

Goldfinch, A. (2015). *Rethinking evolutionary psychology*. Palgrave Macmillan.

2.7 Methodological Objections

Original source:

Even if considerations of selection do not guarantee massive modularity in any shape, the possibility remains that there might nevertheless be psychological adaptations and that, accordingly, it might be useful to hypothesise between adaptive problems and possible adaptive solutions. But even this has been challenged. The following objections are activated at different points during the methodological process of hypothesising between adaptive problem and adaptive solutions. And, as we will see, they are legitimate and pressing questions—questions that many have taken to have sufficiently destabilised methodological adaptationism in psychology.

From explanation:

Goldfinch suggests that evolutionary psychology is potentially useful for generating hypotheses to explain organisms' traits. The method is to think of selection pressures as "problems" that can decrease an organism's reproductive fitness and variations in traits as potential "solutions" to those problems that increase reproductive fitness (i.e., allow an organism to reproduce its genes at a higher rate). These problems and solutions can be proposed as testable hypotheses. Goldfinch then describes several objections to this method that many scholars have found to be sufficient reasons to reject evolutionary psychology.

2.7.1 No Stable Problems Objection

Original source:

Were adaptive problems sufficiently stable to allow selection to engineer stable solutions? What if the relationship between environments, especially social environments that involve interdependent decision problems, and evolving populations is far more dynamic than evolutionary psychologists realise?

Sterelny (1995: 372) claims that there are, in fact, 'no stable problems to which natural selection can grind out a solution'. This argument also appears in Sterelny and Griffiths (1999). As you can see, this kind of argument, if successful, would pull the entire rug from underneath evolutionary psychology. The thought is that evolutionary arm races destabilise adaptive problems. And as evolutionary psychology trades on adaptive problems, evolutionary arm races also destabilises evolutionary psychology.

An arms race involves feedback: a problem arises, a solution emerges, but the emergence of the solution creates pressure on the original problem, changes it, transforms it, thereby requiring the solution to change, and so on. Sterelny observes that, 'As men evolved to detect ovulation, women evolve to conceal it. As we evolve to detect cheaters and others of uncooperative dispositions, emotion-mimics evolve better and better fakes of a trustworthy and honest face' (1995: 372). So evolutionary psychology methodology seems to trade on an overly simplistic characterisation of evolution, on stable adaptive problems and adaptive problems. How then can that methodology possibly capture this dynamic, this interactive character of evolution?

Do evolutionary arms races destabilise adaptive problems? I don't believe they do. But I shall leave that issue for the next chapter because it's important to continue building the strongest possible case against methodological adaptationism in psychology.

From explanation:

Goldfinch asks questions that challenge a certain evolutionary model in which stable environments are said to pose problems for species. Those species solve those problems by evolving traits that better match the stable environments in ways that increase their reproductive fitness. According to Goldfinch, Sterelny challenges this model by arguing that environments actually contain no stable problems. Sterelny argues that species' changing traits also change the environment in which the species evolve. Thus, Sterelny argues, environments contain only dynamic problems, not stable problems as assumed by evolutionary psychology.

2.7.2 The Fine Grain Problem

Original source:

So let's assume there are adaptive problems. How coarse are those problems? How do we individuate adaptive problems? How do we characterise them? How do we individuate them?

The problem of how to individuate correctly domains that specialised adaptations are purported to operate on is what Sterelny and Griffiths (1999) call the 'grain problem'. How coarse or fine is the grain of a domain? How specific is the adaptive problem? Sterelny and Griffiths (1999: 328) ask us to consider the domain of 'mate selection':

Is the problem of mate choice a single problem or a mosaic of many distinct problems? These problems might include: When should I be unfaithful to my usual partner? When should I desert my old partner? When should I help my sibs find a partner? When and how should I punish infidelity?

The correct identification and characterisation of adaptive problems is not obvious. Is 'mate selection' one adaptive problem, with several sub-problems? Or is 'mate selection' a reference to many distinctive adaptive problems? There seems to be no principled way of answering this. It seems arbitrary.

From explanation:

Even if there are stable problems that evolution can solve, Goldfinch notes, it is not clear how we decide what counts as one problem vs. several problems. He describes Sterelny and Griffiths' "grain problem" argument: it is impossible to know how detailed or fine-grained evolutionary problems are. For example, they ask whether mate selection is one problem or several distinct sub-problems, each with their own evolutionary solutions. The inability to offer non-arbitrary way to identify problems, they imply, creates a problem for evolutionary psychology.

2.7.3 No Constraints Objection

Original source:

But suppose we have fixed the grain of the problem according to our own satisfaction. We can now reason from the adaptive problem to the adaptive solution—or vice versa. But how constrained will our reasoning be? How elastic? In other words, from an adaptive problem can we straightforwardly read off an adaptive solution (or vice versa)? Or will there be many possible reasoning trajectories—perhaps too many?

A long standing, deeply entrenched worry in the literature is that the reasoning between adaptive problem and adaptive solution is too elastic. Fitness considerations can be so flexible that it seems possible to reason between adaptive problem A1 and a spectrum of possible adaptive solutions S1, S2, ... Sn. And so too the other way: with sufficient ingenuity, fitness benefits can be imagined for almost any observed behaviour. This concern is frequently cashed out into a very strong position: that evolutionary psychology hypotheses are unconstrained, that there is a free for all, a Darwinian Wild West of hypotheses. For example, Richardson declares that ‘Just about anything is consistent with some evolutionary model or other’ (2007: 65). Gray et al. (2003) approvingly quote Rosen (1982), who quips that there are only two limiting factors that constrain adaptation hypotheses: the imagination of the theorist and the gullibility of the audience.

So there is indeterminacy with respect to both the grain of the adaptive problem and, more seriously, in the (potentially runaway) multiplicity of possible hypotheses. But let us suppose that we have settled upon a hypothesis. Suppose, despite the indeterminacy, the elasticity, we have arrived at a hypothesis: that adaptive problem A1 is solved by psychological adaptation S1. How good would that be as an explanation?

Frome explanation:

Even if we ignore these two objections and assume that we can hypothesize how adaptive solutions might address adaptive problems, Goldfinch asks how we should limit the types of solutions we propose. He notes a long-standing worry that evolutionary psychology has few limits on the types of explanations it offers for how traits might be adaptive since there are so many ways that traits might affect organisms’ fitness.