

Review of the Doctoral Dissertation by mgr Robert Mirski
“Socio-cognitive development in context: Theory of mind,
folk psychology, and culture from an interactivist
perspective”

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Description and Evaluation

The PhD Dissertation of Robert Mirski consists of seven publications: five substantial conceptual analyses and two commentaries, and the presentation summarising these works and their role for the field. Two of the major papers are single authored and in the rest of them the Candidate's contribution is between 45% and 80%.

The papers are linked by a very clear conceptual thread and research agenda, which is visible from the provided “mantle” for the dissertation. Generally, the work of Robert Mirski is concretizing and elaborating an interactivist framework for psychology and cognitive science. This framework is a strong conceptual alternative to viewing mind as a computation device. Interactivism has been proposed by the philosopher, psychologist and cognitive scientist, Mark Bickhard, several decades ago (important works were published already in the 80s, main complete expositions in the first decade of this century) and systematically expanded and developed since then. It is a very carefully constructed framework. It has a strong and clear metaphysical grounding and ontological assumptions, based in process ontology, and an impressively coherent logical construction.

Over the years the framework was getting considerable traction and gaining avid followers, however it has not, as yet, become the major alternative for the computer-metaphor-guided mainstream approaches to cognition. This is probably due to its predominantly philosophical audience for the majority of the works describing the approach (despite the fact that they appeared in such journals as *New Ideas in Psychology*) and the fact that the changes proposed by the framework are fundamental. Interactivism introduces a large constellation of interconnected novel concepts and terminology that is difficult to describe and acquire piecemeal, element by element. Additionally, the approach gives radically new meaning to concepts that have been well established in the domain of the philosophy of mind, cognitive psychology and cognitive sciences, such as, for example, “representation” or “reflection”.

That the approach has not influenced the empirical work in developmental and cognitive psychology and cognitive sciences to a larger degree is a pity, but I am convinced that the efforts of researchers

such as Robert Mirski will substantially change this state of affairs. This would be a most welcome development, because Bickhard's work gives us an approach to the mind and cognition that we have been craving for decades: an approach where persons are feeling and experiencing living beings and not computational agents; where interactions with the social and physical world are in the centre of investigation, being constitutive for minds and persons and not just peripheral "contexts"; where processes are processes and not series of symbolic transformations; and where environment and culture are given a due emphasis in constructing explanations of human behaviour and normativity.

Robert Mirski's dissertation achieved at least two major aims. One of them is explaining, clarifying, and in some points developing further the major points of interactivism for larger audience, including not only philosophers and high-level theoreticians but also cognitive and developmental psychologists and cognitive scientists. This, for the reasons presented above was a major feat and will surely result in supporting further theoretical as well as empirical work in these domains. The second achievement was to concretize the application of the framework and trace its implications, successfully establishing interactivism as a viable approach in several areas. These include long-standing general theoretical debates, concerning such core problems as the nature-nurture problem, the issue of normativity, and the nature of social reality, but also – vitally – more concrete burning issues in the area of social cognition, such as reasoning about others, the so-called Theory-of-Mind, the nature of folk psychology and the mechanisms of reflection.

Even though we can strongly feel the admiration and trust that Robert Mirski has for the author of interactivism and for the approach itself, one can clearly distinguish his own contributions. Such is (the largest but not the only contribution): the analysis, from the interactivist standpoint, of the issue of the development of social cognition, which includes the analysis and critique of extant research and theorizing within the so called "Theory-of-Mind" approaches. One can also notice, in the papers written by Mirski together with his mentor, some signs of theoretical tensions that the Candidate solves in his own way in his single-authored papers or papers with other colleagues. Such is, for example Mirski's critique of the concept of innateness: it seems much deeper and positioned on a much broader theoretical base and more ample literature than in the works of Bickhard (see more below). There is no doubt that the dissertation presents the general theoretical knowledge of a mature and independent thinker, much exceeding the requirements for the PhD Candidate.

Mirski's mantle faithfully describes the significance of each of the papers. Here I concentrate on the single-authored papers, which are probably the best evidence for the above claim. In the first of these (2018) Robert Mirski criticizes the most prevalent theories of the development of human ability to understand and coordinate with others (such as the "theory theory", modular theory of mind, and the two level theory) and evidences their inability to account for some empirical results pertaining to the age when such abilities develop and to the cross-cultural variation in both the age and the kinds of abilities themselves. Arguments from interactivism help to demonstrate the common bases of these

three, allegedly different theories, and show that they all fall in the pitfalls of relying on encoded content representations. Their metaphysical and ontological assumptions make them unable to account for the emergence of novel coordinative and conceptual abilities in infants and children and therefore relegate them to the camp of nativists, even though most of the authors of these approach would probably not agree with this. Mirski does not only show the untenability of the approaches, dislodging their foundations – he shows how the empirical decisions and constructions of specific tasks (verbal, non-verbal) stem directly from the erroneous assumptions and are prone to deep influences both of the culture and individual developmental trajectories, which explains the unreliability of the results.

The second single-authored paper deals with the notion of innateness, basing the critique of the approaches, which propose innate abilities of even innate concepts (e.g. Spelke & colleagues' so called "core knowledge") on a very astute analysis of the evolution of the notion of innateness in biology – towards the epigenetic and evo-devo approaches of such theorists of biology such as Oyama, Lewontin, Gould. Here, again, the interactivist framework lends its concepts to account for the process of development of social and other skills. Mirski seems to be more decisive in his critique of the innateness than Bickhard, which is illustrated by the comparison of the use of this concept in the single-authored paper from 2019 and the co-authored paper with Mark Bickhard from 2021. This is one example of the tension mentioned above. This makes one wish to be able to witness the discussions that had to take place to come to agreement on the use of the concept. I would like to add here another unwanted consequence of nativist thinking in psychology, that the Candidate did not mention, but that seems important to me both for theory and applications: nativism pushes the burden of explanation both to biology and to internal, individual factors, disregarding the role of the environment. This might reinforce individualistic explanations for various dysfunctional processes and be the cause of neglecting relatively easy interventions via environmental reorganizations.

But not only these two papers evidence the mastery of the topics and scientific maturity of the Candidate. It is obvious that Robert Mirski does not only explain interactivism to larger audiences and applies it to specific problems but also helps develop the approach further. It is clear that he has become a valued collaborator of Mark Bickhard – the co-authored papers contain proposals for models of social reality, enculturation in general and the role of language in enculturation, and elaborate the processes proposed by interactivism, such as reflection (although see the Questions and Comments section). Besides these achievements, Robert Mirski greatly contributed to the debates in the most prestigious journals, together with Mark Bickhard, other collaborators, and his supervisor. He has also published some papers, presented as accompanying work, in which he applies interactivism to the methodology of the literature studies and – very pertinently for the elaboration of the interactivist theory – to the problem of understanding of emotion in children. I think it is commendable that some of the work appeared in Polish journals and in Polish language. This is advantageous not only for the Polish

audience but also for having bilingual exposition of Bickhard's difficult theory, which helps the Polish reader to grasp some concepts better.

The above thus justifies not only the statement about i) the general theoretical knowledge of the Candidate, which I already made, but also about ii) the Candidate being able to conduct independent research that iii) demonstrates high level of novelty and originality in the approach to general recalcitrant philosophical problems as well as specific problems in developmental psychology and science of communication. There is no doubt that the presented material, comprising Doctoral dissertation of Robert Mirski is more than sufficient evidence for these three requirements for the doctoral theses. The evaluation of the Dissertation is without any doubt positive and, in my opinion, the Dissertation merits distinction.

Comments and questions

This being clear, I present below some comments and questions. Only some of them contain critique. Mostly, they are points for discussion during the defense and stem from my genuine curiosity towards the views and reflections of the Candidate.

1. **An explanation and comment is needed on the contribution of Lew Vygotski.** It seems that the Candidate (especially when writing together with Mark Bickhard) is critical about the work of Lew Vygotski. I would like to know if the critique concerns particularly the notion of internalization or is broader in scope? To this reviewer it seems that the notion of internalization is much less negatively historically loaded and that it presents much smaller rhetorical obstacles than the notion of representation, which generates much misunderstanding. Internalization does not have to be encodingist and can be imagined as a being part of the process enculturation. I would like the critique of Vygotski's internalization explained – both in general, as well as in the context of the process of “reflection”.
2. **Reflection.** Robert Mirski and co-authors write: “The idea here is that the objects of reflection – items, people, events, types of change and interaction, etc. – are constituted by what will support functional patterns at level 1.” - could this be unpacked and explained? And further: “reflection anticipatorily interacts with the possible interactive patterns and forms an explicit representation”. This is said to enable considering interaction offline, explicit strategies, rehearsal, planning, inhibition etc etc. It seems to be a small step that enables unlimited human powers. But even upon reading the paper closely, I could not understand how, actually, is this secondary system of reflection realized? How anything becomes explicit, and actually what does it mean that it becomes explicit? What exactly is the role of others and language, both in reflection and in explicitness? (or to use Authors' question verbatim: “how language – or rather

situation conventions or meanings it manipulates – represents”? Yes, exactly – how? And what is represented? The manipulation of meanings? It is difficult to imagine all these workings explained just by the “physiological links” in the CNS – this does not seem to be the level of explanation that is expected here. Nor by that reflection requires “a second interactive system that can interact with the first system/organism – interaction among brain regions (...) in a fashion similar to how the CNS of the toddler interacts with the world” It seems to me that it is the toddler that interacts with the world, and not her CNS and I am really not sure how to understand an entity, a mechanism or a process that is able to look back at the mind’s own internal organization and be explicit about it, without evoking some kind of a homunculus. And what would be the motivation for doing this and being explicit? Additionally: wouldn’t this process have its own “frame” problem, since it seems fairly isolated from action? It would be great to hear a more detailed explanation of the process of reflection.

3. **Experience and emotions.** In one of the papers (Mirski & Bickhard, 2021) the Authors address the relationship between the interactivist approach and enactivism. However the description concentrates mainly on the question of the autonomy of the agent, and not on the second major contribution of enactivism to the debate on the nature of mind, namely the necessity of addressing the role, the nature, and the ways to study experience. Since the interests of the Candidate seem to oscillate in the direction of emotions, I would like to ask why emotions and in general, first- and second-person experience do not figure more prominently in all the papers analysing social cognition. It seems that especially for the discussion of normativity the question of experience should be vital (vide, e.g. de Jaegher, 2021).
4. **The omission of the Developmental Systems Theory.** Even though the Candidate’s work seems to be compatible with the dynamical systems formalisms and processual thinking about cognition and even though it concerns development as its central issue, a prominent and, it seems, compatible, theory of development has not been mentioned. I am thinking here about the Developmental Systems Theory, as explicated for example by the works of Overton and others. I would like to know the reasons for this omission and to learn about the relation between interactivism and DST. Connectedly, is interactivism congruent with the dynamical systems as a metatheory for development (van Geert, 1994; Witherington, 2007)?
5. **Last but not least: Constructive Proposal, i.e., the Future Directions in Empirical Research.** Robert Mirski shows very well the pitfalls of the traditional theories of development of social coordinative and social cognitive skills and proposes the interactivist account of these processes. However, even though we can clearly see the inadequacy of the methods used by the criticized approaches and the reasons why they bring contradictory or unreliable findings, the papers stop at the theoretical solutions. It would be great to see the proposals or at least the path to novel methodologies and/or novel tasks or situations, in which to test and show the power of the interactivist account. The truth is in the pudding. I personally think that the urge for novel

methodology for psychology and cognitive science is great and still unanswered – I would be curious of the Candidate's ideas in this matter.

Conclusion

The questions and comments do not, in any way, diminish the achievements of the Dissertation. In accordance with art. 187 ustawy z dnia 20 lipca 2018 r. Prawo o szkolnictwie wyższym i nauce, I confirm that the Dissertation demonstrates: 1) the general theoretical knowledge of the Candidate, 2) his ability to conduct independent research, and 3) the originality of the Candidate's contribution to the field of sciences of social communication and media. Therefore I recommend acceptance of the Dissertation, admission to public defense, and continuing activities within the doctoral procedure.

I also recommend that the Dissertation receive a distinction.



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