

Folk psychologies and social cognition

1. Folk psychologies

A large part of our everyday communicative exchanges involves speech acts like the following:

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|-------------------------------------|-----------------------------------|------------------------------------|
| – I’m so <i>sorry</i> about that. | – What do you <i>mean</i> ? | – They seem <i>nervous</i> . |
| – I <i>forgot</i> to do it. | – Do you really <i>want</i> that? | – He did it <i>on purpose</i> . |
| – I lost my <i>sense of smell</i> . | – Why are you <i>angry</i> ? | – She’s <i>considering</i> it. |
| – I <i>like</i> you. | – Don’t you <i>remember</i> ? | – They <i>agree</i> on that. |
| – I don’t <i>mind</i> . | – <i>Think</i> about it. | – That’s his <i>wish</i> . |
| – I <i>feel bad</i> . | – <i>Look!</i> | – Her <i>soul</i> is pure. |
| – I wasn’t <i>expecting</i> this. | – <i>Listen!</i> | – He <i>suspects</i> it will rain. |
| – I did it against my <i>will</i> . | – You’re <i>stupid</i> . | – They are one <i>mind</i> . |
| – It all <i>comes back</i> now. | – You don’t <i>understand</i> . | – She <i>saw</i> a mouse. |
| – I don’t <i>know</i> where it is. | – You don’t <i>love</i> me. | – His <i>memory</i> is fading. |

- As these examples illustrate, it is common ground between most speakers of English that there are mental states (wanting, knowing, being nervous), mental activities (thinking, considering), and mental entities (minds, wills), and it is common ground that these mental states, activities, and entities hang together in certain ways, many of which are readily made explicit. We will use the term “folk psychology” to refer to such shared systems.
- A folk psychology is a social system, most of which is acquired as part of a language. (There are some non-verbal ways of attributing mental states, like tapping one’s index finger against one’s head to express that a person is non compos mentis.)
- Folk psychologies are culture-dependent, and differences between cultures can be quite considerable. These differences concern mental ontology, complexity, and prevalence of folk-psychological expressions. (In some cultures talk about others’ mental states is discouraged.)

- In an evolutionary perspective, folk psychology is a recent development.

2. Common features of mental states

- The paradigmatic instances folk-psychological speech acts are assertions that serve to attribute a mental state to a third party; belief attribution has been discussed most. Our list contains several examples (third column), but also shows that there is a lot more: questions, orders, requests, etc. Useful reminder that mental-state attribution is a form special. E.g., when I ask you, “Do you really believe that?”, I patently use the notion of belief without attributing it to anybody.
- In this section we list a number of features that, amongst speakers of English, are commonly associated with mental states, using belief and belief attribution as our running examples.
 1. Many though not all of the mental states that we attribute to one another appear to have propositional content: descriptive content that either agrees with the facts or not.
Mental states that needn’t have propositional content, thus understood, are nervousness, anger, . . .
 2. Mental states guide our actions, and there are more or less systematic connections between mental states, on the one hand, and patterns of behaviour, on the other.
Corollary: things with mental states are things that act.
Mental states give us reason to act, justify our actions, etc. [normativity]
 3. Mental-state attribution (or the mental states themselves?) obeys certain rules/regularities: seeing is believing, inertia of belief, elementary logic, interactions between mental states (e.g. belief and intention), . . .
Part of this systematicity involves content.
Normativity.
 4. Beliefs are persistent (cf. Bratman on intention). Persistence comes in at least two flavours. If you believe at noon that it is raining, then *ceteris paribus* you will believe tonight that it was raining *at noon*; but you won’t necessarily believe tonight, even *ceteris paribus*, that it is *still* raining. (Compare this with your belief that Angela Merkel is German.) So, once you have formed a belief, you will stick with it, *ceteris paribus*; this is persistence proper. The other is that, based on world knowledge, you suppose that certain states of the world are inert, *ceteris paribus*,

and your beliefs reflect these inertia assumptions.

5. Mental states are private.
6. Gradability
7. Mental states are somewhere. In our culture they are generally between the ears. Exceptions are pains, itches,...

3. Social cognition

- Social cognition concerns the psychological capacities or processes that are specifically involved in social interactions between conspecifics. As applied to humans it covers a quite significant portion of our psychology, but here we are primarily interested in those aspects of social cognition that are involved in, or at least related to, our folk-psychological interactions.
- Examples:
 1. distinguishing between purposive and accidental behaviours
 2. tracking eye gaze
 3. recognising basic emotions
 4. registration

4. Folk psychology and social cognition

How do folk psychology and social cognition relate to one another? This is the hardest question, and we don't have anything like a complete answer. But still, ...

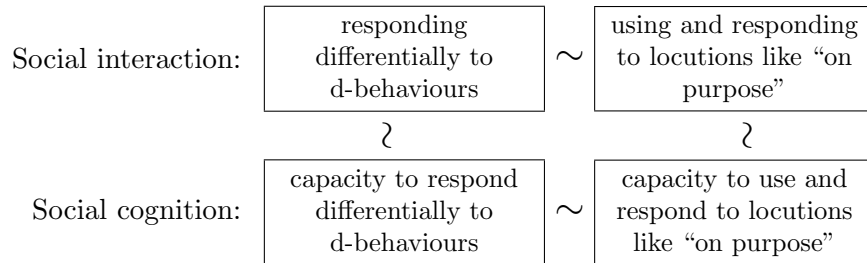
General approach:

- The question concerns relations between two fundamentally different domains: interpersonal interaction and intrapersonal psychology. These can be addressed separately.
- We adopt an evolutionary perspective, in which a new developments in the social domain (folk psychology) build on and modify capacities in the psychological domain (social cognition).
- Instead of offering a general theory up front, we will begin by looking at a number of concrete cases first.

4.1. Acting on purpose

Barney has dropped Betty’s Qing vase on the kitchen floor, as a consequence of which the beloved vessel has ceased to be priceless. How will Betty react? That depends a great deal on whether Barney acted on purpose or not, and although it is hard if not impossible to say precisely how we do it, most of us would agree that, in a great many cases, it can be *seen* that an object is being dropped deliberately, and it seems plausible to suppose that, between humans, there is substantial inter-observer agreement on the distinction between deliberate and non-deliberate behaviours.

- Many species have been reported to respond differentially to deliberate and non-deliberate behaviours, so we are not alone. However, this way of describing a cross-species pattern of behaviours is liable to mislead, because “deliberate” and “non-deliberate” are folk-psychological terms, which non-human animals don’t have. Therefore, let’s use the term “d-behaviours” as a neutral designation of our target phenomenon, which in English is associated with such expressions as “deliberate”, “on purpose”, and so on.
- At some point in prehistoric time, our ancestors had started to respond differentially to d-behaviours (social domain) and therefore had the capacity to distinguish such behaviours (social cognition). This part of the story is unproblematic, even if it remains to be fleshed out.
- Then a new category of folk-psychological terms began to appear: people began saying things like, “I didn’t do it on purpose.” The notion of doing something on purpose was linked to d-behavioural patterns. Dropping a vase in a d-manner counted as evidence that the vase was dropped on purpose. But “on purpose” was not just a label for d-behaviours, for it became associated with variety of communicative practices, notably normative ones. For example, it became associated with moral notions like responsibility and blameworthiness: if Barney dropped Betty’s vase in a d-kind of way, her response would be called *justified* anger rather than mere anger or exasperation.



- The tildes mark relations that require an explanation. Exchanging locutions like “on purpose” is part of our folk psychology; the capacities in the bottom row are part of our social cognition. Since the “logic of discovery” proceeds from observations in the social domain to inferences about the psychological domain, we’ll start our discussion of boxes and relations in the top right-hand corner.
1. There is ample evidence that speakers use terms like “on purpose”, “deliberately”, “intentionally”, that they talk about and inquire into each other’s motives, and so on. All this is readily observable in a great many situations, and if more data are needed, street interviews may be conducted, questionnaires may be used, etc. This is the kind of thing that ethnographers, lexicographers, and language philosophers have been doing, and it’s fairly straightforward. Charting the underlying systematicity is more challenging, but much worse is to come when we turn to the other boxes.
 2. In general, it is much harder to determine whether, and if so how, the members of a population respond differentially to one another’s d-behaviours. Often requires careful experimentation. Differences between species. Fairly clear why these behavioural patterns evolved: others’ d-behaviours tend to be more relevant to my interests than their non-d-behaviours.
- Relations between 1 and 2:
- 2 is co-opted into 1: we *label* d-behaviours as “deliberate”, “on purpose”, etc., thereby *interpreting* them in these terms by linking them to shared evaluative attitudes and practices.
 - By the same token, our purposive vocabulary is *grounded* in pre-linguistic patterns of social behaviour.
3. Turning to the cognition underlying 2, things become significantly murkier.
 - Presumably perception plays a key role.
 - In other species than ours, the capacity to respond differentially to d-behaviours may be fully hard-wired, and I guess that in humans it is at least partly hard-wired.
 - But it may also be shaped in part by “higher-order” factors. Routinisation.
 4. Mystery world.

Appendix: Thinking things

1. “my husband thinks”: 610.000 hits
“My husband thinks he is always right.”
2. “my dog thinks”: 363.000 hits
“My dog thinks I’m a genius.”
3. “my phone thinks”: 121,000 hits (cf. “my phone says”: 777.000 hits)
“My phone thinks I’m in Canada.”
4. “my cat thinks”: 108,000 hits
“My cat thinks he’s human.”
5. “the bees think”: 57,100 hits
“The bees think it’s June.”
6. “the thermostat thinks”: 4,600 hits
“With the module set to the middle setting, the actual room temperature would be about 62 degrees while the thermostat thinks it is 72 degrees.”
7. “my calendar thinks”: 300 hits (cf. “my calendar says”: 147.000 hits)
“My calendar thinks it is May 4th, how do I reset it to May 9th?”
8. “my pencil thinks”: 50 hits
“Too bad my pencil thinks that it’s a helicopter and keeps flying away.”

	...knows	...thinks	...believes	...wants	...intends
he...	127905	78569	75208	198948	9853
she...	55684	32600	28997	92891	2841
it...	14109	8378	9007	37870	6216

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the object named “player”, which has been created by *the game* and contains everything *it knows* about the player character

the team is sure that *it knows* how to catch up

Now when *the control software* reads G28 in a line then *it knows* to send the machine to this position

Yeah, or someone would put a weighted dummy sitting in *the seat* so *it thinks* there is always a passenger

as *the flight controller* fights to hold the craft in what *it thinks* is the correct attitude

the company said *it thinks* Whole Foods shares are undervalued