This is an excerpt from a report on the workshop on mind and attention in Indian philosophy at Harvard University, on September 21st and 22nd, 2013, written by Kevin Connolly, Jennifer Corns, Nilanjan Das, Zachary Irving, and Lu Teng, and available at http://networksensoryresearch.utoronto.ca/Events_%26_Discussion.html

4. What can Indian philosophy tell us about how we perceive the world?

How do we come to have conceptualized experiences of the world? According to Dharmakiriti, an influential 7th Century Buddhist Philosopher, we arrive at such experiences through the transformation in perception from *svalakasanas*—non-conceptual qualitative particulars—to *samanyalaksanas*—conceptualized "type-tokens" that occupy our ordinary perceptual experiences. The question is: How does such a transformation take place?

In her paper, Laura Guerrero explains Dharmakiriti's answer to this question. She points out that Dharmakiriti's distinction between svalakasanas and samanyalaksanas seems analogous to Jerry Fodor's distinction between *iconic* and *discursive* representations. A discursive representation has a correct decomposition, such as a sentence, whereas an iconic representation, such as a mental image, does not. Svalakasanas are akin to iconic representations in that they both do not involve conceptual cognition, and samanyalaksanas are akin to discursive representations in that they both involve conceptual cognition. Therefore, Guerrero thinks that the question at issue can also be formulated as: How does the transformation from iconic representations to discursive representations take place?

According to Guerrero, Dharmakiriti takes the process of transformation to break down into two steps. In the first step, iconic representations together with some *subjective factors*—which include aversions, desires, affects, and interests that constitute the agents' "engaged situation at the time of cognition"—trigger *vasana*, which are subconscious mental imprints that encode information from past experiences. In the second step, vasana facilitate a recursive

process of exclusion called *apoha*, in which the vasana kick out irrelevant differences of things that are in fact radically individuals and focus on their functional features that are relevant to our interests in order to create similarities among those things. With the created similarities, our perceptual system then judges those things as belonging to the same type.

For example, when you see a fire, your iconic representation of it and some subjective factors such as your practical interests in this particular situation trigger the encoded information about fires from your past experiences. Next, your current experience is compared with your past experiences to create functional similarities among the fire you see now and other fires you saw in the past, which allow your perceptual system to judge them as the same type of individuals.

In his comments on Guerrero's presentation, Alex Byrne pointed out that the distinction between iconic and discursive representations seem irrelevant because iconic representations are no more "nominalist friendly" than discursive representations. As Guerrero said, svalakasanas cannot be conceptualized because this involves properties and according to Buddhism, there are no properties at all. However, if we compare mental image of a cow, which is an iconic representation, and a sentence "There is a white cow with green horns," which is a discursive representation, we find the picture taking as much of a stand on what properties the cow has as the sentence. This suggests that iconic representations are no more suited to capture svalakasanas.

Some related issues in Indian philosophy are the cognitive penetrability of perception and its epistemological implications. In his paper, Nilanjan Das focused on the Nyāya school's theory on these issues. He argues that Naiyayika (the adherents of the school) take it as possible that our cognitive states can influence our perceptual experiences. One example is the sandalwood case, in which the subject believes that sandalwood is fragrant, and this causes him

to experience a piece of sandalwood (far away from him) as fragrant. Das thinks that adopting the cognitive penetrability thesis allows Naiyayika to explain cases of illusion and hallucination, which seem to pose a problem to the *principle of perceptual contact* accepted by Naiyayika: "Any entity that forms a part of the content of a perceptual state (in a human being) must be causally linked to some sense or other." In the sandalwood case, the subject's memory of the fragrance forms a causal link between his present perceptual experience and the fragrance; similarly, in cases of illusion and hallucination, the subjects' cognitive memory-based states form a causal link between their present perceptual experiences and the relevant properties, objects, or facts.

Das points out that the same approach can be used to explain some cases of recognition in which properties encountered at an earlier time are now ascribed to some individuals. So, some (but not all) instances of recognition also count as instances of cognitive penetration. However, there seems to be an epistemic difference between cases of recognition and epistemically bad cases of cognitive penetration (e.g., in a case of hallucination): whereas the subjects in recognition cases have reason to endorse the contents of their experiences, they lack such reason in epistemically bad cases of cognitive penetration. Here Naiyayika faces another problem:

When do cognitively penetrated experiences provide us with reason for believing their contents?

To answer this question, Das appeals to a parallel between cognitive penetration and theoretical decision-making. Cognitive penetration, as Das sees it, involves a transition between two experiences—the initial non-penetrated experience and the resultant cognitively penetrated experience. A subject has reason to believe the contents of the resulting experience just in case the subject is reasonable in making a transition from the initial experience to the resulting experience in the "decisional counterpart" of that experience. In particular, Das proposes the

following three necessary conditions: the *new epistemic reason condition*, which says that the subject must have reason to believe the contents of the initial experience; the *reliable starting-point condition*, which says that the subject must have reason to believe that their penetrating cognitive states are reliable; and, the *percolation condition*: that the subject's initial experience jointly suffices with the penetrating state to supports the resulting experience.

In Susanna Siegel's comments on Das' presentation, she asked why Das appeals to the decisional counterpart strategy since they are obviously different. In reply, Das argued that the etiology of cognitive penetration can be rationally assessed in a similar way that the etiology of a decision procedure can. That is why he compares the two. In the Q&A section, Imogen Dickie also pointed out that Das's internalist decisional counterpart strategy appears to be in tension with Nyāya's externalist Perceptual Contact principle since it requires that the subject have some reason to believe the contents of the initial experience. In reply, Das argued that the requirement is not incompatible with externalism since reasoning from unsupported evidence is an unreliable method.