

Column 10: Exploring Mysteries of Living: More Fictitious Causes



Copyright © 2019 by **Stephen F. Ledoux**

A Los Alamos member of The International Behaviorology Institute

Why these Columns? Because human behavior causes global problems, and solving these problems requires changes in human behavior... So *everyone* benefits from knowing something about the natural science of human behavior (called behaviorology) that these columns relate. Having first appeared as newspaper columns, these columns began appearing on **BehaviorInfo.com** starting in 2020.

Understanding, and being able to spot, a range of fictional explanations for behavior provides a skill. The use of this skill prevents analysis errors when trying to understand the causes of behaviors, including problem behaviors, from local to global. So here we consider some more types of explanatory fictions.

In general these "fictions that fail to explain" are not explanations at all. Yet they can cause harm, even if only by distracting us from understanding the real causes of behavior, and delaying any needed interventions.

Still, remember that our most fundamental objection to fictitious accounts is *not* that they are fictional. The real objection is that such accounts are irrelevant to scientific knowledge and applications about behavior. Fictional accounts involve no variables that direct experimental manipulation can show to be functionally related to behavior.

A common fictional explanation for behavior is one we call *circular reasoning*. Our traditional cultural conditioning can compel inferring a "cause" of some sort from an observed behavior. Such a causal statement can sound linguistically satisfying. But this supposed cause gives us no new information about the behavior, which gives the supposed cause the status of a fictitious explanation. We call it circular reasoning, because the cause appears as an inference *from the very behavior that it is supposed to explain*. For this reason some people prefer to call it an *inferential circularity*.

Consider this example. A non-behaviorological practitioner or equally scientifically uninformed person might be faced with a student's earning poor math grades. We have a fictional account if past cultural or educational conditioning evokes statements from them like "a 'mental block' within the student causes the poor math behavior." Some folks explicitly call it a *math block*. Either way, this statement gives us no new information about the poor math behavior. Instead its circularity becomes clear to those who ask some

basic questions:

“Why does the child do poorly in math?”

“Because he has a mental math block.”

“How can you tell [or, How do you know] that he has a mental math block?”

“Because he does poorly in math.”

“But, why does he do poorly in math?”

“Because he has a mental math block.”...

And so on, around we go in a circle, getting nowhere! The circular cause gets inferred from the behavior that needs an explanation. Invent some fake physiology, and the absurdity increases, as we see next.

Here is a somewhat common fictional explanation for behavior. My students found it fascinating, at least after they became comfortable pronouncing it. We call it *gratuitous physiologizing*. This involves inventing phony physiological accounts for behavior (the “physiologizing” part), and using them, because the physiological–analysis level makes the phony part sound more scientifically credible (the “gratuitous” part).

But the physiology is merely made up. It is often circular. It also often fits under nominal fallacy (discussed in a previous column). The mistaken physiological credibility makes these inner fictional causes look like variables separate from the behavior they are to explain. Closer inspection, however, reveals the lack of scientific status. The “cause” is not real, as an example will show. The “cause” is merely another type of fictional explanation for behavior.

For example, consider again a practitioner faced with a student earning poor math grades. Some types of experience might lead him or her to claim that this problem with math is due to a “minimal brain dysfunction” (an MBD) within the student. Why is the brain dysfunction “minimal?” Because the practitioner has had the student examined by a proper medical doctor, a neurologist, who cannot find any dysfunction of the student’s brain; nothing is wrong.

But something *must* be wrong, because the student is poor at math, and something must surely be causing this problem with math. Since nothing else seems responsible (not that much serious looking took place, apparently) the brain surely must be dysfunctional. If we cannot find the dysfunction, then it simply must be “minimal.” As this argument goes, if it was not minimal, then we would be able to find it, and would have found it.

The problem, however, is that the presumption of a brain dysfunction is gratuitous in the first place. It is unreal, invalid, unwarranted, merely made up. An initial assumption warranted by the situation, and worth exploring and fixing, as a practicing behaviorologist would, is that something about the student’s math–related environment is “dysfunctional.” For starters, consider these possibilities: Is the lighting adequate? Is the homework at the appropriate level? Is classroom assistance available? Is encouragement or help available at home? Would changing any of these help? Have contingencies yet evoked trying?

That the brain dysfunction is not real but gratuitous also becomes obvious from further scrutiny. Ask the circular–reasoning exposure questions:

“Why is the child poor at math?”

“Because he has an MBD.”

“How can you tell that he has an MBD?”

“Because he is poor at math.”

“But, why is he poor at math?”

“Because he has an MBD”... (and so on...).

Some school systems have actually used this “diagnosis.” I find that a bit scary.

Worse still, some practitioners, especially those with the kind of education that would allow or encourage gratuitous physiologizing, have no intervention strategies, stemming directly from their mentalistic analyses, that are appropriate for dealing with MBDs. This lack of intervention strategies generally extends not only to ineffective math-focused behaviors, but also to dysfunctional math-related environments.

Such practitioners can only fall back on coincidental or *intuitive* practices. That is, if these scientifically uninformed practitioners experience any success helping the math-poor student, that success must arise intuitively through practices that, coincidentally, are congruent with the natural laws governing behavior. Behaviorology enables practices "congruent with the natural laws governing behavior" by explicit design rather than by mere coincidence.

The dangers of explanatory fictions may be less important when the behavior being explained presents no problems, such as excelling in math being explained by “intelligence” (inherited or not). But those dangers can be crippling in the opposite case. Yet one can still achieve a type of control.

For example, the job specification of the practitioner with a math-poor student may supply the *practical* contingencies that require effective environment-controlling technologies that improve the behavior. The specification may even require him or her to document successful help for that student.

If he or she finds that student parked in front of a television set for five hours each day to the exclusion of study on school assignments, she or he may intuitively change the student’s environment by pulling the plug on the set (although better, scientifically grounded methods exist).

If the ultimate result of pulling that plug is that grades improve, then that *functional* control results from the environmental change. That functional control does not result from the practitioner’s mentalistically or cognitively focused explanatory fiction but in spite of it.

His or her analysis may inadvertently coincide with the successful intervention, but it is not functionally related to that intervention. And this fact remains unaltered even when the practitioner tries to tie his or her fictions to the successful intervention by insisting that unplugging the television must have diminished the mental block or MBD.

Real physiological events sometimes need direct investigation (by physiologists). But this still has little bearing on the emergence of an environment-change technology that affects behavior, math behavior in this ongoing example, as opposed to a more medical technology such as some form of drug therapy.

Drug therapy would be quite inappropriate for this example, and quite often inappropriate

for other examples as well, because less invasive behaviorological–level interventions would work if tried. Too often, instead, supposed physiological events are only hypothesized, invented, or theorized, which continues the well–criticized pattern of non–explanation that we call gratuitous physiologizing.

Writing these columns occurs separately from membership in The International Behaviorology Institute (TIBI, at www.behaviorology.org where you can always find more information and resources). The author is not speaking for TIBI, and the author and TIBI need not be in agreement. TIBI welcomes feedback, members, and donations (501.c.3). This is column 10 of 72.