Folk psychologies and social cognition

1. Folk psychologies

The word "folk psychology" is being used in a number of significantly different ways, which are regularly conflated (Laanpere). The most fundamental distinction to be made is that between internal and external uses (Stich & Ravenscroft). Our use of the word is squarely on the external side. We reserve the label "social cognition" for internal use.

The first attempt at articulating a useful external notion of FP was made by Lewis (1972), whose account has served as point of departure for many subsequent development (including Stich & Ravenscroft and Laanpere). Lewis calls it "common-sense psychology":

> Think of common-sense psychology as a term-introducing scientific theory, though one invented long before there was any such institution as professional science. Collect all the platitudes you can think of regarding the causal relations of mental states, sensory stimuli, and motor responses. Perhaps we can think of them as having the form:
>
> > When someone is in so-and-so combination of mental states and receives sensory stimuli of so-and-so kind, he tends with so-and-so probability to be caused thereby to go into so-and-so mental states and produce so-and-so motor responses. (Lewis 1972: 256)
>
> Add also all the platitudes to the effect that one mental state falls under another—"toothache is a kind of pain", and the like. Perhaps there are platitudes of other forms as well. Include only platitudes which are common knowledge among us—everyone knows them, everyone knows that everyone else knows them, and so on. For the meanings of our words are common knowledge, and I am going to claim that names of mental states derive their meaning from these platitudes.

Key elements: FP as a theory, connection with language, common knowledge.

Although we are sympathetic to Lewis's general approach, we believe it is unfeasible and too narrow, and that it overestimates the similarities between folk psychologies and theories.

On Lewis's account, the main explanandum of a theory of folk psychology is long list of lawlike propositions endorsed by all members of given population. We worry that, in practice, it will be impossible to get enough support for even a handful of propositions of the kind required by Lewis.

Objections two and three will be presented in due course. First outline our own "external" approach. For us, the main explanandum of a theory of FP is at once more comprehensive and intellectually less demanding than Lewis's. It starts out from the observation that there is a special style of social interaction that involve such locutions as:

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

Research questions: What distinguishes interactions that involve such locutions from interactions that don't? What purposes do they serve? How do such interactions vary between languages, cultures, and other social groups? How do children acquire this style of interaction, and how did it evolve?

Lewisian platitudes could be accommodated, too, provided they are not too abstruse. Although people rarely bother to affirm that toothaches are pains, they will readily agree when asked, and therefore this type of interaction would be on our list, too. But we are primarily concerned with interactions rather than any propositions they may involve.

Folk-psychological interactions aren't random. They have a large measure of systematicity, *some* of which may be theory-like (ontology, principles,. . .). But a folk psychology is not just a model/picture of (part of) the world—though it may be that, too. FPs are normative systems in various respects (Brandom, McGeer, Zawidzki, Laanpere). Examples: there are quite a few things one is supposed to believe; self-attribution of some feelings may be virtually mandatory in some situations ("I'm sorry"); there are cultures in

which mental-state talk is discouraged/proscribed in some/many situations (Robbins). (More about normativity later.)

We will generally use the term "folk psychology" extensionally, to refer to certain patterns of social interaction, and sometimes intensionally, to refer to the systematicity underlying such patterns.

A folk psychology is a social practice, the bulk of which is acquired as part of a language. (There are 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.) It follows from this that pre-linguistic children and non-human animals don't engage in folk psychology as we understand it.

Pre-linguistic children and many non-human animals do have social cognition: a set of psychological capacities that enables their owners to engage in social interactions. Folk psychology requires advanced forms of social cognition. In an evolutionary perspective, while social cognition is an ancient phenomenon, folk psychology is a recent development.

Key point: strict separation between social and psychological domains/levels: FP is part of the social domain; social cognition is part of our psychology.

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 aproach:

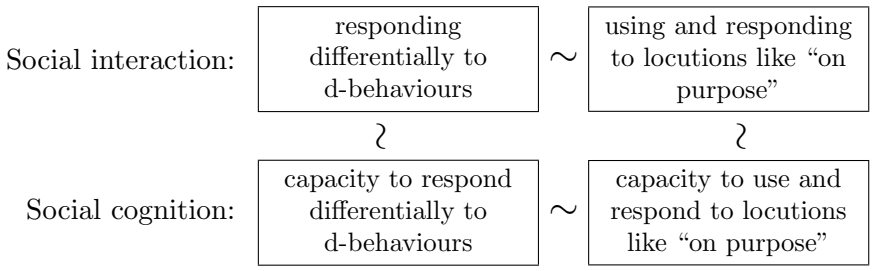
- The question concerns relations between two fundamentally different domains: interpersonal interaction and intrapersonal psychology. These can be addressed separately.
- We adopt an evolutionary perspective, in which a new developments in the social domain (folk psychology) build on and modify capacities 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 prelinguistic 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