he is not in a sceptical world being deceived into thinking that he has hands’ is false.

But this changes nothing. The decisive claim is that in assessing the counterfactuals implicit in (A) we do not have to take sceptical worlds into the reckoning, whereas we must do that in assessing (B) because (B) explicitly speaks of them. Accept, provisionally, what is here said about (B) and focus on the claim about (A). Nobody should make it unless they are already in a position to assert that the actual world is not a sceptical world. And with that we are back to the choice between impotence and redundancy.

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BARE FUNCTIONAL DESIRE

By Philip Pettit and Huw Price

RECENTLY there has been a lot of interest in the question as to whether desire is cognitive, or more particularly as to whether desire might simply be a special kind of belief. The main presupposition of this debate is that desire is always present in the genesis of intentional action, playing a crucial motivational role. The question is whether a state of such a motivational kind can also be a belief. The desire that P will not, of course, be the belief that P — unlike that belief, for one thing, it is likely to persist in the face of evidence that not P. But there is still a question as to whether the desire that P may not be equivalent to a belief with some other content, for example the belief that it would be good if P. Could the belief that it would be good if P play the role definitive of the desire that P? Could it dispose an agent, given other suitable beliefs, to try to bring it about that P?1

The purpose of this paper is to sound two notes of caution about a beguiling argument for the negative answer: for the Humean view that desires cannot be beliefs, or cognitive states more generally.2 The argument in question is not to our know-


2 For our present purposes it is largely irrelevant whether there is a significant distinction here. In general we shall simply use the term ‘belief’, intending this to include cognitive states of other kinds, if such there be.
ledge explicit in any of the recent literature on this subject. However, we find that as pressure is brought to bear on the traditional Humean foundations of the belief/desire distinction, it is increasingly common in discussion. Simple, persuasive and profoundly mistaken, it surely deserves a public burial.

The argument runs like this. Let $B_X$ be the total set of beliefs held by an agent $X$, and suppose that $X$ performs an action $A$. Could $A$ be explained by $B_X$ alone? The desire-as-belief theorist seems bound to think that it could, for $B_X$ may include beliefs which are also desires. But surely this can’t be right, for isn’t it perfectly conceivable that another agent might be in the same belief state $B_X$ and not do $A$? She might differ from $X$ in failing to be the sort of person that $B_X$ moves to do $A$. In other words, she would differ in failing to instantiate a state that we might identify as $\text{Func}(B_X, A)$: a functional state that takes $B_X$ as input and delivers $A$ as output. Thus it appears that if $X$ himself does $A$, then what explains his action is not just his belief state $B_X$, but the combination of that state and $\text{Func}(B_X, A)$. $\text{Func}(B_X, A)$ seems to meet the characterization of desire, being a disposition to act in a certain way given certain beliefs. And it is not itself a belief, since by assumption all $X$’s beliefs are in $B_X$. So the upshot seems to be that beliefs can explain action only in association with a non-cognitive desire.

We call this the bare functional argument, for it relies on a characterization of desire in purely functional terms. We want to show that it provides no adequate defence of the Humean position. In the first section we argue by analogy with causal explanations elsewhere in science that so defended, desires would be redundant in psychological explanation and in any case be non-psychological in nature. In the second section we point out that to attempt to secure desires by this route is to invite a disastrous extension of the argument to psychological processes of other kinds. And in the final section we look at a substitute for the bare functional argument, to which our objections may drive the Humean, and show that it too fails.

I Causes and Clauses

Consider a typical chemical reaction. Two substances react to form a third. Diagrammatically,

(1) $\text{stuff}_1 + \text{stuff}_2 \Rightarrow \text{stuff}_3$.

This diagram gives us the structure of a possible causal explanation for the coming into being of a particular sample of $\text{stuff}_3$: it may have resulted from the co-presence of appropriate amounts of $\text{stuff}_1$ and $\text{stuff}_2$. 
Let us suppose that in the case in hand, this is what did happen. Do we have a full causal explanation of the origins of our sample of \textit{Stuff}_3? Apparently not, for couldn’t the background conditions have been such that the reaction described in (1) would not have taken place? For a \textit{full} explanation, don’t we therefore need to add that the conditions were right? Isn’t the full story something like

\begin{equation}
\text{(2) } \text{Stuff}_1 + \text{Stuff}_2 + \text{Suitable Conditions} \Rightarrow \text{Stuff}_3?
\end{equation}

No. It is true that what would be regarded as the full chemical story might make some reference to the conditions under which the reaction takes place. The relevant chemical theory may establish, for example, that the reaction (1) only takes place in an acidic environment. In this case it would be perfectly proper to write

\begin{equation}
\text{(3) } \text{Stuff}_1 + \text{Stuff}_2 + \text{pH} < 7 \Rightarrow \text{Stuff}_3,
\end{equation}

and to regard this as formalizing a more complete causal explanation than (1) itself. However, there is a world of difference between (3) and (2). This is shown most clearly by the fact that the issue that seemed to lead from (1) to (2) leads equally from (3) to

\begin{equation}
\text{(4) } \text{Stuff}_1 + \text{Stuff}_2 + \text{pH} < 7 + \text{Suitable Conditions} \Rightarrow \text{Stuff}_3.
\end{equation}

For the conditions on the left of (3) are no more a \textit{guarantee} of the reaction that produces \textit{Stuff}_3 than those on the left of (1). In both cases the unmentioned background conditions ‘have to be right’. Clearly this doesn’t apply to (2), however. The ‘Suitable Conditions’ mentioned in (2) just \textit{are} those that guarantee the reaction described in (1).

(1) and (3) have the form of respectable scientific explanations, but (2) and (4) do not. We mean this primarily as a simple description of scientific practice, but it is not difficult to see why the practice should be like this. If any proper causal explanation requires a suitable conditions clause then all do, and the requirement is thus universal — \textit{all such explanations require the very same clause}. After all, identifiable differences could be independently specified in the manner of the acidity condition in (3). The catch—all suitable conditions clause is supposed to cover just those conditions that are not separately specified in this way. However, a universal feature of causal explanation can safely and profitably be ignored. This might happen in two ways. The convention might be that causal explanations are always to be taken as elliptical for a ‘proper’ explanation that does include such a clause; or, we think more plausibly, the convention as to what counts as a \textit{proper} explanation might simply not require such a clause.

Why is the second alternative more plausible? For two reasons, we think. First, because the only motive for choosing the first would seem to be the view that the antecedents of a ‘proper’ causal explanation should \textit{necessitate} its consequent. In securing such
necessitation, however, the proposal that explanations have an implicit suitable conditions clause wildly overshoots the mark — it makes virtually any explanation a proper explanation, and hence sets a standard that is simply irrelevant to the ordinary scientific assessment of explanations as adequate or inadequate, as better or worse than one another.

The second reason is that suitable conditions clauses are not generally characterizable in scientifically interesting terms. There are two aspects to this. The first is that to the extent to which they can be explicitly listed, the suitable conditions concerned will not generally be specifiable in terms of the same scientific theory to which the explanation in question belongs; chemical processes will typically be disrupted by non-chemical interference, for example. If there is an exception to this it lies within physics, and rests on the claim of some parts of physics to provide a universal explanatory framework. This claim about physics is contentious, but we needn't argue it here. For one thing the exception envisaged is irrelevant to the psychological case; and for another there is a second barrier to a scientifically interesting characterization of suitable conditions clauses — one that applies, we think, even in physics. This is that in general there will be no non-trivial description of the relevant suitable conditions. Given any actual causal process, there are endless possible worlds in which that process is somehow disrupted, in which its antecedents fail to give rise to its actual products. The only way to characterize the worlds in which it is not disrupted is in precisely those terms: as the worlds in which it is not disrupted, or in other words in which conditions are 'right'. This characterization has no scientific content, and no prospect of acquiring any.

Let us now apply these lessons to the bare functional argument for Humean desire. The argument was that

(5) \( B_X \Rightarrow A \)

is inevitably an incomplete explanation of the fact that an action \( A \) is performed by an agent \( X \) with beliefs \( B_X \). The full story is

(6) \( B_X + \text{Func}(B_X,A) \Rightarrow A \),

where \( \text{Func} \) is supposed to be a desire that is not also a belief. The lesson of our discussion is that the reference to \( \text{Func} \) is nothing but a suitable conditions clause, ascribing in portmanteau fashion whatever factors are required to supplement \( B_X \) in order to guarantee \( A \). After all, the argument for the need to introduce \( \text{Func}(B_X,A) \) turns on nothing more than the abstract consideration that two people might share \( B_X \), and yet just one of them perform

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3 Perhaps that is why Jerry Fodor thinks that the special sciences are in a different position with regard to *ceteris paribus* clauses than physics. See *Psychosemantics* (Cambridge, Mass.: M.I.T. Press, 1987) pp. 2–6.
A. And that consideration shows only that $B_x$ leads to $A$ defeasibly, in the fashion of explanatory conditions generally; it leads to $A$ only under suitable conditions, that properly remain unmentioned. So characterized, in other words, desires would be worse than redundant in psychological explanation of action: it would be a methodological mistake to try to put them in. Given that the one fixed point in this debate is that desires do have a central and distinctive role in action explanation, this can hardly count as a defence of the Humean side of the case.

Indeed, things are even worse than this. For even if it were true that the explanation of $A$ must also mention that suitable conditions were fulfilled — that $\text{Func}(B_x,A)$ obtained — this would give us no reason to think of those conditions as constituting a further \textit{psychological} state. As we noted, suitable conditions clauses are not in general able to be couched in terms of the theory to which their associated explanations belong. The Humean might as well have argued that since a rolling stone gathers no moss \textit{only under suitable conditions}, it gathers moss \textit{unless it has the right psychological profile}. The bare functional argument casts $\text{Func}(B_x,A)$ as a \textit{desire}, on the grounds that it disposes the agent, given certain beliefs, to act in a certain way. Those grounds are simply irrelevant, however, unless there is an independent basis for thinking that $\text{Func}(B_x,A)$ is at least a psychological state.

Humeans might respond at this point by saying that as they envisage it, $\text{Func}(B_x,A)$ is not just the set of factors gestured at by a suitable conditions clause. Rather it is something analogous to the acidity condition mentioned in (3): specifically, an independent non-cognitive desire. However, what grounds are there for thinking that there is any further place for such a desire, once all the relevant beliefs have been identified? The bare functional argument was intended precisely to supply such grounds, and our analysis has shown that it fails: it only makes a case for a gap that shouldn't be filled anyway, namely the place occupied by a suitable conditions clause.

In alleging an incompleteness in (5), the Humean thus faces a dilemma. If the gap is one which the cognitivist might be expected to countenance, then what fills it cannot be cast as a non-cognitive desire, indeed even as a psychological state. If on the other hand what is supposed to fill the gap is a desire of that kind, then it is a gap which the cognitivist has been given no reason to recognize.

\section*{II Actions and Inferences}

So much by way of diagnosis of the misguided attractions of the bare functional argument. In case there are lingering pockets of sympathy for the argument, however, we want to administer a further dose of adersive therapy. We want to show that the argu-
ment gets out of hand, leading to absurd results elsewhere in psychology.

As we described it, the bare functional argument is addressed to the process whereby beliefs — including beliefs which double as desires — allegedly lead to action. But what is to stop the argument being applied to other psychological processes, such as the inferential process whereby beliefs lead to belief? Consider for example a case in which X is led from the belief that if P then Q and the belief that P to the belief that Q. We might represent this as

(7) \( C_X \Rightarrow B_Q \)

where \( C_X \) comprises all the relevant cognitive precursors of the psychological event in question (including presumably the belief that if P then Q and the belief that P). If the bare functional argument were any good, would it not entail that (7) has really to be spelled out as

(8) \( C_X + \text{Func}(C_X, B_Q) \Rightarrow B_Q \)

As in the original case, \( \text{Func}(C_X, B_Q) \) is a non-cognitive state — by assumption, all the relevant cognitive states are in \( C_X \). So if the bare functional argument shows that there is no intentional action without non-cognitive desire, it would seem to show equally that there is no inferred belief without a corresponding non-cognitive state. Like action, inference cannot be entirely a cognitive matter.

This is crazy enough, but more is to come. The argument threatens to escape vertically, as well as horizontally. For suppose that in place of \( B_X \) in (5) we now put \( BD_X \) — our agent’s total state of belief and desire, as the Humean construes them. What is to stop us applying the bare functional point even to this case, arguing that since beliefs and desires only lead to action in an appropriately constituted agent,\(^4\)

(9) \( BD_X \Rightarrow A \)

needs to be filled out to

(10) \( BD_X + \text{Func}(BD_X, A) \Rightarrow A \)

Thus if it ever got going in the first place, the bare functional argument would be in great danger of getting out of hand, ramifying in two unwelcome directions. The Humean therefore needs a

\(^4\)If this seems contentious, it may be because of a residual attachment to the idea that desires play the explanatory role of a suitable conditions clause, and hence necessitate action in the presence of belief. This is a further indication of the extent to which the suitable conditions construal distorts the orthodox belief/desire model of action explanation. After all, that model at least finds room for the idea that lack of rationality may defeat the process whereby beliefs and desires ordinarily give rise to action.
means to tame it, a principle with which to restrict its use to cases in which the psychological process in question leads from beliefs to action. What principle could this be, however, other than the very one at issue — namely that cognitive states by themselves cannot motivate action?

III DESIRES AND DISPOSITIONS

Although the analogy between action and inference can thus be construed as the basis of an additional objection to the bare functional argument, there is another construal under which it may seem to hold out hope for the Humean position. We will conclude with a discussion of this appearance — this illusion, as it turns out to be — for it brings us back nicely to our starting point.

It is commonplace in the discussion of inference that there may seem to be a missing premiss in any argument whatsoever. Do the premisses 'If P then Q' and 'P' support the conclusion 'Q'? Or do they require the addition of the premiss, 'If, if P then Q, and P, then Q'? We answer in the affirmative at our own risk, for then we face the regress that the Tortoise pressed on Achilles. Yet a negative answer seems too blunt, since there is a prima facie need for the additional premiss. The way out of this traditional dilemma is by now well known, however. The fact recorded in the additional premiss is certainly presupposed in the judgment that the argument is valid and that the premisses therefore support the conclusion. But that it is presupposed does not mean — on pain of regress — that it has to be recorded in a premiss. It may correspond, not to a proposition expressed in the argument, but to a rule of inference that the argument displays.

These observations are relevant to our concerns, because they bear on explanation as well as justification. They suggest that if we explain someone's coming to believe that Q by the fact that she has also come to believe that if P then Q and that P, then the explanation contains a gap similar to the acidity condition gap which is explicitly filled in (3). Assuming that rationality is relevant, the full explanation ought also to mention the fact that the subject is disposed to follow the rule of inference licensing the argument: she has the corresponding habit of inference.

Given this explanatory message, the Humean may be tempted to argue as follows: The lesson in the case of inference is just the sort of lesson I wish to emphasize in the case of action. As beliefs rationally generate a new belief only in the presence of a suitable habit of inference, so in my view beliefs rationally generate action — or even the intention to act — only in the presence of a corresponding habit. The habit in the case of action I describe as desire. My picture is that when an agent is moved to Φ by the belief, say, that Φ-ing is fun, the belief occasions the action only so far as the
agent instantiates the habit of acting in the light of that property. And the habit of acting in the light of the fun-property is simply the desire for fun.'

The fallacy in this argument should by now be familiar, however. For all that any of the premises say, the habit that the Humean here identifies as desire may be a cognitive state — and therefore, by assumption, already in B_X. After all, we think of the habit of inference involved in the example of inferring that Q as cognitive. We think of it, as we think of belief, as being appropriate or inappropriate in the light of how things are: if not true or false, then at least valid or invalid. The cognitivist about desire might be thus happy to think of desire as something like a habit of inference, since this is not to exclude the possibility that desires are also subject to assessment in the light of how things are in the world.

As before, in other words, the Humean here finds no escape from the dilemma that the bare functional argument turns out to conceal. The Humean wants to show that a belief-based action explanation is necessarily incomplete, in a sense which is at one and the same time psychologically significant and independently demonstrable. These requirements turn out to be mutually exclusive, however. The 'suitable conditions' incompleteness is demonstrable but psychologically insignificant. And although the alternatives may well be psychologically significant, a demonstration that they constitute an incompleteness would have to call on the very principle at issue, namely that cognitive states cannot themselves be motivational.

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**AN OBJECTION TO WRIGHT’S TREATMENT OF INTENTION**

*By Alexander Miller*

CRISPIN WRIGHT has recently suggested that 'intentional and sensational states ... are, in effect, “secondary”: that subjects' best judgements fix the extension of the truth predicate among ascriptions of belief, desire, and feeling to them' ([1], p. 22). In what follows I argue that on Wright's own conditions for a class of concepts being 'secondary', it cannot be correct to construe the concept of intention as secondary in that sense.