Introduction There have been many disputes in philosophy and psychology in the past twenty five years over the nature of something that is variously called "folk psychology", "theory of mind", "mindreading" and other things. (Those names are not in fact real synonyms; each carries a different load of presuppositions. For a brief history of the topic, and finer distinctions within it, see Morton (forthcoming *a*).) There can be a right answer to such questions only if there is something in the right corner of reality suited to have a nature. If not, the questions we ask may be like "what is the true nature of luck?" or "let's find the essential properties of the constellations". In this paper I shall explore the possibility that we apply the folk psychology label to too varied a bundle of capacities and phenomena for there to be a single tidy account of it.

My argument is not meant to be conclusive. My conclusion will be that the non-existence of folk psychology is a possibility that we ought to take seriously. We are weighing conjectures here – as we usually are in philosophy, even when it presents itself as delivering the results of inescapable argument – and this conjecture is part of a larger and more conjectural thought, which I shall mention to give the discussion some perspective and then not return to. Folk psychology is supposed to be the means by which people in ordinary life understand the minds of other people. "Mind" covers a lot of ground: motivation, belief, consciousness, emotion, character and more. How much unity does this list have, besides a vague causal link to the nervous system? Are questions about the nature of "the mental" and its relation to physical reality well-formed? I'm not convinced, either way. It seems to me entirely possible that when future cultures try to read our books they will need long glosses on the scattered variety of contexts in which we talk of mind. (Just as when we philosophers go into popular bookstores and see a section marked "mind and spirit" we shudder and ask for the distinction to be explained to us. Many nonacademics use "mind" to refer to a cluster based on intellect and character and spirit to refer to a cluster based on consciousness and emotion. Perhaps, just perhaps, that's a better way to do it.)

The structure of my argument is as follows. I first present a picture of the activities that folk psychology is supposed to perform that makes it clear that they can be performed by a very loosely connected bundle of abilities. I then discuss the role the folk psychological vocabulary can play in holding such a loose bundle together. I then connect the discussion with imagination-based or simulationist accounts of folk psychology. And then to end the chapter I extract a rhetorically definite position from the preceding pros and cons.

1. The variety of functions Folk psychology is supposed to apply in everyday analogs of the situations in which a scientific psychological theories might be applied. (There's an optimism about psychology here, as well as about folk psychology.) The idea is that we have a need to predict and explain what other people do, and that in order to do this we have to attribute beliefs, desires, emotions and other states to them. So the picture, at any rate on the dominant "theory theory" account, is that we have a practical need to know what to do with regard to someone else and we meet this by gathering information about her, using this to attribute states of mind to her, using these attributions to predict what the person will or may do, then using these as inputs to one's own decisions. (Things look somewhat different from the rival simulationist camp. I'll return to this.) The crucial thing is that we use a single capacity to get from information about people to our own social decisions. That is the central dubious assumption. Consider some of the many possible combinations of practical situation and information about another person.

- you are lost in a strange city and you want to know who it is safe to ask for directions.

- you are attracted to someone and you want to know how to get to know them.

- you have stolen something and you want to know if the shop assistant has seen you take it.

- your plan to meet someone at a particular place and time has failed, and you want to know what to do to find them.

- you want to get on with your new boss and you need to find out whether to act obsequiously, critically, or with initiative.

- your friend's partner has died but your friend is carrying on in a relatively normal way; you want some sense of what kind of a time it is for her.

- you are considering spending your savings on a very expensive house, and you want to know whether in five years' time there will be many other people willing to spend a correspondingly large sum if you decide to sell.

Note that in several of these the situation is described in folkpsychological terms, or more neutrally in terms of social situations and attitudes. With a certain amount of effort we could rephrase the descriptions in terms just of the evidence provided and the acts you are considering, though losing some of the intuitive content. The fact is that when we try to describe our involvement in social life we have no real choice but to use the folk-psychological vocabulary. (That's an argument *for* the reality of folk psychology: but see the next section.)

These situations are very varied. We can describe the way we manage them in terms of a somewhat less varied array of social capacities. Central among them are:

- self-preservation: the capacity to know when people are dangerous or cooperative.

- solving coordination problems: the capacity to choose the outcome to a social situation that most other people in it will also find.

- emotional contagion: the capacity to pick up other people's moods when in their presence (see Goldie 1999.)

- reflective grasp of rationality: the capacity to calculate from an explicit statement of other people's aims and information, the choice that it would be most rational for them to make.

The important fact about these capacities, and many of the others that are recruited to get us through situations like those listed above, is that they also have applications that are not natural candidates for folk psychology. Thus the self-preservation capacity can be served by processes that also tell you about fierce dogs, alligators, and landslides. Skill with coordination problems is part of a general capacity to handle strategic choice, which applies for example when one is thinking through what outcomes it would be rational for a group of people to settle on, in terms of the facts of the case and what is in their interests, guite independently of their beliefs and desires. Emotional contagion can occur without attributing any state to anyone or forming any conclusions. On may not even know whose emotions one is picking up. And a reflective grasp of rationality is obviously something whose main application is in making one's own individual decisions, not second-guessing those of others. Moreover when we do apply it to predicting others we do so in very nuanced and constrained ways, knowing as we do how far anyone is from acting fully rationally on more than the rarest occasions. (I have elaborated the point about coordination problems in chapter 1 of Morton 2003, and on the point about rationality in chapter 2 of that book.)

One remarkable feature of several of the capacities we use to find our way through our relations with other people is that they result in something other than a belief: they are not directly linked to attribution or prediction. A skill in coordinating with others can manifest itself just in doing the appropriate thing, as when one is dancing with someone or playing a team sport. A capacity for sharing others' emotions can manifest itself in simply feeling something related to what they feel, with no straightforward connection to any actions one performs as a result. The picture that emerges has two main features. First, the beliefs we form about other people's minds and future actions result from a variety of capacities for social life and rational action that we all possess, in varying degrees. They are not the sole output of any of these processes, and in fact many of these processes often do not result in beliefs at all.

Second, the full human capacity to anticipate the actions of others and to attribute states of mind to them comes from combining these component skills. However many situations that call for anticipation or sympathy with others can be managed pretty well by using them singly.

Some hard empirical questions immediately arise. Do all people in a given culture manage their attitudes to others by use of the same component capacities? Do people in all cultures use the same bundle of capacities? If the answer to these questions were yes, then folk psychology would have a sort of a derivative real existence, as the thing you get when you combine X,Y,Z, and W. My suspicion is that the answer is No. In particular, I suspect that some people and some cultures make very little use of explicit thoughts about rationality, and some people and some cultures make a lot more use of our capacities simply to do the appropriate or cooperative thing, without knowing the reasons for it. One factor that makes the differences between cultures hard to focus on is the fact that since people do not like others to be unpredictable, and sometimes react with extreme hostility to actions they find bizarre, we learn to act in ways that fit the capacities that those around have for reacting to us. Some of the limits of a local bundle of capacities will pass unnoticed because the behaviour that would reveal them has been discouraged. (One of the few people to have appreciated this point is Martin Kusch, see Kush 1999.)

2. The appearance of unity Separate though these capacities may be, when they are used in a deliberate and reflective way to mediate one person's dealings with another they are often connected and used in combination. The main tie between them is the vocabulary of mind, our talk of beliefs, desires, emotions, memory, reasoning and related concepts. We are good at making inferences between attributions in different parts of this vocabulary, extensive and varied as it is. "She thinks you stole her cat so of course she is angry at you", "he remembers when you were an arrogant young graduate student so he is somewhat defensive in your presence". And in particular, we can use very little of it without explicitly or implicitly introducing words for belief and desire. This is the most impressive and intuitive reason for believing in the solidity of folk psychology: the coherence and cohesion of the folk psychological vocabulary. It provides us with a way of organizing our thoughts and attitudes about ourselves and others that

moves us beyond simple reactions and anticipations to structured thinking about personality and motive. No doubt without it organized human life could not exist.

I do not want to deny this. Indeed I think that the folk psychological vocabulary has a greater richness and a more complicated structure than many philosophers and psychologists assume. (They often speak as if it consisted of some assumptions about the relations between beliefs, desires, and actions, plus a few optional extras.) And I think that one task of philosophers of mind is to explore and even improve the vocabulary, so that we can use it more easily and apply it to a larger range of cases. But without denying any of this we can also note a number of ways in which the application of the folk psychological vocabulary is not as central and basic to our understanding of others as it might seem.

When we describe verbally a person's state of mind, think in terms of this description, and come to some conclusion about the person, our thinking is usually constrained by factors that we cannot articulate in the standard vocabulary, but without which the thinking would be impossible. You want to know how someone is likely to travel downtown (perhaps you want to be sure not to be travelling with the person, as there is a conversation you don't want to have). You think "she likes scenery, and the view from the train is a lot nicer than the view from the bus, so most likely that is how she will travel." Without noticing, you have ruled out cycling, hitchhiking, asking a neighbour for a ride, running, and other ways she might get downtown. This may be because your intuitive grasp of her personality rules these things out. Or it may be because your grasp of the social situation in the context of which she was travelling made arrival in any of these ways a bad move. Or it may have been something else. The pattern is general: *articulate folk psychological* description operates courtesy of a background of possibility-eliminating factors, of potentially unlimited variety. (In this connection see Bermúdez 2004.)

We can sometimes combine descriptions of people's motives with knowledge of how people generally behave to predict what those particular people will do. You take someone to be stingy and riskaverse, and so you predict that he will not spend the extra couple of thousand getting his house repainted, which might result in his selling it for considerably more and might also have no effect on the sale. But we do not do as much prediction as it may appear. After someone has done something we often come up with explanations of their action, which have the same general form as predictions, but which we would not have be so rash as to produce as predictions beforehand. One reason for the asymmetry between prediction and explanation

(which is well known in the philosophy of science) is that after the fact we have evidence for additional relevant facts about the person, namely that she has acted as she did. Often this extra information triggers constraints on the possibilities, as described in the previous paragraph, that cannot themselves be put into folk psychological terms. One result is that the explanation is then contrastive: it explains not why the person did the act absolutely, but why the person did this act rather than one of a limited range of alternatives. In the face of this, it is very hard to tell real insight-giving explanation from pseudo-explanation faked up to fit the facts as we know them, sometimes a verbal shell for the real sub-conceptual grasp of personality that gives us our real hold on what people are like and what they are likely to do. As a result, much of our calculation of the transition from motives to actions results not in absolute predictions but in contrastive explanations, where the range of the contrast is set from outside folk psychological thinking. (See Morton 2003, chapter 4, and Morton 1996.)

A third factor is the hidden ambiguity of "belief" and "desire". Philosophers often write as if we had clear concepts of two relations between a person a and a proposition p "a believes p" and "a desires that p". In real spoken English we use a great variety of words: thinks, suspects, is of the opinion that,...; wants, longs for, would like, has a yen for, ... And we use contrasts between these words to indicate different kinds of belief and desire. Compare for example your desire to get home without getting soaked on a wet night when your car has broken down to your desire that a ticket you have in a five million dollar lottery prove to be the winner. There is a sense in which the latter desire is stronger, since you would walk ten miles in the rain for five million dollars, and a sense in which the former is, in that you react with dismay to the prospect of not getting home promptly and dry and just shrug your shoulders at the possibility that your ticket will not win. Similarly, you may "believe" that your position on some philosophical position is right, in that you defend it to with energy and ingenuity and, particularly, assert it with conviction. But you recognize that the arguments against it have force, and you are rather less confident of it than you are about many things, for example that there is no life on Mars, that you would not claim to believe even though you find them fairly likely. (A creature with vastly greater cognitive powers than human beings might well not have any beliefs: it would give to each proposition it considered a degree of belief, and then act accordingly, without ever making a slice between the ones it said Yes to and all the rest.) When we ascribe beliefs and desires and use them to explain and predict what people are doing the ascriptions are incomplete: we rely on conversational context and our

knowledge of the particular person involved, and no doubt other factors, to fill in the full content of the ascription.

This view of belief and desire ascriptions is controversial. (I have given a more thorough defence in chapter 4 of Morton 2003.) Something very similar is guite obviously true of other parts of the folk psychological vocabulary, though, in particular our words for emotions and attitudes. Consider the family of regret, remorse, shame, guilt, and embarrassment. There are differences between all of these, but we are usually not very careful about which one we use. We say "regret" when "remorse" would be more precise, or "shame" when "embarrassment" would apply better. There are many emotions intermediate between these terms. (Not all languages have terms for all of these, and the words for retrospective negative emotions in different languages rarely translate very exactly.) So when one person says of someone that he, for example, feels guilty about something he has done, her audience applies what they know of him and of the situation to make a more specific attribution, and then moves to predictions or explanations on the basis of that more specific thought. This too is a very general phenomenon: when we attribute states to people using the folk psychological vocabulary, the content of the attribution is filled in by the audience in accordance with factors from outside that vocabulary.

These three observations pull in the same direction. The vocabulary of folk psychology is a unifying point, a drop of glue, at which many disparate not essentially psychological capacities are brought together to give us a grasp of motive and action. Sometimes these other capacities do most of the work of predicting or explaining. (Usually they do, I think, but the point is obviously open to controversy.) Very rarely can the vocabulary be deployed in a self-sufficient way.

That unifying function is vital, though. It allows the disparate capacities to be linked and deployed together. And, also, its presence allows them to be rehearsed in application to other human beings, which is not at the center of their natural range of functions. A good example of this, to be discussed in the next section, is the use of conditional thinking, primarily an action-planning capacity, to imagine the choices other people are likely to make in possible situations. These applications of capacities beyond their instinctive domains have to be learned, and we would not learn them, at any rate would not learn them in anything like the way we do, without the demand for attributions of states of mind and thought out rationalizations of motive and action in a specific and limited vocabulary. So, summarizing in a way that brings out both the centrality and the limits of the role that the vocabulary plays: learning how to use the folk

psychological vocabulary scaffolds the development and application of a host of other skills, all of which can be essential when we predict, explain, anticipate, or interact with others. (See chapter 11 of Sterelny 2003.)

3. Learning to imagine For many philosophers and psychologists the use of the folk psychological vocabulary is not at the heart of folk psychology. Many writers have postulated a level of thinking about states of mind that cannot be easily expressed in ordinary language. So have I, in this paper, but while the thinking I have postulated is varied and in its non-verbal form not specific to the understanding of other people, for many writers there is a mind-specific domain of conceptual thinking, distinct from the manipulation of the surface vocabulary of folk psychology. (See Gopnick and Meltzoff 1997.) One form this can take is that of a theory of motive and action, some elements of which are innate and others of which develop in childhood, in terms of which we understand one another.

This account has never been refuted, but after its initial promise no one has produced a detailed version which explains any hitherto unexplained data. No one has said what the theory is, what its assumptions and rules are. And when philosophers try to describe the theory it collapses into the theory of rational action, which is indeed a coherent theory, but not implicit and not a theory of human psychology. It is a theory that can be applied to human psychology, if many adjustments and provisos are added, but the adjustments and provisos have never been stated systematically, let alone presented in a way that it is plausible that they are part of something specific to the human understanding of other humans that slots into place in the first few years of life.

Other accounts concern "simulation": understanding another's mental processes by undergoing similar processes oneself. There is a large variety of such accounts, and some of the best known of them describe capacities that are clearly adaptations for psychological purposes of basically non-psychological skills. I shall briefly discuss two relevant skills. (The distinction between theory-theory accounts and simulationist accounts is too crude: see the introduction to Davies and Stone 1995. Stich and Nichols 2004 speak helpfully of information-rich and information-poor accounts.)

In the cases to which off-line simulation accounts, pioneered by Robert Gordon, apply best, one person anticipates the action of another by activating her own decision-making processes as applied not to her actual situation but that of the other person, taking the output of this process not as a decision for herself but as a prediction about the other. (See Gordon 1995.) (You are trying to catch

someone descending some stairs to a hotel lobby. At the bottom of the stairs she can go to the street through the door to the right or the left. You see obstacles between the stairs and the left door and so, without consciously thinking about it, you go towards the right door expecting that that is the way she will go.) How could someone learn to apply their own decision-making thinking to the actions of another? A natural suggestion, first made by Gregory Currie (1995), is that the connecting link is conditional thinking. That is, thinking in which one decides what one would do if various situations were to occur. This has an obvious utility: if the best response in the unlikely event of a kitchen fire is to first try to douse it then it makes sense to buy an extinguisher for oil-based fires now. Conditional thinking requires that one feed hypothetical inputs into one's decision making processes, and that one disconnect the output of the process from actual action. (The end process of thinking out what you would do if the chip pan were to burst into flames is not to spray with the extinguisher now, at the empty stove.) So the only further adaptation to get off-line simulation is the replacement of the input of one's own hypothetical situation with that of another (hypothetical or actual).

If one wanted to make off-line simulation into an all-purpose mind-understanding tool one would have to consider many more refinements. Some of one's own idiosyncrasies and many of one's own desires will often have to be subtracted, for many predictive and explanatory tasks, and characteristics of the other's thinking may have to be worked into the simulated decision-making. But it is not my aim to make it into an all-purpose tool. My aim is to show how a process that is useful in a limited range of situations, and very plausible as a means that we do employ in that limited range, can be understood as an adaptation for psychological ends of a capacity whose primary employment is quite different.

A rather different capacity that complements off-line simulation is that of perspective-taking. This is a general term for a capacity that begins with an infant's tracking the direction of gaze of a care-giver. This seems to be an innate human trait, not shared by our close relatives. (Though dogs are said to have something close to it, while wolves do not.) It has obvious application in pre-verbal social life and is thought by some developmental psychologists to play an important role in the development of social skills and of language. (To understand what an adult is referring to when using words a child has not heard before, it helps immensely to know what the adult is looking at.) As this capacity develops and becomes more sophisticated it grows, no doubt with help from other capacities, into the ability to know what things look like from another person's perspective, and then to less literally visual applications in appreciating another person's point of view on a situation.

Basic perspective-taking can support simple attributions of visual information to others. It allows one to know what another person can see. (Consider small children playing hide and seek: one thing they learn from this is to imagine what someone walking along a particular route will be able to see.) And these simple attributions can combine with simple social routines in the absence of any explicit folk psychological thinking. (Consider small children playing tag: you don't want the other person to touch you and so you want to know which way they will lunge, and to do this you have to be aware of which way they are looking.) Moreover, basic perspective-taking is required for all but the most trivial applications of off-line simulation. As I described the example of the person waiting to intercept the other person coming down the stairs, the interceptor assumed that the descender could see the obstacles on the way to the left door. But it could be that the descender could not see the obstacles, and the interceptor was in a position to see that she could not. And then he should not anticipate her going to the right door. In modelling another person's decision-making with your own you have to feed into it the information that is actually available to the other person. Knowing what information this is, is sometimes so simple a business, for us humans to whom it comes naturally, that we can fail to see that it is a skill that has to be present, and is sometimes so challenging that without a very advanced form of perspective-taking any attempt at simulation will be sure to fail. (See Morton (forthcoming b), and chapter 5 of Morton 2003.)

Perspective-taking and off-line simulation illustrate my central point. We start with two non-psychological skills, gaze-following and conditional thinking, each of which can be adapted to serve a basic psychological function. Together, though, they form a more powerful predictive and explanatory device, and fit together so easily that we might at first think we were dealing with part of a specific mindappreciating module.

4. Conclusion: as real as bears Imagine a set of circles on a plane. There are many overlaps between the circles, and if we attend to one such overlap we can see the circles that it is part of as peripheral extensions of it. But of course any of these circles could also be seen as the peripheral extension of a quite different overlap, just as the overlap we first focused on could be seen as just one of many regions defined by the overlapping circles.

The circles are the fundamental human capacities. The overlaps are the many varied abilities we acquire by combining and adapting

them: argument, public speaking, bicycle riding, violin playing, football, folk psychology. Some are more important than others. The overlap that constitutes folk psychology is no doubt an important one. But many of its overlaps with fundamental capacities are also parts of other derived capacities, some equally important even though we have not found standard labels for them. One could imagine a philosophy on which the ability to solve strategic problems (folk game theory) and the ability to feel sympathy for others were seen as important abilities underlying basic features of human life. Then the overlap that covers part of each of those, and others, that we call folk psychology might seem like an arbitrary and un-natural conglomeration.

This way of putting it obscures the difference between a weaker and a stronger possibility, though. The weaker possibility is that there is a fixed list of human capacities and that in all people there is a combination of these capacities, adapted in roughly the same ways and used in roughly the same proportions, that is used for everyday psychological explanation. The stronger possibility is that because individual variations in capacity and development the combination that one person uses to understand and predict others is significantly different from that used by another. We don't know which of these is nearer to the truth.

Suppose for the sake of argument that the weaker possibility is right, since it gives the greater solidity to folk psychology. Does it follow that folk psychology is real, that we can say "human beings" have a range of abilities, and among them is the ability to anticipate actions in strategic situations, sense what emotions another is feeling, make decisions on other people's behalf, and the like"? Well, if the line explored in this chapter is right, it might be rather like saying "human beings have a range of abilities, and among them is the ability to ride unicycles and to play the oboe" Yes, each of these components exists, so in a way their combination exists, as real as the object consisting of the top five metres of the Eiffel tower and Julius Caesar's left femur. Or, to use an analogy more like the one that began this section, folk psychology is as real as a constellation. The Great and Little bears, for example, are patterns in the sky that strike us as salient. Each of them, though is composed of stars many light years apart from one another, not related by origin or gravitation, and not forming any similar pattern seen from elsewhere in the universe. If the bears are astronomically real then folk psychology is an equally real part of human cognitive equipment.

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