# Rehabilitating Introspection

## *A Procedure for a First Person Psychical Science*

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**Abstract.** In this paper I argue that the lack of progress in developing a science of the mind is not because a mind can not be objectively observed, but rather because human minds are highly individualized. I then propose a procedure for circumventing this individualization problem and offer a number of insights based on what are presumed to be intersubjectively reproducible features of my own mind.

The insistence that psychology be anchored in, if not necessarily restricted to, "the third-person point of view… [of] ...objective physical science" (Dennett, 1991, pp. 71-73) has led to serious errors of omission in the behavioral sciences. Gleitman's *Psychology* (1981), at one time the bible according to cognitive science, offers over 700 pages on everything from acquisition curves to zygotes, without a single reference to self-esteem, feelings of worthlessness, guilt, self-worth, etc. And, Eibl-Eibesfeldt's sizeable tome on *Human Ethology* (1989) somehow manages 850 pages on topics ranging from abstraction to zebra finches, while studiously ignoring this same class of features. The same applies to *The Adapted Mind* (Barkow, Cosmides and Tooby, 1992), viewed by many as the cornerstone of evolutionary psychology. To me, this suggests that what might be referred to as 'the Dennett view' of "the methodological scruples of science" - one that has pretty much dominated psychology for the past seventy-five years or so - is badly in need of an overhaul.[1]

> *One of the characteristics of the majority of modern psychological theories, aside from the arbitrariness of so many of their claims, is their frequently ponderous irrelevance. The cause, both of the irrelevance and of the arbitrariness, is the evident belief of their exponents that one can have a science of human nature while consistently ignoring man's most significant and distinctive attributes* (Nathaniel Branden).

## A Procedure for a First Person Psychical Science

Facilitated by the isomorphism customarily apparent within classifications of natural objects (e.g., atoms of oxygen), verification in science is not so much a matter of public demonstration as a manifestation of our collective faith in intersubjective reproducibility (e.g., replicating an observation or experiment). As such, there would seem little reason, in principle, for treating a scientist's first person observations of the private events of his own mind as less credible than "empirical" observations of physical events, so long as they can pass the muster of reproducibility. But there's the rub.

Unlike oxygen, honeybees and Mustang convertibles, in humans there is a considerable amount of individualization, no doubt resulting from nature's increased reliance on individual imagination and judgment ("reasoning"). But since this is an order problem rather than a privacy problem, the solution is, not to banish introspection, but to differentiate (stratify) between the more evolved individualized features (specific "reasoning", specific higher emotional behavior, etc.) and the more mechanical, isomorphic processes lower in the evolutionary scheme of things (perception, fear, anger, etc.). Once accomplished (e.g., Diagram II), the individualization can then be dealt with by applying corresponding amounts of

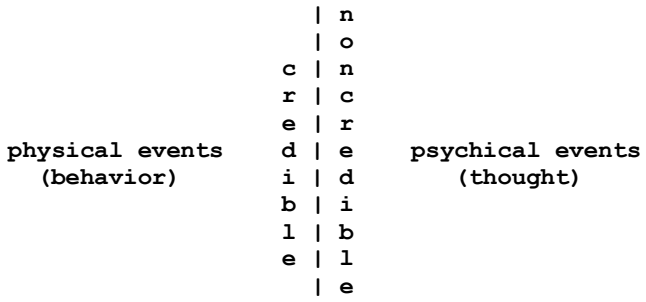
abstraction and generalization to those features (both thought and behavior) where individualization can be presumed to be most rampant (Diagram I).

For example, one's own individualized conclusions for why one selected product A over product B, reminiscent of the technique employed in an influential critique of introspection (Nisbett and Wilson, 1977), would not customarily be construed as an appropriate first person datum, whereas feelings of anger, worthlessness, etc. (enduring structures) would.[2] Diagram II is itself based on first person observations of a single mind (my own), which I assume others can confirm, reject or improve upon (as a work in progress) simply by consulting their own mind as an example of how this might proceed. For the remaining skeptics, it is perhaps Nisbett and Wilson themselves who have offered the most convincing testimony that the "treacherous incubator of errors" (Dennett) they have unearthed may have less to do with the study of human minds (introspection) than with the study of human beings:

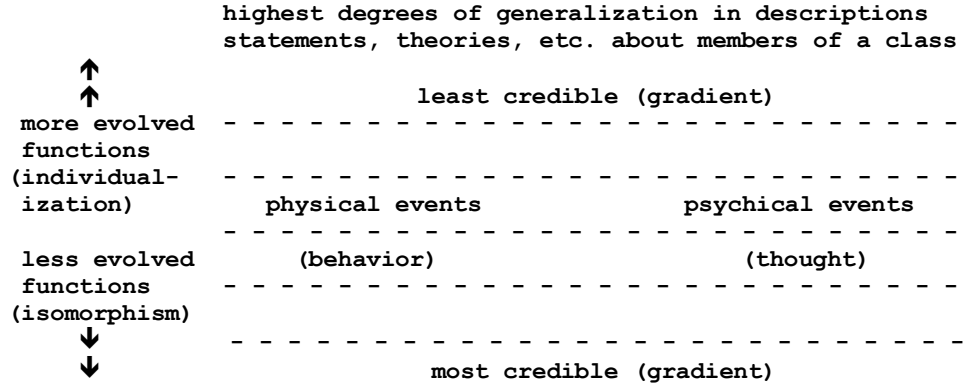
> *The reader is entitled to know that the stimulus situations were chosen in large part because we felt that the subjects would be wrong about the effects of the stimuli on their responses. We deliberately attempted to study situations where we felt that a particular stimulus would exert an influence on subjects' responses but that subjects would be unable to detect it, and situations where we felt a particular stimulus would be ineffective but subjects would believe it to have been influential. It is even more important to note, however, that we were highly unsuccessful in this attempted bias. In general we were no more accurate in our predictions about stimulus effects than the subjects proved to be in their reports about stimulus effects. Most of the stimuli that we expected to influence subjects' responses turned out to have no effect, and many of the stimuli that we expected to have no effect turned out to be influential.*

The Domains of Credibility

pertaining to the kinematics
(thought and behavior)
of systems at the holistic
level of description




Ia. Behaviorist/Positivist Conception




Ib. Revised Conception

Diagram I

## Phylogeny of Psychical Functions

### Organic Kingdom

| | Cognitive Functions (phylum) | Conative Functions (phylum) |
|---|---|---|
| | **Higher Cognition (class)**<br>**(analogical "reasoning")** | **Higher Emotion (class)** |
| | Associations arising from 'the cognition of abstruse similarity and difference', e.g., electricity is like water flowing in a pipe. Highly individualized. | Self-worth (ego) related need and disorder (anxiety, depression, suicide, etc.) serving no obvious biological purpose. Specific objectives and behavior highly individualized and frequently involved with abstract notions (love, honor, morality, meaning, purpose, immortality, etc.). |
| ↑ homo saps ↑<br>↓ shared ↓ | **Lower Cognition (class)**<br>**(conditioning)** | **Lower Emotion (class)** |
| ↑<br>↑<br>more evolved functions (individualization)<br><br>less evolved functions (isomorphism)<br>↓<br>↓ | Associations arising from 'the cognition of obvious similarity and difference', e.g., this A + B sequence is like one's previously observed. Inter-environmental individualization, intra-environmental isomorphism. Likely progenitor of higher cognition. | Short term motivational states (fear, anger, sexual arousal, curiosity, etc.) serving obvious biological purpose. Non-volitional psychical states evoked by singular relatively well defined events (stimuli), with some degree of individualization superimposed on isomorphic evoking events and responses. |
| | **Perception (class)** | **Physical Pain and Pleasure (class)** |
| | Isomorphic cognitions of stable low level information (discernment of objects, etc.). | Short term isomorphic motivational states resulting from biologically significant tactile experience. |
| ↑"observable"↑<br>↓ inferable ↓ | **Instinctive Functions (phylum)** | |
| | Likely progenitor of cognitive and conative functions found in the human psyche. Highest probability of psychical isomorphism inferred from isomorphic behavior within classifications of lower animals. | |
| ↑ animate ↑<br>↓ inanimate ↓ | **Inorganic Kingdom** | |
| | Postulated pan-psychism as proto-mental origin of observed functions. Extreme isomorphism likely and inferred from isomorphic behavior within classifications of inorganic matter (e.g., atoms of oxygen). | |

**Diagram II**

## The Phylogeny

***Higher Cognition:*** Not uncommonly, deductive syllogisms such as 'Socrates is a man, all men are mortal, therefore Socrates is mortal', are offered as examples of reasoning. This is not how I am employing the term in the phylogeny, which is why it appears in quotation marks. I mean for it to refer to whatever thought process lies at the heart of ampliative inference, a process often associated with 'Aha!' or 'Eureka!' experiences, but commonly falling below the threshold of an identifiable event in which much, if not most, of the processing is not introspectively available. Even so, by applying a bit of the abstraction and generalization prescribed by our procedure (and in contrast to the Nisbett and Wilson approach to the study of "higher order, inference based responses"), I believe enough is available for us to make a reasonable guess that the cognition of similarity and difference (analogical/metaphorical "reasoning") does most of the heavy lifting. But then I am hardly the first introspectionist to arrive at that conclusion:

> *All kinds of reasoning consist in nothing but a comparison and a discovery of those relations either constant or inconstant, which two or more objects bear to each other* (David Hume, 1739).

***Lower Cognition:*** My unorthodox definition of conditioning as 'the cognition of obvious similarity and difference' stems from my unorthodox definition of "reasoning" as 'the cognition of abstruse similarity and difference' which, when combined with the former, offers a number of explanatory advantages:

1. It allows for continuity between the two concepts and, as such, allows for an appreciation of how "reasoning" might have evolved from conditioning. In this view, the ability to understand electricity by comparing it to how water flows in a pipe is just an extension of the process that underlies an organism's ability to understand a currently observed A + B sequence (e.g., Pavlov's dogs) by comparing it to ones previously observed.

2. It allows one to forego syllogistic deduction ('Socrates is a man…", etc.) as a paradigm for reasoning in that, based on the analogy with conditioning, concluding that Socrates is mortal can be viewed as analogous to a conditioned mouse remembering it must go left at the fourth fork in a maze. In much the manner the mouse's recollection would be construed as more a manifestation of conditioning <u>that has already occurred</u>, we might also conclude that deducing Socrates is mortal is more a manifestation of reasoning <u>that has already occurred</u>, and perhaps closer to remembering than reasoning, at least in an ampliative sense of coming to a deeper understanding of the nature of reality, and thereby serving to produce a net increase in one's rationality.

   > *If analogy were merely a special variety of something that in itself lies way out on the peripheries, then it would be but an itty bitty blip in the broad blue sky of cognition. To me, however, analogy is anything but a bitty blip -- rather, it's the very blue that fills the whole sky of cognition – analogy is everything…* (Douglas Hofstadter, 2001).

3. It allows for a naturalistic indeterminism in that one can surmise that once an event sequence or feature has become cognized it is easy to appreciate how one might then have <u>the option</u> of following the sequence or conforming to the feature or not, and thereby becoming <u>less determined</u> by it, i.e., aware of more options than prior to the cognition. Another way of saying this is that it lends itself to the suspicion that there might well be an inverse correlation between 'being cognizant' or 'being rational' and 'being determined'.

   > *The one great difference between man and all other animals is that for them evolution must*

> *always be a blind force, of which they are quite unconscious; whereas man has, in some measure at least, the possibility of consciously controlling evolution according to his wishes* (Haldane and Huxley).

4. It affords a linkage between "reasoning" in the ampliative sense and rationality, in that rationality could be construed simply as 'the cognitive product of "reasoning" (ampliative inference)', with the Latin/Greek origin of 'ratio' meaning 'to compare'.

***Higher Emotion:*** From the standpoint of the objectives of a substantive science of human nature, the neglect of ego/self-worth related emotion within the behavioral sciences (e.g., Gleitman, 1981, Barkow, Cosmides and Tooby, 1992, etc.) is reprehensible in that (1) rarely in science is there an opportunity to attribute such a vast array of disparate phenomena to a single causal factor, of which the few needs mentioned in the phylogeny are only the tip of the iceberg, but also because (2) the presence of a non-physical need (maximizing self-worth) in a species of naturally selected organism is biologically bizarre at a minimum and, as such, might readily constitute one of those most treasured of all scientific assets, a theoretical anomaly (Kuhn, 1970). This becomes all the more apparent when viewed from the first-person perspective in that, while what others think of us is often important, the ultimate arbiter of higher emotional well-being is what we think of ourselves, as any one with half a mind is well aware. It therefore seems unlikely that the self-worth complex can be dismissed as little more than a fitness maximizing instinct for social status, particularly given the likelihood that dominance hierarchies can be maintained in a more biologically expedient manner (e.g., animal appetites counter-valenced by fear), and without all the deleterious side effects (feelings of worthlessness, anxiety, depression, suicide, etc.) :

> *Discussions of scientific method have tended to stress problems of testability, while neglecting...those aspects of the universe which in some sense are most central and significant for the area of reality with which the science deals* (Zener, 1962).

***Lower Emotion:*** In contrast with higher emotion, the biological functions served by the various lower emotions are usually fairly easy to decipher. But here too, the first person perspective raises issues and offers insights that are not normally given their due.

Presumably, Mother Nature has gone to a lot of trouble to evolve our capacity for reflective thought precisely because it renders it possible for us to have a fairly good idea of what will be in our long range best interest and, just as crucially, to be able to act upon that information when undertaking a prudent course of action. But if this is so, why then are there motivational states such as fear, anger and sexual arousal, that urge us to engage in random acts of strategic stupidity on those innumerable occasions when, at some later point in time, we end up having to ask ourselves, "Now why did I do that?" If prudence is such hot stuff from an evolutionary standpoint, why isn't Mother making it a bit easier for us to exercise it more prudently?

The answer, I believe, is pretty much what you might expect. The reason the lower emotions seem so out of context with our more reflective concerns is precisely because they are remnants of a pre-reflective survivalist heritage -- vestigial remains of ancient stimulus response mechanisms which, prior to the advent of prudential insight, were chiefly responsible for perpetuating ourselves and our genetic blueprints. And their lack of continuity with our more reflective concerns is because, at some point in our dark and distant past, survival was not the result of any overall intention or "will" to survive, but simply the non-intentional cumulative effect of a number of independent intentions or "wills" to exhibit stereotypical responses to immediate stereotypical stimuli, but which were probably undertaken with little if any understanding of the overall objective they were "designed" to achieve.[3] In other words, the reason the lower emotions so often urge us to do stupid stuff is because, in a manner of speaking, they don't know what they are doing. Their strategic incoherence is due to the fact that the id is not so much an evil

monster as a bunch of bungling idiots (Larry, Curly and Moe come to mind), and in which case Freud's mistake was not in positing little men in the brain (the id, ego and superego), as Ryle (1949) and Dennett (1969) have maintained, but in not positing enough of them.

***The Inorganic Kingdom:*** My postulated panpsychism is based on the realization that the only observable physical relationships are spatial/temporal, and therefore that our propensity to posit causal agency in the physical realm must be based on our first person experiences with the mind's affectations and effectations. This assumption appears to be further corroborated by the realization that the earliest vestiges of causal explanation took the form of spatially non-extended self-conscious agents (spirits, gods, etc.) suggesting that the discovery of causal explanation and the discovery of self-consciousness were one and the same discovery. If I am right about this, then on every occasion a physical scientist postulates causal agency, he is actually doing psychology, it's just that the physical scientist's "ghosts" (atoms, leptons, neurons, genes, etc.) are presumed to be a lot dumber and more predictable. But they are ghosts, nonetheless (i.e., non-observable causal agents inferred from observable spatial/temporal effects).

> *Physical concepts are the free creations of the human mind and are not, however it may seem, uniquely determined by the external world* (Albert Einstein).

## Tongue-in-cheek Dualism

> *For years and years, philosophers took thoughts and beliefs to be modifications of incorporeal Cartesian egos. Happily, since early in the present century it has become clearer that thinkers are complex organisms embedded in natural, physical environments and are nothing (metaphysically) more than that: materialism in one form or another has prevailed ever since* (Lycan, 1988).

While it is easy to appreciate the appeal of not having to contemplate the messy possibility that nature might be comprised of more than one type of "stuff", it should also be understood that the ontological economy afforded by materialism rests on a tenuous syllogism:

Premise: Physical science has proceeded at the speed of light while psychology has remained a basket case.
Conclusion: Mechanistic materialism is true.

Given my suspicions of an inverse correlation between 'being cognizant' and 'being determined' ('Lower Cognition'), and my depiction of the genesis of causal explanation ('The Inorganic Kingdom'), it should come as no surprise that I have a somewhat different take on this matter:

Premise: Physical science has proceeded at the speed of light while psychology has remained a basket case.
Conclusion: Psychology is harder to do, initially at least, e.g., the individualization problem.

It should also come as no surprise that I prefer a metaphysics that is capable of steering between the Scylla of materialism and the Charybdis of idealism -- a tentative dualism in which both mind and brain are construed as equally "real", but in which there is no commitment as to just how "real" that might eventually turn out to be. In this view, natural selection operates, not on the brain, but rather on the postulated non-observable causal substrate presumed to give rise to our perception of a brain residing in four coordinates of space-time via one route, and the apperception of thoughts and feelings residing in a single coordinate of time (presumably) via another route. And of these two sources, there should always

be a healthy appreciation for the likelihood that it is the latter route that has spawned the early vestiges of causal explanation (contra to Kant's a priori arguments) and, as such, may yield the most direct information regarding the causal fabric of rational agency. If so, then perhaps my proposed procedure for a first person psychical science will not prove to be quite the exercise in futility some might have envisioned.[4]

*Everything should be made as simple as possible, but not one bit simpler* (Albert Einstein).

## Summary

In this paper I have proposed a procedure for circumventing the individualization problem that might well lie at the core of introspection's less than illustrious career -- a problem I have maintained to be associated more with the study of human beings than with the study of human minds. Among the more interesting developments of employing this procedure has been the presentation of a phylogeny of psychical functions along with a number of insights among them (1) the observation (Higher Cognition) that "reasoning", at least in the ampliative sense of term, appears to be largely a matter of cognizing similarity and difference and, as such, more analogical than logical in nature; (2) the discovery (Lower Cognition) of a possible inverse correlation between 'being cognizant' and 'being determined'; (3) an increased appreciation for the centrality of ego/ self-worth related emotion both as a motivational factor in human affairs and as a matter of scientific interest (Higher Emotion); and (4) reason to suspect that only man is likely to be endowed with anything approaching a unified "will to survive" (Lower Emotion). I have concluded by proposing a metaphysics more compatible with the spirit of taking the mind seriously -- an ontological agnosticism of sorts (tongue-in-cheek dualism) that can serve as an alternative to mechanistic materialism.

## Footnotes

1. I am hardly the first to suggest that psychology has been adversely affected by what is basically a metaphysics (mechanistic materialism) masquerading as an epistemology (logical positivism and its descendants):

> *From early in this century to the present day, psychology has been characterized by a number of polarities reflecting various conflicts and tensions in the field… By the late 1950's voices expressing deep dissatisfaction with the discipline appeared. Most notable was the appearance at this time of the monumental* Psychology: A Study of a Science, *edited by Sigmund Koch. In that work, one eminent psychologist after another, after many years -- or even a lifetime of research -- admitted to strong doubts about what had been achieved, and some suggested that our most basic assumptions had to be questioned.*
>
> *Koch's diagnosis was incisive. He argued that psychology was unique insofar as "its institutionalization preceded its content and its methods preceded its problem's… The 'scientism' that many see and decry in recent psychology was thus with it from the start... From its earliest days of the experimental pioneers, man's stipulation that psychology be adequate to science outweighed his commitment that it be adequate to man"* (p. 783). *And even more crucially, Koch went on to point out that "psychology still bases its understanding of vital questions of method on an extrinsic philosophy of science which, in some areas, is* [forty] *years or more out of date"* (Manicas and Secord, 1981).

2. It's no accident that I have incorporated references to techniques such as differentiation, stratification, abstraction, generalization, etc. and terms such as "enduring structures" when referring to my own proposed procedure. There is a substantial body of literature (e.g., Bhaskar, Scriven, Hanson, Harre, Madden, etc.) critical of another one of the components of "the Dennett view" of "the methodological scruples of science", its obsession with Humean constant conjunctions, of which the Nisbett and Wilson paper is an all too familiar example.

> *Worse than taking falsifiability as the mark of science is taking psychology to be typical of science. Its near-total eschewal of explanatory hypotheses rules it out. Despite its interesting-sounding name, its subject matter isn't even the mind. Psychologists just note regularities in behavior, which is nothing like science. And that's why it's so boring.*
>
> *A while ago, there was a discussion… about whether traditional academic psychologists should allow evolutionary thinkers into its hallowed halls. I think that gets things in reverse. Evolutionary thinkers should consider whether <u>we</u> should tolerate psychologists in <u>our</u> midst. I say <u>no</u>! Let's give traditional psychologists the boot. Get them the hell out! They are corrupting evolutionary thinking with their eschewal of explanatory hypotheses, their childish obsession with numbers and statistics, and their incredibly naïve methods* (Jeremy Bowman).

3. To further confuse matters, it appears that, in her infinite wisdom, Mother Nature has apparently exapted (jury-rigged) a number of the lower emotions to assist in the shepherding of self-worth (fear of asking for a date or giving a speech, anger over an insult, sex as a basis for endearment, etc.), a task for which they are often understandably ill-suited. But then what else would you expect from a blind mechanical process?

4. Currently in the works is a paper that presents an outline of a theory of ego/self-worth related emotion based on the premise that 'feelings of worthlessness' are a maladaptive byproduct of the evolution of rationality. In addition to conforming to the prerequisites of the procedure prescribed in this paper, this proposed theory can also be construed as resulting from an attempt to address a theoretical anomaly ('feelings of worthlessness') in a preexisting scientific theory (the theory of natural selection) along the lines prescribed by Thomas Kuhn in his influential work (1970), 'The Structure of Scientific Revolutions'. In a subsequent paper, I also foresee the possibility of corroborating this theory of emotion in terms of one of its implications, i.e., the implication that our moral norms issue from an implicit theory of rationality in which 'being rational' is simply a matter of 'being objective'.

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