ToM: Culture & beyond

PSY277 Theory of Mind

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Culture can be basically viewed from two main viewpoints: Firstly, as distinct ways people live in different parts of the world, this means in *geographical* point of view. This encompasses such phenomena as language, local customs, religion and so on. On the other hand, we can talk about culture in terms of physical artifacts created by the society, so called *material culture*. This includes for example literature, movies and art in general, but also architecture and actually, every material object created by humans.(Macionis & John, 2010).

In my essay, I will point out four different concepts, which originate from both of these fields, and which are closely related to the Theory of mind (further as „ToM"). Namely, in the framework of *geographical* culture, I will introduce different **behavioral attributions** people have developed as part of their local customs; and will ponder about relationship of ToM and **concept of God** as this evidently exists in both religious and spiritual people. Regarding the *material culture*, I will muse on the effect ToM may have played on the genesis of **material culture as such**; and also will briefly mention one of the physical artifacts created by humans – a **robot**, and will meditate on the hypothetical possibility of them developing their own ToM.

It is interesting to realize where all ToM can play a role for us. It´s not just living people who we attribute mental states to. We sometimes happen to see intentions and beliefs that obviously don´t possess any mind at all. Especially in case non-living objects seem to „have a mind of their own" (do unexpected/ unwanted things), we have a tendency to think of them the same way we do about misbehaving people. For example kicking a vehicle, beating a computer or throwing down a cell phone. We don´t really think they wanted to do it but we act towards them as if they had their own ToM and decided to do so. These situations can arouse similar emotions and behaviors in us. The objects which can cause these reactions don´t necessarily have to be three-dimensional. In 1944 experiment by Heider and Simmel (as cited in Bering, 2011), it has been shown that people have a tendency to attribute mental states even to animated geometric objects. People were describing their „behavior" in the same words we describe the people´s one. If we read a book or watch a movie, we also imagine various minds of the characters and create our representation of their ToM. To go further, there are many abstract concepts in society, where God is probably the most ultimate one. Here, too, we create our own representation of the mind of God itself. What if God doesn´t actually exist and resides only within our minds? People have a tendency to believe there is something greater than themselves, something they can pray to with their innermost

wishes, and something that can possibly judge and punish them in case they misbehave or fail. But it might turn out it is afterall just an overactive ToM. Nevertheless, a very important one for society´s survival. Without people´s faith into something higher – whatever it is – which might one day reward or punish them, people would probably act much more animally. ToM of God closely corresponds to Freud´s superego, or a part of ourselves aiming for self-perfection. It comprises one´s ego ideals, spiritual goals and conscience, that prevents us from turning our inner drives and fantasies (which can be harmful) into reality (Myers, 2010)

But, what if God has created us with a concept of itself already engraved into our minds? This would help explain why there have been various religious or spiritual practices ever since the dawn of humankind. Or, even further, what if God isn´t an autonomous, independent agent that lives outside human brain cells, but rather we –ourselves – are infinite particles and manifestations of God, and the ToM of God is a reflection upon our own mind? And we all define *how we want to be* – so to say, how we want the God to be; what we want to relate to. This would help explain endless variety of representation of God in different cultures/societies, where this image is ever-changing. Each of us can come with our own theory how the God might/should be and this can add up to the whole picture. This way, we can influence the nature of society. Humans possess an innate tendency to create their ideal self, and then, even if unconsciously, use this image as an relational framework for their decision making processes. They try to shape up their selves to become as much in accordance with their ideal self-image a possible. The picture of God plays a major role in this ideal self-picture development. Therefore, it is as if that within our minds, we create an ideal picture of God-like ourselves, and then, with modifications possible, try to become one with our inner concept.

There is an interesting scientific evidence supporting the above claim: Recent research of Kapogiannisa et al. (2009) has shown that, regarding representation of God´s ToM, we use mainly the same recently evolved brain structures as we use to represent other people´s believes and feelings. Exposure to different belief statements caused an activation of the same parts of brain as those used for everyday interpretation of the world and people living in it. These parts are those which have evolved most recently – especially various parts of the cortex. According to a British anthropologist Robin Dunbar (as cited in Coghlan, 2009), "it's not surprising that religious beliefs engage mainly the theory-of-mind areas, as they are about

virtual beings who are treated as having essentially human mental traits, just as characters in a novel or play are".

Another interesting notion is that we can have a ToM of people who don´t exist anymore. If a person dies, we still keep a representation of their mind within ours, therefore can assume what the person would have thought or done. Many people, especially older ones, would use their inner speech to talk to the deceased partner, and sometimes even make this silent conversation audible. We use the same mental system as we do when we read literature or watch a movie, and later are able to recall and imagine mental states of characters introduced there. Not only we are able to represent the ToM of made-up of real characters, but at the same time, we can think of ToM of author himself. ToM is a critical tool, which enables us to understand creations of other people – through their (art)work, we can contemplate on the personality of its author. Without this ability, the whole human culture would be non-existent. For example, much of the drama and humor relies on our ability not only to create visions of character´s mind but also to imagine how each of these imaginary minds might view the minds of others (Leverage, Mancing, Schweickert & Williams, 2010).

Regarding the future, there is a remarkable area of researchers´ interest: robots. Currently, scientists are trying to create not only an artificial intelligence, but they are tempting artificial consciousness, too. Is it conceivable that there could be a thing that appears to be human but in fact has no conscious experience? Is it possible to elicit ToM in an artificial object? Is consciousness an inevitable precursor of ToM, or could ToM exist independently on it? According to Scassellati (2011), if we are about to build machines that will interact naturally with people, they must be able to both interpret the behavior of others according to valid social rules and display the social cues that will allow people to naturally interpret the machine's behavior.

In the field of computer science (where it hasn´t received much attention yet), ToM is the attempt to represent the hidden state maintained by another agent based upon the observable behavior of that agent. By „agent" we mean any entity capable of volitional, independent behavior. In terms of ToM, we expect from an agent a purposeful behavior, and we conform to our expectations (Henig, 2007). If a robot would have its own ToM, it would be able to draw conclusions of other people´s ToM the same way people do. It would be able to express

its internal states, as for example emotions (if there would be any „real"?), goals and wishes. Overall, it would make the nowadays interaction between humans and robots much easier.

This attempt to create an artificial ToM in non-human systems makes scientists to define more precisely what ToM is, and how it develops. In computer science, a study of the foundations of a theory of mind is an attempt to link **low-level perceptual capabilities** with a **high-level cognitive model.** The researchers are trying to link complex cognitive skills with actual behavioral triggers. This goal forces the researchers to nail the abstract cognitive concepts down to very concrete skills (e.g. gaze direction; pointing to a desired object etc.), which they later attempt to teach the robots (Henig, 2007). Construction of the foundational skills for a ToM will enable us to look closer into the link between these two realms. In a way, it´s yet another possibility how to specify the definition and understanding of ToM, except (for example) the study of ToM in people with autism spectrum disorders. Let´s conclude the „robot topic" with the opinion of an American philosopher, writer and cognitive scientist Daniel Dennett (1992) who thinks, that the best reason for believing that robots might some day become conscious is that human beings themselves are conscious, and that we are a sort of robot ourselves.

I have introduced various, less common ways of viewing the relationship of ToM and culture. Each of these various topics would deserve its own essay, but my aim was to present the variety of possible views on ToM, and to show where all ToM plays a huge role in our daily lives. In my essay, it is evident that sometimes science and philosophy don´t have to be separate disciplines, but can be interwoven. Next essay on similar theme could focus on just one of these topics, and expand on the philosophical depth and scientific evidence and implications.

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