Summary: Toward an Anthropological Theory of Mind (AToM)

2011-10-13 11:00:01

By

This is the first in a series of posts covering cross-disciplinary research on theory of mind. The series is being posted simultaneously at Somatosphere and at the Foundation for Psychocultural Research (FPR) blog*.*

Last weekend a small, international gathering of twenty-seven anthropologists and psychologists took place at the Stanford Humanities Center, organized by Stanford anthropology professor **Tanya Luhrmann** and Culture and Mind postdoctoral fellows **Julia Cassaniti,** and **Jocelyn Marrow.** The meeting was made possible by a generous gift from the **Robert Lemelson** Foundation.

Nestled under the dappled shade of oak trees, the center provided a beautiful setting for a relaxed yet animated discussion on the concept of theory of mind, including the possibility of cross-cultural, comparative research program. *(See end of post for full list of participants.*

Stanford AToM Slideshow

According to the hypothesis on which the meeting was based "there are cultural variations in the way minds are imagined, and . . . these variations have consequences for mental experience (broadly defined) and the nature of social interaction." Invited speakers briefly summarized their work (papers were circulated in advance) but most of each session and many lively coffee-break conversations were devoted to exploring related questions and research opportunities.

The workshop opened on Thursday evening with a talk by anthropologist **Rita Astuti** (London School of Economics) covering the history of ToM and the challenges of cross-cultural, interdisciplinary work. Below is a summary of the Friday morning session on "interiority and boundedness,"

featuring talks by anthropologists **Joel Robbins** (UC San Diego), **Julia**, and **Tanya**.

Theory of Mind

Theory of mind (ToM) was coined by primatologists David Premack and Guy Woodruff to refer to the ability of an individual to "impute mental states to himself and to others" (Premack & Woodruff, 1978; Call & Tomasello, 2008). The concept subsequently carried over to developmental psychology and neuroscience. Psychologists were interested in the emergence in young children of a capacity to attribute false beliefs to other persons (Wimmer & Perner, 1983; also referred to as the Sally-Anne test or S-AT). Neuroscientists began to explore some possible neural mechanisms of ToM (which critically "enables us to predict what others are going to do" [U. Frith & C. Frith, 2010]) , like imitation (eventually bolstered by the discovery of mirror neurons in macaques, which fired when observing an object-directed gesture, with the mirror neuron "system" thus appearing to mediate an understanding of others' actions), as well as "precursor" mechanisms, like face processing, gaze monitoring, or detection of animacy and their dysfunctions (Hurley & Chater, 2005; Rizzolatti & Craighero, 2004; Iacoboni & Dapretto, 2006). A particularly influential 1985 paper for both research programs by Simon Baron-Cohen, Alan Leslie, and Uta Frith argued that children with autism lacked a theory of mind based on their difficulties with the false belief test (Baron-Cohen, Leslie, & Frith, 1985). *(Links to research cited available at end of post.)*

Currently, the mainstream definition in the psychiatric neuroscience literature characterizes ToM as the cognitive (or "high level") capacity to "mind read," that is, "to attribute mental states like thoughts, beliefs, intentions, and feelings to oneself and others," (Montag et al., 2011). But, as several attendees noted, some assumptions implicit in this sort of definition – e.g., the extent to which ToM is based on explicit inferences of internally held propositions – presume an understanding of mind which is western. Anthropologists have long been aware that the western model of mind is not shared by all people. Those at the meeting had assembled to explore what they knew about the consequences of different models of mind for mental experience, developmental process, psychiatric illness, and the adults experience of inferring intentions.

ToM: Interiority and Boundedness

In the first talk of Friday's session, anthropologist **Joel Robbins** (UC San Diego) discussed his research on the Urapmin of Papua New Guinea, who, although generally described as sociocentric or relational, have a very strong sense of a core self that is virtually unknowable to others. For

the Urapmin, the heart is the seat of thoughts, feelings, and intentions, and it is believed "one cannot know what goes on in the heart of another person." The Urapmin appear not to use speech as a vehicle for expressing thoughts, feelings, or intentions, so much so that the language lacks verbs like *thank, apologize, promise,* and *lie*, and they are distrustful of others' speech. (Although persons' mental states are opaque to one another, Joel was quick to distinguish this form of "innate" opacity – a core self doubly wrapped within the heart/body – from the communicative opacity and non-expressivity cultivated by the Yap that Jason Throop would go on to describe in the afternoon session.) At the same time, according to Joel, the Urapmin regularly say that people "do what they want to do," or "are driven by their hearts," and they have a rich vocabulary for different kinds of emotions and thoughts that arise in the heart. This means that in the Urapmin case the belief that people cannot know what others are thinking and feeling does not, as some have predicted, correlate with a general lack of cultural elaboration of ideas about the contents of the mind and their importance in motivating action. Joel also said that in the 1970s all adults in the community converted to charismatic Christianity and consequently face conflicting demands from, on the one hand, a religion that requires sincerity in speech and honesty in the confession of one's sins to God and, on the other, from a traditional belief in the impossibility of such kinds of communication.

After giving a brief summary, Joel provided two basic claims/research questions: (1) Assuming theories of mind shape the mental experience of those who hold them, how do we test the possibility that people are not reading the minds of others in interpreting what they say or how they act? (2) Just as cultural ideas about language connect to morality, sociality, ideas about selves, etc., we should explore the ways in which cultural theories of mind are connected in important ways to ideas in other domains. Joel felt he was on firmer ground with the second research program in terms of exploring the ramifications of an Urapminian theory of mind. For example, most people in Urapmin assume they are "innately" related to many others, rather than expecting relationships to built out of shared feelings and thoughts, and the unpredictability of speech is moderated by everyday gift exchanges, which "almost have the rhythm of conversations" (a promise, for example, is made via the bestowal of a small gift rather than conveyed verbally.)

After Tanya opened up the session to questions and comments, **one of the attendees** mentioned **Vygotsky's** work on the connection between language development and thought, particularly how inner speech develops from hearing external speech followed by a stage of talking (or thinking) out loud – i.e., a process of internalizing what is heard – which is eventually inhibited. Children and adults continue to hear subvocalizations which are unintelligible to others, however, and which serve as a vehicle

for thought. She wondered about the extent to which the Urapmin subvocalize, and "how they are construing subvocalization in inner speech, if it's not thought."

Joel was intrigued by the suggestion, but also noted the complexity of an investigation into subvocalization. Interestingly, he mentioned that when people "hear God," when the Holy Spirit tells them something, they do not "hear a voice," but rather they experience the Holy Spirit "as a certainty in my heart," although Joel also said this was common for charismatics generally.

Linguistic anthropologist **Bambi Schieffelin** (New York University), who conducted research among the Bosavi of Papa New Guinea and said they share many of the same orientations and preferences, commented that when her 4-year-old son talked to himself, the Bosavi found it very peculiar, even "creepy." She thought there was an interesting cultural possibility that speech among the Bosavi (as part of a particular language ideology) always requires an addressee. Cultural psychologist **Hazel Markus** (Stanford University) said that in East Asia – Japan Korea and Taiwan, specifically – the idea that speech is appropriate only in certain situations or that the mouth is the source of misfortune (or meaningless prattle in the case of a chatterbox) is very common. In Japan, if something really matters "you won't say it"; in other words, thoughts and speech are not necessarily always closely aligned. Also, "you have to have another person before the self is "on," she said. (This isn't to say there *isn't* a very clear sense of an interior "something," which is important and a source of great, emotionally expressive literature in Japan, she said.)

The second talk by **Julia Cassaniti,** based on her research in a small community in Thailand, explored how Buddhist ideas are lived in everyday life. She described three key concepts: mindfulness, *kwan*, and karma. According to her position paper, "the concentration and focus of the mind [mindfulness] is both a goal and a representation of healthy minds and bodies." When the mind is distracted, the implication is that our "souls" or "ghosts" (*kwan*) are scattered. Julia likened kwan to our understanding of "wits." Keeping our minds (or wits) balanced and permeable in the sense of open to experiences and aware of (and wary of) our own and others' intentions ("out in the air") keeps our mind/wits together. Karmic energy ("the energy of intentionality"), which is destabilizing, arises when the mind becomes fixed on particular ideas, desires, or goals that "shoot out from us." Consequently, people are reluctant to hazard a guess about what another person might be thinking or feeling, because this presumes the other is possessed of a single, bounded, autonomous mind that is wholly separate from one's own.

A participant wondered what the relationship was between what people

tell you in an interview and what they may be doing in everyday life. Julia said her informants seemed to actively practice what they believed, when, say, they were confronted with a predicament like the loss of money. Referring to soul-calling ceremonies, in which a white string bracelet used to “keep one’s kwan together,” is attached to the wrist, **Aparecida Vilaça** (Museu Nacional/Universidade Federal do Rio de Janeiro) recalled a similar practice in Amazonia in which an object – a necklace of beads – is considered “outside but also inside.” If the necklace breaks apart, so does one’s identity or personality (the wearer “goes crazy”). **Julia** said the white-string bracelets weren’t necessarily used to hold something inside; they’re not permanent and when the string wears out, the bracelet is put in a river and floats away. **Another participant,** who was familiar with a different Buddhist practice, said that in that context the intentions of the practitioners are very strong, but the point is to not get too attached to them or too obsessed with moving in a particular direction. Julia seemed to feel that the idea of having intentions but just not becoming too attached to them might have a deleterious looping effect, but concerns with attachment resonated (she described a festival in which lanterns or little boats are set afloat as a reminder not to become too attached to worries or intentions). Regarding the different perceptions of the mind that can be gleaned from the many varieties of religious practice in Thailand, China, and the US, **Hazel Markus** noted how, in the West, the mind is perceived as influencing or making things happen in the world. But “effortfully striving for something may not always be the best way to make things happen, in fact it’s often problematic, “ she said, “and that’s what’s so difficult for Westerners to grasp.” **Another participant** wondered if kwan stays in one piece or disintegrates into separate pieces when it “wanders off.” Julia said it appeared to stay in one piece. But she also said kwan is sometimes referred to in the singular, sometimes in the plural in the literature. The lack of noun/verb inflection in the language makes it difficult to determine. She felt, however, kwan was a concept best understood in the plural.

The theme of the final talk of the session by **Tanya Luhrmann** was how theory of mind changes mental experience. The talk focused on American experientially oriented evangelical Christians, who live in a world dominated by a “Westernized, Christianized, secularized theory of mind.” Three important features of this model are: (1) a wall between mind and world, which spirits cannot cross; (2) the interior word is important (i.e., “emotions and feelings count for something, they have causal consequences, and can make you sick”; (3) what’s in the mind is not real “in the way that tables and chairs are real.” Evangelical Christians hold a different theory of mind, in which God can cross the boundaries of the mind, and in which what is in the mind is real—but in a different manner than tables and chairs. These Christians must learn to adopt this new theory of mind. They cultivate a personal, interactive relationship with God,

who is perceived as a person very much like oneself. The churches essentially teach a theory of mind in which individuals attend to the everyday flow of stream of consciousness and learn to "cherry pick out" particular thoughts, mental images, and feelings. Those that feel different, spontaneous, or "not me," are identified as potentially emanating from God. Learning to orient to certain kinds of internal sensory information, asking for guidance from God on the most mundane matters of everyday life, and "daydreaming" about God as a continuous, warm, supportive presence (and conversation partner) is a kind of attention training paradigm for learning to respond to life's bigger questions/challenges according to what God tells you to do. Tanya said a conflict arises in terms of being taught to orient to inner experience and cultivate an everyday relationship with God while, at the same time, not considering what occurs in the mind real. The result, Tanya said, is a kind of oscillating back and forth between the (fictional) mind/(real/fictional) world and the emergence of "a third (ontological) domain of reality" ("real but different").

Tanya then described an experiment in which she randomized people into different prayer practices; those engaged in an imaginative prayer practice, which included daydreaming about God (vs. a control group engaged in Bible study) improved their mental imagery vividness and salience and their ability to use mental imagery and increased the likeliness of unusual sensory experiences. Many participants in this group also said "God became more real to them." Based on these results, Tanya said she was interested in the idea of a cross-cultural research program that would look at dimensions of the mind like interiority, boundedness, whether the content of the mind is real, etc., in order to ask the following questions: What is the significance given to inner thought? What is the inner-voice dialogue? What is the significance given to inner sensory experience, what kinds of experience count, what about unusual sensory experiences? Do dreams matter, if so, how? And what are the consequences of these different emphases on mental experience? Tanya also felt **Aparecida**'s comment about the idea of objects containing the mind would make an important research query.

In response to **a participant's** question about the purpose of appealing to God on mundane matters Tanya said it was a way to make what you imagine God to be real (in terms of a real voice coming from outside your head). Evangelicals have "to get God across the boundary of the mind." They have to get "God outside and real," she said. (Tanya also described another set of practices by evangelicals, an effort to map emotional experiences onto God or to map God onto themselves so that they become more able to experience a sense of being loved by God.) Regarding Tanya's idea for a cross-cultural study, **another participant** suggested not just asking about effects, in some secondary sense, but exploring the conflict among, e.g., the Urapmin, between their ToM and a

Christian God whose intentions are knowable and can be expressed verbally. ("Why do you trust God's words?")

Tanya also commented that the American evangelical movement is a representation of God based on a specific representation of the American mind. She said there was a "buyer's market" in God concepts designed for the secular mind because there is an acute awareness that people don't necessarily believe in God. **Hazel Markus** felt an under-explored areas was the role of Protestant Christianity in giving life to an independent self, or form of agency, "that really underlies most of our theorizing." Hazel thought this model of self wasn't working for evangelical Christians, who may be seeking a more relational model ("the other was too harsh and too interior"). Tanya agreed, saying the evangelical movement (particularly the emphasis on personal experience) was a direct response to secularism.

Regarding the idea of a "buyer's market," **Doug Hollan** (UCLA) wondered how we can distinguish between a process of self selection (where a person has a certain set of proclivities, like hearing voices, and shops around for accommodating churches) vs. the argument of being socialized into certain practices that focus on "hearing" God. Tanya mentioned previous work using the Tellegen Absorption Scale in which she found a close relationship between a proclivity for absorption (according to the scale) and reporting an unusual sensory experience. Interestingly, referring to the randomized prayer practice trial she described earlier, absorption did not predict whether you experienced God as a person (being assigned to the imaginative prayer practice did) or whether you heard God, although it did predict lifetime report of hearing God. **Another participant** suggested keeping in mind the significance of individual differences in terms of temperament (or different attentional capacities or differences on the absorption scale).

Several questions emerged during the general discussion. **One participant** again brought up the question of how to explore what really happens in everyday life (vs. what the interviewee reports) in the sense of trying to understand what kinds of moments in life these cultural philosophies of mind are *for* (e.g., just those instances in which intentions are thwarted?) How can this be explored more systematically, that is, other than, say, looking at examples of reported speech? Also, in communities that follow different practices, how much of a difference is there in terms of the way an individual thinks, or theorizes, about his/her own and others' mental states? Joel suggested that, at least among the Urapmin, their particular ToM operates constantly, it's not just an explanatory model. Taking the Urapmin as an example, **John Lucy** suggested looking at ToM in terms of an overall system of social behavior rather than as a localized set of practices. How the culture acknowledges interior states (or doesn't),

would be a component. As the session drew to a close, the conversation continued to flow around these and other intriguing questions.

References

Call, J., & Tomasello, M. (2008). Does the chimpanzee have a theory of mind? 30 years later. *Trends in Cognitive Sciences, 121*(5), 187–192. doi:10.1016/j.tics.2008.02.010

Frith, U., & Frith, C. (2010). The social brain: Allowing humans to boldly go where no other species has been. *Philosophical Transactions of the Royal Society B: Biological Sciences, 365*(1537),165–176.

Hurly, S., & Chater, N. Eds. (2005). Perspectives on imitation. (Vols. 1–2). Cambridge, MA: MIT Press.

Iacoboni, M., & Dapretto, M. (2006). The mirror neuron system and the consequences of its dysfunction. *Nature Reviews Neuroscience, 7,* 942–951. doi:10.1038/nrn2024

Montag, C., Neuhaus, K., Lehmann, A., Krüger, K., Dziobek, I., Heekeren, J. R., Heinz, A., & Gallinat, J. (9/2011). Subtle deficits of cognitive theory of mind in unaffected first-degree relatives of schizophrenia patients. *European Archives of Psychiatry and Clinical Neuroscience.* Advance online publication. doi 10.1007/s00406-011-0250-2

Rizzolatti, G., & Craighero, L. (2004). The mirror-neuron system. *Annual Review of Neuroscience,* 27, 169–192. doi:10.1146/annurev.neuro.27.070203.144230.PMID 15217330

Premack, D. G., & Woodruff, G. (1978). Does the chimpanzee have a theory of mind? *Behavioral and Brain Sciences, 1,* 515–526.

Wimmer, H. & Perner, J. (1983). Beliefs about beliefs: Representation and constraining function of wrong beliefs in young children's understanding of deception. *Cognition*, *13*, 41–68.

List of Participants

Rita Astuti, Professor, Department of Anthropology, London School of Economics

Lera Boroditsky, Assistant Professor, Department of Psychology, Stanford University

Luke Butler, Graduate student, Psychology, Stanford University

Julia Cassaniti, Culture and Mind Postdoctoral Fellow, Anthropology, Stanford University

Eve Danziger, Associate Professor in Anthropology, University of Virginia

Suzanne Gaskins, Associate Professor of Psychology, Northeastern Illinois University

Dedre Gentner, Alice Gabrielle Twight Professor, Department of Psychology, Northwestern University

Kathyrn Geurts, Associate Professor of Anthropology, Hamline College

Alexa Hagerty, Graduate student, Anthropology, Stanford University

Douglas Hollan, Professor of Anthropology, University of California, Los Angeles

Graham Jones, Assistant Professor of Anthropology, Massachusetts Institute of Technology

Michelle Karnes, Assistant Professor in the Department of English, Stanford University

John Lucy, William Benton Professor Department of Comparative Human Development, Department of Psychology, University of Chicago

Tanya Luhrmann, Watkins University Professor in Anthropology (and Psychology, by courtesy) Stanford University

Ellen Markman, Lewis M. Terman Professor of Psychology, Stanford University

Hazel Markus, Davis-Brack Professor in the Behavioral Sciences, Stanford University, Department of Psychology

Giulia Mazza, Graduate student, Anthropology, Stanford University

Jocelyn Marrow, Culture and Mind Postdoctoral Fellow, Anthropology, Stanford University

Joel Robbins, Professor of Anthropology, University of California, San Diego

Barbara Rogoff University of California, Santa Cruz Foundation Distinguished Professor of Psychology

Sonya Pritzker, Assistant Researcher and Clinical Specialist at the UCLA Center for East-West Medicine

Danilyn Rutherford, Associate Professor in Anthropology, University of California, Santa Cruz

Bambi Schieffelin, Collegiate Professor; Professor of Anthropology, New York University

Rupert Stasch, Associate Professor, University of California, San Diego

Allen Tran, Graduate Student, Anthropology, University of California, San Diego

Jason Throop, Associate Professor of Anthropology, University of California, Los Angeles

Aparecida Vilaça, Associate Professor in the Postgraduate Program in Social Anthropology, Museu Nacional/Universidade Federal do Rio de Janeiro

Constance A. Cummings, Ph.D., is Project Director of the non-profit The Foundation for Psychocultural Research*, which supports and advances interdisciplinary research and scholarship at the intersection of brain, mind, culture, and mental health and illness. She is co-editor (with Carol Worthman, Paul Plotsky, and Dan Schechter) of* Formative Experiences: The Interaction of Caregiving, Culture, and Developmental Psychobiology *(New York: Cambridge University Press, 2010). She received her doctorate in theoretical linguistics from New York University.*

AMA citation
. Summary: Toward an Anthropological Theory of Mind (AToM). *Somatosphere*. . Available at: . Accessed March 7, 2013.

APA citation
. (). *Summary: Toward an Anthropological Theory of Mind (AToM)*. Retrieved March 7, 2013, from Somatosphere Web site:

Chicago citation
. . Summary: Toward an Anthropological Theory of Mind (AToM). Somatosphere. (accessed March 7, 2013).

Harvard citation
, *Summary: Toward an Anthropological Theory of Mind (AToM)*, Somatosphere. Retrieved March 7, 2013, from <>

MLA citation
. "Summary: Toward an Anthropological Theory of Mind (AToM)." . Somatosphere. Accessed 7 Mar. 2013.<>