

Addiction Postulates and Legal Causation, or Who's in Charge, Person or Brain?

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In this article, I address the persistent confusion over the meaning of a medical diagnosis of drug addiction or substance dependence in the courtroom, specifically in regard to legal judgments about the reasonable legal person, causation, and individual responsibility in civil actions. Using the example of the *Engle* tobacco litigation in Florida, where the plaintiffs have reduced mind to brain and claimed that the clinical status of addiction excuses or mitigates the smoker's responsibility for the health consequences of smoking based on brain processes, I examine the conceptual difficulties presented by use of biomedical models of behavior in a legal system predicated on different assumptions altogether. For legal purposes, the biological system in question is the human organism as a whole, not a brain *per se*, and there is a functional identity between a smoker and his motivational states for purposes of responsibility attribution.

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If, in short, there is a [neuronal] community of computers living in my head, there had also better be somebody who is in charge; and, by God, it had better be me.—Jerry Fodor¹

A few years ago, historian D. Graham Burnett² wrote a fascinating book about a “nineteenth-century New York court case that put the whale on trial and challenged the order of nature.” It is recommended reading for trial lawyers. The case was *Maurice v. Judd*, which was tried in Manhattan in 1818; the book is *Trying Leviathan*. The case involved a dispute over a candlemaker's refusal to pay a \$75 fish oil inspection fee on the basis that a whale is not a fish. Like Melville's Ishmael in *Moby-Dick*, local whale men took the stand to testify on “the good old fashioned ground that a whale is a fish.” There was a titanic clash of scientific experts and leading trial lawyers that transfixed the city for three days. The candlemaker lost. The jury was out all of 15 minutes, returning to announce a verdict for the plaintiff, “having decided that a *whale* is a *fish* and whale oil fish oil” (Ref. 2, p 178).

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Trying the Leviathan of Addiction

As the *New York Observer* put it, Dr. Burnett's book “bristles with insights about the relationships between popular belief, democracy, science, and the law that resonate with contemporary controversies.”³ A current example is the collision of law and science on-going in Florida's so-called *Engle* litigation over the meaning of tobacco addiction for purposes of legal causation and responsibility attribution in the courtroom. There are about 8,000 such cases pending trial. This story, pitting medical concepts used by neuroscience and psychiatry for clinical and research purposes against the legal view of agency and causation, is every bit as strange as the one Dr. Burnett tells about the role that the new science of taxonomy played in *Maurice v. Judd* almost 200 years ago. Only now, the science of taxonomy is winning.

Summary of the *Engle* Litigation

To make a long story brief, an *Engle* plaintiff who is able to make a threshold showing that he is addicted to ordinary cigarettes and that addiction is the legal cause of his smoking-related injuries is entitled to the *res judicata* benefits of certain factual findings made by an earlier jury in the original *Engle* class action, which was prospectively decertified by the Florida Supreme Court as “[t]he pragmatic solution”

after a lengthy Phase I trial of common issues eight years earlier.⁴ Put differently, an *Engle* plaintiff who can show addiction to cigarettes is entitled to seek compensatory and punitive damages.

The plaintiffs in *Engle* offer a biophysical explanation for smoking as behavior supposedly compelled by the pharmacological effects of nicotine on the brain. They use the medical concept of addiction as a synonym for the conclusion that the smoker is somehow not fully responsible for the harmful consequences of smoking, because it can be difficult to give up smoking: “you can’t easily put the cigarettes down and walk away from them” (Ref. 5, p 1157). Deterministically reducing mind to brain function and vice versa, the plaintiffs essentially leave the agent and “the causal role of consciousness in volition” out of the picture altogether in their claimed explanation of smoking behavior (Ref. 6, p 129). On their telling, addiction is some sort of excusing, mitigating, or nonresponsibility condition at law, “an excuse for bad behavior, a means of absolving blame, an explanation for otherwise ‘irrational’ behavior” (Ref. 7, p 309).

The plaintiffs are essentially arguing brain causation, which is facially absurd. Smoking behavior is not the work of a homunculus in the brain or neuronal circumstances. “[W]e can’t get the macro story from the micro story” (Ref. 6, p 135). Brains do not smoke cigarettes; acting people do, and the whole human organism is involved. For the same reason, brains are not subject to responsibility attribution; acting people are. Law is about personhood, not biophysical function.

In this setting, the addiction claim is trial theater, a distraction. The nub of the matter in *Engle* is what addiction means for purposes of legal cause or causal responsibility, not the pharmacological effects of nicotine on the brain or how smoking behavior comes about as a matter of microlevel biophysical function. Regardless of addiction status, smokers are otherwise reasonable legal persons for all legal purposes, from contracts, to torts, to advanced health care directives, to informed consent. The real question in *Engle* is who is in charge for responsibility or accountability purposes, the brain or the person.

The Biomedical Paradigm of Addiction

The biomedical model of addiction adopted by plaintiffs in the *Engle* litigation paints smoking on a regular basis in shades of mental disease, brain func-

tion, the sick role, and victim status. It has many fathers. Its godfather is probably psychologist Alan Leshner, who led the National Institute on Drug Abuse in the United States from 1994 to 2001. In a widely cited article penned 15 years ago, he famously postulated and decreed that “addiction is a brain disease” (Ref. 8, p 45).

According to Leshner’s fiat:

... [t]hat addiction is tied to changes in brain structure and function is what makes it, fundamentally, a brain disease. A metaphorical switch in the brain seems to be thrown as a result of prolonged drug use. Initially, drug use is voluntary behavior, but when that switch is thrown, the individual moves into the state of addiction, characterized by compulsive drug seeking and use [Ref. 8, p 46].

Leshner’s subsequent caveat that “recognition that addiction is a brain disease does not mean that the addict is simply a hapless victim” and that “having this brain disease does not absolve the addict of responsibility for his or her behavior,” has been lost in wide popular acceptance of his metaphor for addiction as a chronic, relapsing disease of the brain (Ref. 9, p 76). Leaning on the likes of Leshner, plaintiffs commit “the fundamental psycholegal error,” wrongly concluding that a medical concept or status has some necessary correspondence to legal considerations. By itself, however, the concept or diagnosis of addiction (absent evidence of certain psychotic conditions) does not establish legal causation or negate responsibility.¹⁰

Leshner is talking about cellular-level mechanisms of neuroadaptation, how neurons in the brain functionally adapt to supposedly addictive drugs, such as nicotine. But “this information is of limited value,” because neurons adapt to all sorts of other stimuli, including behavioral, psychological, social, situational, and environmental cues (Ref. 11, p 780). The evidence is that “[a]ll living cells, and especially nerve cells, have an innate ability to adapt to changes produced by influences external to them.” It’s how *Homo sapiens* learn and remember things, how we are wired (Ref. 11, p 781). In this sense, of course, addictive behavior is not unique; all behavior is ultimately associated with brain processes. In any event, a brain “mechanism is not the same as a *cause*” for legal purposes (Ref. 11, p 782; emphasis in the original).

The Diagnostic and Statistical Manual of Mental Diseases (DSM), a keystone of modern psychiatry, is another father of the *Engle* plaintiffs’ biomedical concept of addiction. It uses the term dependence as

a synonym for addiction, which it centrally defines for clinical and research purposes as “a pattern of compulsive substance use” (persistent “seeking and using”) despite adverse health consequences (Ref. 12, pp 194–5). Significantly, DSM criteria were developed “to enable clinicians and investigators to diagnose, communicate about, study, and treat people with various mental disorders,” not to answer legal questions (Ref. 12, pp xxxiii, xxxviii).

Addiction is how researchers, medical doctors, and others in clinical practice conceptualize what our grandparents, their grandparents, and so on knew as bad habits *tout court* (Ref. 13, pp 351–2). Addiction, however, is not like “an unseen ligament pressing on the mind, drawing it to consequences which it sees, but cannot avoid,”¹⁴ or an invading organism or pathogen like the tubercle bacillus that causes tuberculosis (Ref. 7, p 308). As the title page of the Surgeon General’s 1988 report states, “nicotine addiction” is one of the “consequences” of smoking, not a “cause” of it.¹⁵

The “essential feature” of addiction “is a cluster of cognitive, behavioral, and physiological symptoms” (Ref. 12, p 192). Its signs and symptoms are chiefly behavioral, observed and reported; there are no laboratory tests, including brain scans, that can accurately diagnose mental disorders.¹⁶ The chief sign of addiction to nicotine is behavioral, smoking every day.

Crucially, persistent smoking does not impair or erode mental functioning (Ref. 12, p 269). The habit, however, can be motivationally difficult to give up for a variety of reasons, including the behaviorally reinforcing (i.e., motivating, influencing, or rewarding) effects of nicotine (Ref. 15, pp 215, 248, 267, 276). It does not take expert testimony to know that quitting smoking, like saving money, can be difficult because it involves giving up things that we value now.¹⁷

Difficulty quitting, or “constrained choice,” is really what *Engle* plaintiffs mean by addiction (Ref. 5, p 1157). By addiction, plaintiffs and tobacco control experts do not mean that smoking cessation is a physical impossibility. To claim as much would be contrary to their trial strategy, which is to plead the smoker’s own partial fault affirmatively, such as failure to try hard or long enough to give up smoking, under the rubric of comparative-fault doctrine as a shortcut to damages.¹⁸ As a leading Florida plaintiff’s lawyer active in the *Engle* litigation explains,

“[w]ithout an opportunity to compare and appor-tion plaintiff’s fault, the jury may decide the case against [plaintiff]” (Ref. 19, p 28).

This raises the legal question of whether smoking abstinence, temporary or permanent, is an unreasonably hard choice. As demonstrated below, it is no such thing. Abstinence, in fact, is actually the recommended treatment protocol for regular smokers, and a “smoke-free society” has been an official government health policy goal for decades (Ref. 15, p vii).

The Legal Paradigm of Agency

From a legal perspective, the defining characteristic of personhood is not simply having a brain, but with it “a sense of agency, of autonomy, the sense of being in control of one’s behavior and destiny” (Ref. 20, p 32). Tellingly, the medical concept or status of nicotine addiction makes no difference in this regard. When a plaintiff says that habitual smoking is caused by addiction, he is “clearly thinking of a force that is nevertheless ‘his’ except in some special sense” not relevant to law for agency purposes.²¹

In this respect, among others, the plaintiffs’ biomedical approach to causation, that brain processes compel smoking and make abstinence difficult, misses the mark. Law is not bound by extralegal professional criteria (Ref. 22, p 403). The basis of legal responsibility is mental and behavioral, not physical. Mental properties “are qualitatively distinct from properties of the brain,” which itself “cannot have beliefs or other mental states” (Ref. 20, p 23). At the same time, “the nature and content of mental states” cannot be explained “in terms of the material structures and functions of the brain,” even with state-of-the-art brain-imaging technologies (Ref. 20, p 25). For legal purposes, therefore, the biological system in question is the human organism as a reasonable legal person, not a brain, *per se*.

Law’s approach to causation is agent based, not event or mechanism based. It paints in the colors of the reasonable legal person and attribution of responsibility. Its concern is with what the agent does, not how his action comes to be in terms of otherwise normal biophysical function (Ref. 23, p 43). “The concept of the responsible legal person . . . is an intentional, reasonably fully conscious and potentially rational agent who is not exposed to an unreasonably hard choice” (Ref. 22, p 399). The upshot is that “[b] rains are not held responsible” under the law, “[a]cting people are” (Ref. 22, p 405).

The biomedical model's assumptions about "brain causation" are arguably antilaw and ascientific, to the extent that they reduce human behavior (and agency) to the level of the neurobiological correlates of behavior generally. Actions that are signs and symptoms of behavioral "disorders" according to medical practice (such as smoking or drinking to excess), however, are not pure mechanisms (Ref. 24, p 890). Smoking is action, "whether or not the action is the sign of a disease" (Ref. 24, n 10). For legal purposes, the behavior is "explained or rationalized by the agent's reasons for action" at the higher level of consciousness, not at the level of cellular mechanisms of neuroadaptation, meaning that "conscious states can be causally efficacious" (Ref. 22, p 398).

While the plaintiffs in *Engle* liken abstinence as a constrained or difficult choice to a lack of free will, because of strong competing desires or urges to continue smoking, law never addresses the presence or absence of free will as a metaphysical "ability to act uncaused by anything other than oneself" (Ref. 24, p 897). Law judges human behavior in terms of "consciousness, the formation of mental states such as intention, knowledge and comprehension, the capacity for rationality, and compulsion" (Ref. 24, p 897). The genius of its reasonable legal person standard rests on its "integration of the physical and mental," and the assumption that "a human organism's purposive function [is] to generate meaningful, intentional behavior" consistent with legal rules and standards (Ref. 23, p 3).

For legal purposes, the medical diagnosis or concept of addiction cannot be separated from individual desires, beliefs, reasons, intentions, volitions, and actions that play a causal role in bringing about or preventing behavior (Ref. 23, pp 43–4). The "mind is the expression of the activity of the brain and. . . these two are separable for purposes of analysis and discussion but inseparable in actuality" (Ref. 25, p 1586). As agents, smokers "participate in their actions in at least two ways: forming intentions under the influence of reasons; and expressing these intentions by performing voluntary bodily movements" (Ref. 23, p 32). Critically, at every step in the causal chain, the "agent identifies with the mechanism that issues in the action" (Ref. 23, p 43).

In a courtroom, "the functional identity between an agent and his motivational states is enough to identify the agent as a subject of responsibility for these states" (Ref. 23, p 39). Put differently, the

smoker is responsible for the consequences of smoking as a matter of sole legal or proximate cause because "persons, not their brains, are the subjects of responsibility" at law (Ref. 23, p 47). Autonomy and responsibility are social constructs not found in the brain (Ref. 6, p 136). There are no responsibility pathways or circuits in the brain.

In summary, the law does not conceive the mind (or consciousness) as working divorced from underlying neurobiological processes (Ref. 16, p 87). Focusing on the physical properties of brain structure and function to the exclusion of the mental aspect of life, the *Engle* plaintiffs are interpreting agency and causation from the wrong level of organization. Consciousness, which emerges from and is enabled by the physical brain in some unknown way, is the right level of causal explanation in the courtroom, as embodied by the law's reasonable-legal-person standard.

Abstinence Is Not an Unreasonably Hard Choice

That giving up smoking (like saving money) can be difficult to do for a host of reasons is beyond cavil, but it is not an "unreasonably hard choice" (Ref. 22, p 399). All other things being equal, people who smoke cigarettes on a regular basis, or in other ways consume tobacco products, are never without "the ability to make conscious decisions and exercise conscious control over [their] actions" (Ref. 16, p 87, n 88). In fact, in certain places and settings, no smoking is the norm as well as a legal requirement, without special laws or exemptions for addiction diagnosis or status. Legal rules of this sort, like the reasonable legal person standard, reflect law's belief in constraint or self-control as an adaptive property that "operates in two directions: from mind to brain and from brain to mind" for public policy purposes (Ref. 20, p 28).

Notwithstanding addiction status or diagnosis, or quitting difficulty, therefore, smokers are "rational creatures who understand rules and can conform their behavior accordingly" (Ref. 16, p 86). Every day, millions of smokers are required, without exception, to comply with legal requirements (e.g., no-smoking laws), and the overwhelming evidence is that they do.²⁶ There are 50 million plus former smokers in the country today, which outnumbers current smokers, and an estimated 90 percent of them quit smoking without formal treatment programs or cessation devices.^{15,26–28} The plaintiffs' as-

sertion that smoking abstinence is an unreasonably hard choice is not corroborated by any evidence save the smoker's *ipse dixit*.

The rub with the biomedical model of addictive behavior in relation to regular smoking is its utter lack of relevance in a courtroom for purposes of the questions of ultimate concern to the law. It does no more than tell us the neurologic correlates of the smoking act, which is not enough. Notwithstanding the application of medical-sounding labels, regular smoking does not destroy an individual's "capacity to form and express desires, reasons, and intentions in choices and actions," or exercise self-constraint (Ref. 23, p 11).

Critically, for the questions of ultimate concern to the law, these cognitive, affective, volitional, and physical capacities "are what provide us with the control over our behavior that makes us responsible for it" (Ref. 23, p 11). They endow smokers with complete causal control as agents, in terms of "the capacity to acquire, critically reflect on, and revise the desires, beliefs, and emotions that [they] integrate into. . . reasons for action, to form and express intentions in choices (decisions), and to express choices in actions" through "the physical ability to perform the bodily movements identified with these actions" (Ref. 23, p 13). In sum, the premise undergirding legal causation and responsibility is that the self consists of "integrated properties of the mind, brain, and body" (Ref. 20, p 32) and that "the mind constrains the brain" and bodily systems (Ref. 6, p 144).

The point bearing emphasis in regard to claims of nicotine addiction in the courtroom is that "difficult or limited choices [in life] alone do not excuse [one] from responsibility" (Ref. 23, p 41). Addicted or not, the smoker is a "generally conscious, intentional, and potentially rational agent" (Ref. 22, p 404). "Concluding that human action is not controllable because it is a sign or symptom is simply question-begging" (Ref. 24, p 928). In sum, difficulty changing behavior, saying no to continued smoking, "is not an 'impairment' of self-control; it is a normal feature of anyone's way of life. It is one of the conditions of being human. . . . This is no mystery or puzzle, no rarity, no pathology or disease needing a special explanation" (Ref. 29, p 63). Difficulty comes into play only because the goal of not smoking (or drinking, for example) is subordinate to others: "We decide not to smoke not because we cease to enjoy

smoking, but because we want to avoid lung cancer" (Ref. 30, p 148).

Whether the positive reinforcement of nicotine's effects on the brain and body is the chief or the only reason for regular smoking, it is quintessential motivated, reason-responsive behavior. The smoker-agent's biophysical system, including the brain, functions exactly as endowed by nature and the resulting behavior is ultimately subject to the hallmark of agency at law—namely, the capacity for practical reasoning and reflective self-control (Ref. 31, p 161). Restated, otherwise normal conscious states have causal efficacy for legal purposes.

As Stephen Morse explains, "It is surely harder to behave well when one has strong desires to do wrong because the prospect of satisfaction is so pleasant, the prospect of frustration is so painful" (Ref. 32, pp 1059–60). But these "desires and fears of frustration and related feeling states" are "not physical forces that literally force one's body to move if they reach sufficient intensity. They work through the agent's practical reason," which regular smoking does not impair (Ref. 32, p 1060). Quitting difficulty as "loss of control" is a colloquialism meaning that "due to neurological processes deep in the brain," the smoker is experiencing a strong desire for a cigarette that puts him at a crossroad for decision-making purposes (Ref. 33, p 407). It is the language of choice, not involuntariness.

Demystified, "addiction" is just habitual smoking dressed in medical words of "diagnosis," since "today, the explanation of a behavior is saying it in the language of mental illness, brain, dopamine, and drugs. Saying it in plain English is not scientific, not explanatory, not 'true'" (Ref. 34, p 334). Law and science are different animals. In a courtroom, the smoker as a potentially rational legal agent is a sole legal cause or author of the foreseeable consequences of his own choices and actions, including (especially) whatever goes in the mouth and body.^{35–38}

Conclusions

Science and the whale lost to popular wisdom in *Maurice v. Judd*. Almost two centuries later, addiction taxonomy and neuroscience are routing popular wisdom, legal convention, and common sense in the *Engle* trials, on the specious basis that regular smoking is not "free choice." Plaintiffs' conceptualization of addiction as pharmacologically compelled behavior (i.e., brain-causation) is bunkum that brings

Samuel Taylor Coleridge to mind: that “truth depends on, and is only arrived at, by a legitimate deduction from all the facts which are truly material” (Ref. 39, p 144).

In the end, addiction is a medical concept or construction (an idea) developed for purposes of the information contained in a clinical diagnosis. It is not a material thing and, as such, not a truly material fact in a courtroom. Smoking abstinence is not an unreasonably hard choice, and regular smokers are not the hapless puppets of brain processes. The smoker, as a reasonable legal person, is in charge and (as such) the sole legal or proximate cause of the open and obvious health consequences of smoking. The smoking act is wholly his in every legally relevant way.

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