to create a feeling of ‘we-ness’ (for example: ‘I = you’), and the process in which your own intentions can become something phenomenally concrete (for example: an ‘I-me’ relation) require grammar and, thus, the existence and interplay of language<sup>26</sup>.

#### THE UNDEREXPOSED POWER OF THE EVENTS IN TOMASELLO’S WORK

When one reads Tomasello’s works, it is striking that he seems to downplay the force of the events, the simultaneous, ‘co-present’ (*gleichursprüngliche*) attendance of ‘intention reading’, ‘joint attention’, the synchronising force of the social contagion<sup>27</sup> and the social exclusion processes. He does not seem interested in thinking about the contingent, unplanned and yet unarticulated – that is, the unidentified and unclassified social field in which life is lived before it can be grasped and fixated by the use of concepts like ‘intentions reading’ and ‘joint attention’ and unambiguous agency forms of mind reading. Apparently, total acceptance of the event’s essence, as a singular synthesis of chance and necessity, does not fit into this profound science-driven but basically reductionist

research and thinking regime. Even though Tomasello will not accept the premise that a kid, in order to be able to engage in cognitive ability X (e.g. mindreading, joint attention, sense of agency) must first possess the concept X and be able to apply that concept X coherently – it is astonishing to see that his concepts and experimental approach limit his capability to study the social interaction in its full complexity.

Moreover, social exclusion is hardly very idyllic, but Tomasello is primarily concerned with the willingness to engage in ‘intention reading’ processes, as they are practiced in a local and foreseeable horizon, in which known actors flourish (empathetic study directors, alert mothers and fathers, well-nourished and socialised children). The experiments are not open to everything that might have happened, and they do not embrace all ‘types’ of kids. Whether or not our ancestral environment did foster exclusion and exploitation and whether or not our ancestors were ‘Machiavellians’ or ‘Tomassellians’ the researcher does not want to discuss in this context. The researchers only want to stress that the empirical research seems to be going on in a very peaceful atmosphere that might not be generalizable to depict and understand mankind’s interaction as such.

In addition, Tomasello underestimates and neglects the unconscious and even non-articulated processes’ force, in order to ascribe the child a more or less self-conscious ability to perform intention reading and decoding and to ‘equip’ it with a friendly pointing behaviour, lifted up to unprecedented heights.

The assertions are many in number and repetitive: “The tricker of it all: intention reading, intention identification” (Tomasello 1999: 6; see also Tomasello 2003: 291). Intention reading is “foundational” and a “prerequisite” (Tomasello 2003: 91, see also 19 and 23). “Human beings are the world’s experts in mind reading” (Tomasello et al. 2005: 675, the very first statement). “Humans beings are also the world’s experts at culture...” and “...reading attention and interaction with others culturally – are intimately related” (also at p. 675). But people are also experts in bothering, excluding and exploiting each other. Humans are adept when it comes to killing each other. What happened to all these negative forms of human actions in Tomasello’s oeuvre? Intention reading ‘talents’ can also be used as means to get a step ahead in a fight for something and not just as friendship-founding ‘mechanisms’ to create culture and sociality.



Tomasello points out that “human infants” in an ontogenetic perspective display “a strong motivation to share emotional states with others...” (Tomasello et al. 2005: 683), and that in a phylogenetic and evolutionary historical perspective the fact that ‘we’ began to work more closely together proved to be an advantage (the latter point reaching back to the ‘arrival’ of the modern human approximately 150.000 years ago (Tomasello et al. 2005: 687)<sup>28</sup>. But the problem is that “identification with others” (Tomasello et al. 2005: 688) is neither a sufficient basis nor fundamental argument for this process nor for its different historical ‘expressions’. One might imagine that a lot more was at stake, for example, necessities due to threats from other tribes and animals, the lack of food, climate changes, new tools, new social rules and bodily changes, including genetic and brain-related features, etc. Tomasello is keen to let the duo *intention reading* and *identification with others* explain everything.

Social synchronisation must be grasped in its peculiarity without the support represented by the philosophical a priori and *credo* of the ‘prosocial’ human animal. Social synchronisation comes into being in the lived life, and it is stirred into a mixture of overbearing social structures and a series of, at once, limiting and contingent individual and collective choices. Here, the forms of power, discursive rules of grammar, time organisation, cash flow, working patterns, ethics, education and training, product supply, hope and anticipation, experience, physical attractions (desire, proximity, imitation, disgust etc.), artistic breakthroughs, piqued attention, scientific regimens, discomfort and joy, family forms, sexual norms, technological ‘devices’, legislation, history writing, national myths, songs, unspoken rules and expectations and many other ‘things’ all play active roles in ‘creating’ the social; roles that we must not forget. To give a straight and strict definition and not just a ‘laundry list’ of the concept social synchronisation represents a major challenge for future research.

The wish to go directly from a beautiful myth about the ‘prosocial’ human animal in order to understand, explain and justify why people form, maintain and become engaged in social ties is wishful thinking and naïve. Social synchronisation is the name of a complex and self-generating ‘machine’ of fields of tensions and opportunities for coordinating human life; it is not

something that can be reduced to or merely be justified by a ‘prosocial’ biological predisposition. Instead of indeliberately ‘(re)inventing’ sociology, based on stylised developmental psychological experiments with pointing and speaking young children, one could alternatively let the inspiration flow from the works of Marx, Durkheim, Tarde, Le Bon, Freud, Bataille, Broch, Bloch, Adorno, Marcuse, Canetti, Goffman, Baudrillard, Maffesoli, Sloterdijk, etc. All of these thinkers have tried to identify how the ‘mass(es)’ must be conceptualised and described. There is a rich heritage that one might draw upon which goes at least 150 years back in time. In order to think Modernity, it is pivotal to think ‘the mass’ and not be content with thinking about it merely as a class, substance, subject, non-authenticity or as a ‘black hole’; but one must not think of ‘the mass’ alone, either, which is what Tomasello tends to do, to decode it in terms of joint attention and shared intentionality patterns.

A guide to discovery for naturalists into the social theory and crowding behaviour must be to check out the conceptual horizon and insights but also the weak points of mass-sociologists and mass-psychologists in the 20<sup>th</sup> Century. As a take-off, I suggest Gustav le Bon: *The Crowd. The Study of the Popular Mind* (1886), Elias Canetti: *Crowds and Power* (1962), and Peter Sloterdijk: *The Contempt for the Masses. An Attempt about Culture Wars in Modern Society* (2000).

#### DOES TO MASELLO’S WORK CONTRIBUTE TO PHILOSOPHICAL ANTHROPOLOGY?

Tomasello fuels the notion that the human, primarily due to its biological constitution, belongs to a helpful, generous, selfless and curious surplus delicate species. But the question is whether these beautiful thoughts on this unique nature and, thus, on the animals we are, are well-founded.

Tomasello understands the communicative motives as consisting of “Requesting, Informing and Sharing” and it is quite right that they open for “a virtual infinity of particular social intentions” (Tomasello 2008: 87). But what became of territorial markers, the struggle for recognition and strategic behaviour, etc.? Are these ‘expressions’ or acts always decipherable as secondary derivatives – that is, to be under-

stood as derivatives and not as “spontaneous expressions of life” (Løgstrup 1972)? The German philosopher Peter Sloterdijk also presents the human as a species with generous potentials in his critique of philosophical and sociological attempts to ascribe “ontology of lack” (a *Mangelontologie*)<sup>29</sup> to human beings. To be a human being is to go through “a life-long second birth” (“Eine lebenslange zweite Geburt”)<sup>30</sup>, to benefit from large and extraordinary plastic brains (compared to other mammals) and, especially, to be nurtured and spoiled by other human beings. But Sloterdijk does not solely depict the human in a positive perspective that focuses on mutual sharing beyond the power battles in space and time. In fact, he analyses human interaction both in a historically changeable perspective and in a spatial micro-, meso- and macro-spherical perspective.

Tomasello writes:

*“The second fundamental human communicative motive, seemingly unique to the species, results from the fact that individuals often want to offer help to others without even being requested to – specifically, by informing others of things, even when they themselves have no personal interest in the information.” (Tomasello 2008: 85)*<sup>31</sup>

- and continues:

*“People often simply want to share feelings and attitudes about things with others – what I call an expressing of sharing motive.” (Tomasello 2008: 86)*

According to Tomasello, it is a purely social gesture, an inviting and non-teleological (speech) act when the neighbour says: What a beautiful day it is today!

*“...they want to share their enthusiasm nonetheless...” (Tomasello 2008: 87)*

- even though he might be ironic (it could be raining cats and dogs), or his assertion might signify that it is time to leave the lazy armchair and go cut the grass. Both ‘elaborated’ children and adults possess knowledge and understand hints, and they can thereby transcend or undermine the reign of ‘pure’ enthusiastic bodily and otherwise communicative expressions. But of course it has to be stated that the sophisticated ironic speech acts build upon the acquirement of the literal interpretation of such assertions and therefore both types of utterances are not part of the horizon of the formerly mentioned toddlers.

Tomasello does not profoundly qualify philosophical anthropology, but he presents his thoughts on how the human’s reciprocal interaction was not constituted by a lack, but rather built (and is still being built) on a generous invitation and, hereby, on something ‘more’ than he/she, as a single individual, might benefit from *in splendid isolation*.

## CONCLUSION

In a theoretical sense, Tomasello can be described as a cognitivist thinker with a universalistic and essentialist project. He serves and repeats one double-point in his works, while launching new experiments which appear to confirm his points in asserting that the human by nature is a prosocial animal and that we-intentions are the key to understanding the social life of human beings in all societies and in all times. The small pointing, empathetic, altruistic and prosocial human child enters the scene as a *deus ex machina* and a *prima causa*. But instead of being forced to choose between a Rousseauian or a Hobbesian conception of human nature, as either ‘good’ or ‘evil’, it is possible to step out of this prescribed and simplistic two-way choice. Neither philosophical discussions nor empirical investigations of the delicate relationships between biology and ‘the social’ are destined to force one to choose sides in this ancient conflict. Sociology and the humanities are not obsolete forms of human knowing, nor are they without scientific insights. Tomasello’s strong naturalistic project threatens to render superfluous a non-biological understanding of the social and cultural genesis and of the very different historical settings and characteristics of human life forms, thus, depriving the human of an important part of his/her action space and his/her *agency* in the slipstream of unforeseen events.

## NOTES

1. The first three questions were: *What do I know? What should I do? What can I hope for?* And it is hardly too much to say that Tomasello is – at least indirectly – also in the process of answering them.
2. In a way, the unborn child (the foetus) must be seen as part of the mother’s body: without the umbilical cord and supply of nutrients and blood there would be no new life. But it seems somewhat farfetched to conceive the mother-child dyad as the very hotbed of the ‘prosocial social’. The social is precisely

- characterised by the presence of ‘born’ people forming bonds, and the social sphere contains norms, laws, habits, expectations, recognition, inclusion and exclusion etc. – highly advanced communication forms and social ‘plays’ that cannot be found in the human biology. To ascribe the not yet born child a status of creator of the social *par excellence* conflicts with basic sociological knowledge. According to Sloterdijk (1998) the unborn child in the uterus is situated in a ‘nobject-position’: it is neither a pure object (a thing, an object) nor is it a subject (something assertive, something independent).
3. See Gallotti’s review (2011) of Tomasello et al. (2009). He writes: “Tomasello believes that mutualism consists of recursive mindreading,” and this belief is backed up by “a decisively naturalistic twist.” Tomasello’s central matter is described in this way by Gallotti: “The central claim is that human cooperative behaviour is underpinned by inferential processes and pro-social motives observed in degrees of complexity that are not even remotely detected in the primate social world.”
  4. For a presentation and critique of neurocentrism, see Nepper Larsen (2008), (2010a), (2010b), and (2014).
  5. In Tomasello et al. (2005: 681) “the exchange of emotions” is seen as the crucial ‘fuel’ for the interaction and ‘logic’ of the social exchanges and interactions “in which the adult and infant look, touch, smile, and vocalize toward each other in turn-taking sequences.” The motivation to share emotional states with others and express “motivations for sharing goals and perceptions with others” is already present before the child turns 1 year (2005: 683).
  6. Acc. to *Gyldendals Fremmedordbog*. Gyldendal: Copenhagen 1972: 364.
  7. See e.g. Habermas’ (2009) laudatio to Tomasello. On 16 Dec. 2009 the city Stuttgart donated the Hegel Prize to Tomasello, and the world-famous sociologist and philosopher wrote a review of the German translation of *Origins of Human Communication* (2008) under the telling title: “Es beginnt mit dem Zeigefinger” (“It begins with the index finger”).
  8. See also Gallotti (2012: 20) for an accurate characterisation: “The work of Tomasello and colleagues has attracted a great deal of interest among those who want to give a naturalistic account of the roots of sociality based on the capacity for collective intentionality. But the hype surrounding this research project seems premature.”
  9. See “The Look” in Chapter 1: “The Existence of Others” in part III “Being-for Others”, in *Being and Nothingness*, (1998: 252-302; in particular p.257).
  10. See also Petersen, Roepstorff, and Serritzlev’s (2009) bid for possible theoretical alternatives to game theory and neuro-economic rational choice models.
  11. See e.g. David Brooks’ commentary in *New York Times* (16 May 2011), praising cooperativeness and altruism. Brooks draws explicitly on Tomasello et al.’s newest and most accessible work: *Why We Cooperate* (2009).
  12. See e.g. Hutchins (1995).
  13. E.g. scientists from many different disciplines and fields of knowledge gather at so-called *Joint Action Meetings* (JAM) these years. On 7-9 July JAM IV took place in Vienna where I presented this paper. See also Michael (2011).
  14. See e.g. Theiner et al. (2010).
  15. See e.g. Thompson and Varela (2001).
  16. Within the contemporary business world, the lingo of *Corporate Social Responsibility* (CSR) and *Corporate Social Innovation* (CSI) is becoming predominant, and although there is some hollow ideology and empty air in these words and practices, the concepts may still indicate that many people eagerly want to realise and work for a new type of more mutualistic capitalism— though these dream trends and visionary thoughts must be seen as regulative ideas of societal attempts to harness and civilise the future of capitalism. Diverse phenomena like individuality-transcending theories on mirror neurons (Vittorio Gallese, Giacomo Rizzolatti), distributed cognition (Cowley et al.), communication (Jürgen Habermas, Niklas Luhmann – all differences notwithstanding), dialogue (Garrod and Pickering), discourse (Michel Foucault, Ernesto Laclau and Chantal Mouffe, Norman Fairclough), recognition (Axel Honneth), social movements (e.g. the Danish cultural theorist Henrik Kaare Nielsen), actor-networks (ANT, Bruno Latour), intangible networks and social media (Manuel de Landa, André Gorz, etc.), pollen society (Yann Moulier Boutang), flash mobs, social semiotics, neo-tribes (Michel Maffesoli), ‘sur-individualism’ (the Danish historian of ideas, Lars-Henrik Schmidt), ‘onphone’ (Manzotti’s neologism that is explicitly anti-subject-object dualistic in order to link ontology and epistemology together in a one unit monism), reciprocal economy and social motives that exceed the Economic Man (see Heuser about the socialist ‘star economist’ Armin Falk), hearts ‘in step’ (we are physically affected when we have common experiences with each other, see Konvalinka et al. (2011)), return of the masses (Nepper Larsen (2011a)) and perhaps social capital also pulls in that direction (Pierre Bourdieu). And the Icelandic-Danish artist Olafur Eliasson is extremely concerned with how meeting with artworks can make us feel things together, even though we seem to be destined and doomed to individual perception (in his unpubl. lecture “Emotional Synchronicity: How Art Moves the World,” presented at Copenhagen Business School, Frederiksberg, 17 May 2011).
  17. Münchhausen trilemma or Fries’ trilemma was first formulated in the 1800s by the German philosopher Jakob Friedrich Fries (1773-1843). Fries rephrases and condenses the sceptic Agrippa’s position. See Nepper Larsen (1987: 291f).
  18. But ‘helpfulness’ and ‘readiness to help’ are cognitively advanced concepts, presupposing an insight that the foetus, infant or small child cannot yet have.
  19. I thank my colleague at GNOSIS, the Danish biologist and philosopher Theresa Schilhab for inspiration to strike this critical point.

20. *An sich* becomes so to speak *für sich*. Self-consciousness is not a cradle gift: it becomes. Already G.W.F. Hegel knew and wrote that. The self is an event (see Kirkeby, 2008), not a fixed and self-given structure. Accounts of inter-corporeality in the phenomenological tradition, from Maurice Merleau-Ponty to e.g. Thomas Fuchs and Maxine Sheets-Johnstone, and the Habermasian accounts of intersubjectivity, could back up this thesis on co-constitution. Empirical studies in this realm analysing the relation mediation between children and adults could also be looked upon.
21. It is not because Tomasello does not care about how "... understanding enables individuals to imagine themselves 'in the mental shoes' of some other person, so that they can learn not just *from* the other but *through* the other" (Tomasello 1999: 6), but in both the first and last instance, it is the small newborn baby's nascent biological dispositions that are interpreted as the crucial 'ignition' of communication and the provided sociality.
22. The participants in Tomasello's experiments are *WEIRDs* – *Western, Educated, Industrialised, Rich and Democratic* (see Henrich, Heine and Norenzayan 2010) – meaning that the 'research material' does not reflect or represent the average world citizen.
23. See e.g. Nepper Larsen (1987, 2009b), but of course also the works of Wittgenstein, Heidegger, Gadamer, Merleau-Ponty, Barthes and Derrida etc.
24. Very humbly, Tomasello writes that his view of language does not imply "that we know how language originated in human evolution, because we do not" (Tomasello 2003: 9), but apparently that does not prevent him from arguing that the primary reason for the existence of language is its communicative tool character.
25. Tomasello also seems, here and there, to have an eye for the differential markers of linguistic communication. See e.g. the following (Tomasello 2008: 5) where he talks about the need to distinguish between "he's, she's, and it's" to be able to step into a situation in which "joint attention" and "shared intentionality" are made possible on the basis of a "common conceptual ground."
26. I thank the Danish historian of ideas, Dr. Phil. Ole Fogh Kirkeby for inspiration for fostering and presenting this criticism.
27. Social contagion refers to all the often quite subtle and unconscious imitation and simulation patterns we form, making us imitate each other, like and dislike the same things, often without knowing each other.
28. Why does Tomasello think more in an actualising and individualistic and ontogenetic first-then micro- and meso-perspective than in an evolutionary historical 'Evo-Devo' macro-perspective? ('Evo-Devo' is an acronym for Evolutionary Development, the long, historical perspective on the evolution of species). Tomasello is a highly productive experimentalist and he has a strong comparative mind (his 'material' being small children and great apes), but he is definitely not an evolutionary historian. Sometimes small fragments from the past become present in the text, but unfortunately it

does not happen in a systematic fashion. Thus, the risk is that he forgets something important and powerful. Suddenly a phrase indicates that the human was forced by the need to develop his/her vaunted prosocial nature, which must imply that the human did not always possess a prosocial nature: "Humans were put under some kind of selective pressure to collaborate in their gathering of food they became obligate collaborators – in a way that their closest primate relatives were not" (Tomasello et al. 2009: 75). Due to the fact that Tomasello's research perspective is contemporary and comparative, and not species-historical-reconstructive, we will unfortunately not learn much more about this outstanding issue.

29. See Sloterdijk (2009).

30. See Nepper Larsen (2009a).

31. The first motive concerns "requesting – getting others to do what one wants them to do..." (see Tomasello 2008: 84).

## REFERENCES

- Brooks D 2011. Nice Guys Finish First. *New York Times*, May 16, A27.
- Cowley SJ, Major JC, Steffensen SV, Dinis A (Eds.) 2010. *Signifying Bodies: Biosemiosis, Interaction and Health*. Braga: The Faculty of Philosophy of Braga.
- Gadamer HG 1967. Mensch und Sprache. In: JCB Mohr (Ed.): *Kleine Schriften I*. Tübingen: J. C. B. Mohr (Paul Siebeck): pp. 1-7.
- Gallotti ML 2011. *Why We Cooperate*, Michael Tomasello. MIT Press, 2009. Book Review *Economics & Philosophy*, 27(2): 183-190.
- Gallotti ML 2012. A naturalistic argument for the irreducibility of collective intentionality, *Philosophy of the Social Sciences*, 42(1): 3-30.
- Garrod S, Pickering MJ 2004. Why is conversation so easy? *Trends in Cognitive Sciences*, 8(1): 1364-1366.
- Habermas J 2009. Es beginnt mit dem Zeigefinger. *Die Zeit*, No. 51, Dec. 10: 45.
- Henrich J, Heine SJ, Norenzayan A 2010. The weirdest people in the world? *Behavioral and Brain Sciences*, 32(2-3): 1-75.
- Heuser UJ 2011. 'Ich bin risikobereit', interview with the economist Armin Falk. *Die Zeit*, No. 20, May 12, p. 27.
- Hutchins E 1995. *Cognition in the Wild*. Cambridge: MIT Press.
- De Jaegher H, Di Paolo E, Gallagher S 2010. Can social interaction constitute social cognition. *Trends in Cognitive Sciences*, 14(10): 441-447.
- Kirkeby OF 2008. *Selvet sker. Bevidsthedens begivenhed*. Frederiksberg: Samfundslitteratur
- Konvalinka I, Xygalatas D, Bulbulia J, Schjødt U, Jegindø E-M, Wallot S, Orden GV, Roepstorff A 2011. Synchronized arousal between performers and related spectators in a fire-walking ritual. *Proceedings of the National Academy of Sciences*, 18(20): 8514-8519.
- Liszkowski U, Brown P, Callaghan T, Takada A, de Vos C 2012. A Prelinguistic Gestural Universal of Human Communication: 1-16.

- Løgstrup KE 1972. *Norm og spontanitet*. Copenhagen: Gyldendal.
- Manzotti R 2006. An alternative view of conscious perception. *Journal of Consciousness Studies*, 13(6): 45-79.
- Moulier Boutang Y 2007. *Le capitalisme cognitif*. Amsterdam: Éditions.
- Nepper Larsen, S 1987. *En fortolkende opdagelsesrejse i Münchhausens sumpe. Tre essays om kritisk normativitet. Habermas, Nietzsche og Adorno som anledning*. Roskilde: Skriftserie No. 15 at Institute V at RUC.
- Nepper Larsen S 1995. *Sproget er alles og ingens. Erkendelse og spekulation*. Aarhus: Aarhus Universitetsforlag.
- Nepper Larsen S 2008. *Neurovidenskab. En udfordring for filosofisk tænkning*. Copenhagen: GNOSIS Vedhæftninger.
- Nepper Larsen S 2009a. Menneskets livslange anden fødsel. Peter Sloterdijks sfærologi og filosofiske antropologi. *Vagant*, 1: 86-96.
- Nepper Larsen S 2009b. Sproget er ikke kun et redskab. In Dansk lærerforeningens antologi *Det rum(m)elige sprog*. Frederiksberg: Dansk lærerforeningens Forlag.
- Nepper Larsen S 2010a. Den plastiske hjerne som mulighedsorgan – en analyse af samtidens smag for 'neuroplasticitet' og dens grænser. *Dansk Sociologi*, 2: 81-102.
- Nepper Larsen S 2010b: Kampen om den plastiske hjerne. *Vagant*, 3: 52-67.
- Nepper Larsen, S 2014: The Plasticity of the Brain – an Analysis of the Contemporary Taste for and Limits to Neuroplasticity. *CLP-RJP Revue Juris-dique Polynésienne*.
- Petersen MB, Roepstorff A, Serritzlev S 2009. Social Capital in the brain? In: G Tinggaard, GLH Svendsen (Eds.): *Handbook of Social Capital*. Cheltenham: Edward Elgar Publishing, pp.75-92.
- Rorty R 1979. *Philosophy and the Mirror of Nature*. Princeton: Princeton University Press.
- Sartre JP 1998. *Being and Nothingness*. London: Routledge. London (orig. Paris 1943).
- Sloterdijk P 1998. *Sphären I. Mikrosphärologie. Blasen*. Frankfurt am Main: Suhrkamp Verlag.
- Sloterdijk P 2009. Mangelvesen-fiksjonen. *Vagant*, 1 (transl. of Peter Sloterdijk: *Sphären III. Mesosphärologie. Schäume*. Frankfurt am Main: Suhrkamp Verlag 2004).
- Theiner G, Allen C, Goldstone RL 2010. Recognizing group cognition. *Cognitive Systems Research*, 11(4): 378-395.
- Thompson E, Varela FJ 2001. Radical embodiment: Neural dynamics and consciousness. *Trends in Cognitive Sciences*, 5(10): 418-425.
- Tomasello M 1999. *The Cultural Origins of Human Cognition*. Cambridge: Harvard University Press.
- Tomasello M 2003. *Constructing a Language. A Usage-Based Theory of Language Acquisition*. Cambridge: Harvard University Press.
- Tomasello M 2008. *Origins of Human Communication*. Cambridge: The MIT Press.
- Tomasello M, Carpenter M, Call J, Behne T, Moll H 2005. Understanding and sharing attentions. The origins of cultural cognition. *Behavioral and Brain Sciences*, 28: 675-735.
- Tomasello M, Warneken F 2007. Helping and co-operation at 14 months of age. *Infancy*, 11(3): 271-294.
- Tomasello M, Dweck C, Silk J, Skyrms B, Spelke E 2009. *Why We Cooperate*. Cambridge: A Boston Review Book, The MIT Press.