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Continuing Commentary

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Commentary on Daniel C. Dennett (1988) Précis of *The Intentional Stance.* BBS 11:495-546.

Abstract of the original article: The intentional stance is the strategy of prediction and explanation that attributes beliefs, desires, and other "intentional" states to systems – living and nonliving – and predicts future behavior from what it would be rational for an agent to do, given those beliefs and desires. Any system whose performance can be thus predicted and explained is an *intentional system,* whatever its innards. The strategy of treating parts of the world as intentional systems is the foundation of "folk psychology," but is also exploited (and is virtually unavoidable) in artificial intelligence and cognitive science more generally, as well as in evolutionary theory. An analysis of the role of the intentional stance and its presuppositions supports a naturalistic theory of mental states and events, their *content* or *intentionality,* and the relation between "mentalistic" levels of explanation and neurophysiological or mechanistic levels of explanation. As such, the analysis of the intentional stance grounds a theory of the mind and its relation to the body.

The matter of other minds

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Dennett's (1987; 1988) *The Intentional Stance* (henceforth *Stance*) continues a long tradition of philosophers' writing prescriptions for psychology. In the past, prescriptions were part of cures for uncertainties about what we can know (epistemology) and doubts about what we must do (ethics). The current philosophical discussion about psychology is often limited to the scientific status of the concepts of folk psychology. *Stance* is also devoted to such matters (but see Dennett 1984). In this commentary we examine the relevance to autism of the methodology advocated in *Stance.* Autism also raises questions related to the practical, ethical side of folk psychology not discussed here.

When it was first described by Kanner in 1943, autism was defined as an "innate inability to form the usual biologically provided affective contact with people." Subsequent research has confirmed that autism is a matter of severe social unadaptedness which is only remotely related to the syntactic aspects of linguistic and intellectual skills. For example, linguistic impairments are specifically in the domain of semantic-pragmatic competence. Impairments in the basic skills needed for interaction with others lead in turn to difficulties autists have in (to use Dennett's words) "making sense of themselves." In the face of this diagnosis, one is tempted to use the notion of a "theory of mind." Should we conclude that, unlike chimpanzees (Premack

& Woodruff 1978), autists do not have a theory of mind (Baron-Cohen et al. 1985), that they are specifically retarded in the development of a theory of mind (Baron-Cohen 1989), or alternatively, that autists might have only a theory of mind and lack an ability for ascribing mental states in natural interaction (de Gelder et al. 1988)? Such conclusions sound very much like answers from folk psychology. We understand them but we do not know what they mean. *Stance* promises to extricate us from the predicament we find ourselves in when for the best of scientific reasons we refuse to dump folk psychology. The trouble is that *Stance* speaks in many tongues. It defends surface intentionalism (SI), deep realism (DR) and it promotes a distinction between notions and beliefs (NBD). In this commentary I point out that each of these views taken *separately* suggests a perspective on autism. It appears difficult to combine and to elaborate these perspectives.

1. *Stance* confirms at length the SI standpoint Dennett is well known for: To be predictable by the intentional *stance is all* there is to having beliefs. On most occasions we can effortlessly predict autistic behavior by treating autists as if they had beliefs and desires. If so, we must conclude on the strength of SI that autists are real believers. This gets the intentionalist in conflict with the current diagnosis of autism as a specific deficit that manifests itself in interaction with other people but does not affect perceptual beliefs. The conflict is of a peculiar kind because SI is unhelpful in clarifying what the disagreement is about and how far it extends. Moreover, the student of autism searches for internal causes, mechanisms and processes to be blamed for the deficit. SI declares that when it comes to deciding about the intentionality of the system none of that

matters. Two interesting moves are possible, but SI can make neither of them. One is to conceptualise in an interesting way the intuition that autists can have beliefs about objects but not about other people. SI is not sensitive to this distinction. The other is to push the idea that "real" believers, in contrast to "as if" believers, are able to reciprocate the intentional stance taken toward them. *Stance* does not explore this possibility because it does not matter for the SI perspective.

2. *Stance* shows Dennett as a deep realist (DR) defending the innateness of "large parts of folk physics and folk psychology" (p. 495). Autism lends support to DR in the sense that genetic determination of autism is increasingly likely. Happily, unlike SI, DR does not override the existence of autism. Instead, it leads to the conclusion that autists are not true believers. Now our success at predicting their behavior becomes a mystery. DR, just like SI, gives us no grip on the conflict. The reason is straightforward. When it comes to saying just what it is about folk psychology that is innate, *Stance* chooses the "via negativa." It offers very few indications about the way intentional competence attributed by an SI theorist is realised (implemented or approximated as Dennett says) in the organism. For example, *Stance* offers little help to elaborate the distinction between *sympathetic understanding* (the natural, innate capacity to attribute beliefs and desires to others as part of ongoing daily interaction, for example, preverbal social exchanges in babies, recognising caretakers, interpreting emotional expressions by reacting appropriately, or in the verbal domain, achieving joint reference in conversation) and *theoretical understanding* (having a theory of mind in the sense of engaging in conscious inferential thinking and mastering the set of typical mentalist concepts). The distinction (or similar ones derived from concern with the implementation of our natural intentional competence) is obviously not relevant from the point of view of SI, and the DR claim is too unspecific. The consequence is that in the context of SI, claims about DR are easy prey for messianic eliminativists.

3. *Stance* also contains the outline of a distinction between having beliefs and having notions. This aspect of *Stance* seems particularly promising for understanding results from research on autism but it leads to conclusions that *Stance* does not envisage and may not welcome. It appears that, notwithstanding their deficit, intellectually and verbally competent autistic children do develop a theory of mind as measured in experiments of interpersonal belief attribution (for recent results with autistic subjects see Baron-Cohen 1989; Wimmer & Perner 1983, but see de Gelder 1987). Moreover, when no generalised verbal impairment is present, autists do actually use intentional language and are able to reason about mental states in an explicit way (de Gelder & van der Heide, in press).

Experimental data are by no means our only source of information on the autistic theory of mind. We observe that genetic determination of autism is not incompatible with the gradual improvements in social adaptedness observed in some cases. As a matter of fact, progress in our understanding of the innate basis of autism has led to a better understanding of appropriate learning programs for autists. Some remedial tutoring programs offer explicit instruction in social interaction. They try to familiarize young autists with social situations by explaining how people are likely to react to various moves, conversational and other. Often the aim is to make visible the "scenario" behind a series of events. The result is a better adapted behavioral repertoire, providing a cover up and a strategy for compensating for the original deficit. One might say that autists have developed an indirect, explicit, and theoretical route to natural intentional behavior.

The contrast between direct and indirect routes, processes and compensation strategies is borrowed from cognitive neuropsychology. It fits with modular models of cognition and with the distinction between tacit, implicit representation and explicit propositional processing (e.g. Dennett 1988). In this view, the autistic deficit has to do with implicit and modular pro-

cesses. At the behavioral level, the relative adaptedness of autistic behavior illustrates the existence of the multiple levels of control noted by Premack (1988). By the same token it shows that the brain has more than one way of coping with the task assigned by the intentional theorist to be intentionally competent.

Lets us now cast the situation just sketched in terms of Dennett's NBD. Autism would be related to the fact that there is no "concept" of other minds in the notional world of autists. This is a plausible suggestion but it leads to implications not envisaged in *Stance*. We saw that some autists show the sophisticated intellectual achievements and the mastery of language that are the conventional hallmarks of high order or ("real") intentionality and that would no doubt qualify them as true believers. Must *Stance* then conclude that organisms capable of sophisticated verbal behavior but lacking intentional notions are still true believers? If so, SI neutralises the positive contributions from DR and NBD.

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Author's Response

Abstracting from mechanism

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With regard to (1), de Gelder is just wrong in claiming that my view is "not sensitive" to the distinction between having beliefs "about things" and "about people." Presumably some beliefs "about people" are about them only insofar as they are mere "things" – e.g., the belief that a particular person is visible, weighs more than a hundred pounds, is too large to squeeze through a porthole, and so on. These do not warrant distinguishing from similar beliefs about tables and chairs and other things. The special class of beliefs "about people" are those that are about *their beliefs* and other mental or intentional attributes. The mark of these is, in my terms, that they are *higher-order* beliefs, and this distinction is central to my view. As for the other alternative suggested – the idea that only "real" believers can reciprocate the intentional stance – this is discussed and rejected by me in the book, and more explicitly in my response to Premack (1988, p. 522), who made the same proposal in his commentary.

With regard to (2), I agree with de Gelder that I missed a trick in not distinguishing, as (in particular) her research does, between what she calls sympathetic understanding and theoretical understanding. But I see no reason why I cannot incorporate her findings into my theory. Some jazz musicians get by thanks to a hard-won mastery of harmony theory, which permits them to *figure out* quickly which notes "go" with a particular chord change, while others – often innocent of music theory – just "do it by ear." The differences in both competence and underlying mechanisms are real and important, but so are the sim-

ilarities in competence. Autistic children seem to "have a tin ear" for intentional attributions – a fact my theory *permits* one to explore, though I grant that it not only did not encourage this, but may well have contributed to some researchers' overlooking this prospect. I like the idea that the therapies de Gelder discusses are rather like formal training in music theory for those who are not born with good ears.

I think de Gelder's (3) misapprehends the point of my notion-belief distinction, which is really "just for philosophers" and concerns theoretical niceties of reference – such as what to do about beliefs about Santa Claus, or the beliefs of those who don't know that the Morning Star is the Evening Star. As far as I can see, its wheels turn quite independently of any empirical issues arising from cognitive neuropsychology. That might be a reason for criticizing my distinction – or at least ignoring it, if puzzles in formal semantics are outside one's concerns.

De Gelder's commentary points to a particular weakness of the intentional stance which is a necessary concomitant to its strength: *Since* it abstracts from mechanisms (from the "design stance" point of view), it lumps together those cases where different mechanisms (with different details of competence and incompetence) are responsible for a shared competence. Sometimes this is theoretically desirable; sometimes not. One must keep this fact in mind.

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