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**RAGE AGAINST REASON: ADDRESSING CRITICAL CRITICISMS
OF BIOSOCIAL RESEARCH**

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Abstract:

Continuing their tradition of deconstructing science and the motives of scientists, critical criminologists have recently leveled a series of criticisms concerning biosocial criminology. We address these criticisms, including the alleged “Ptolemizing of Lombroso,” the difference between constructionist epistemology and biosocial epistemology, and the incommensurability of the social sciences. Having addressed these criticisms, we then turn our attention to the problems endemic in postmodern efforts to trivialize science and discuss the “moral theology” that passes for critical criminology.

INTRODUCTION

Nicolas Carrier and Kevin Walby (2014) recently wrote a critical review of biosocial criminology in this journal accusing its adherents of "Ptolemizing Lombroso" and calling its ascension in criminology a "pseudo-revolution." For them, biosocial criminology "maintains Lombroso's 'basic framework,' only 'adding complications and changing minor premises'" (p.2; quoting Zizek, 1989, p. vii). Although we emphatically disagree with their assessment, we were happy to see the publication of their work for two reasons: First, every theoretical perspective should be subject to scientific and scholarly discourse. To this end, biosocial criminology, as well as critical criminology, should be examined, debated, and discussed. A core tenet of

science involves the free exchange of ideas, and as empirically oriented scientists we value the opportunity to respond to our critics. Second, critical assessments of biosocial criminology provide us an opportunity to not only discuss and defend biosocial science; it provides us a platform to juxtapose a functional scientific perspective—that is, biosocial criminology—against a perspective that offers little substantive scientific or epistemological value.

We are also glad that Carrier and Walby chose Ptolemy to ground their argument against biosocial criminology. Like the detested Lombroso, Ptolemy was a polymath who took the study of cosmology out of the world of philosophical speculation and brought it into the world of synthetic science. Although his geocentric model was wrong, it was useful because it encouraged others to think on its imperfections. In this sense, Ptolemy served as the impetus for scientific advancement. As the history of cosmological theory shows, science moves from error to correction to counter-correction. Ptolemy's theorizing represented the budding attempts of early Western scholars to understand their physical world—attempts, we note, that comported with their immediate sense experiences. These experiences, of course, did not fully or even accurately describe the physical world but they “made sense” and were consistent with other authority sources such as the Church. While Carrier and Walby may heap scorn on Ptolemy, any sensible person of the time would have been a geocentrist. After all, we don't feel the earth moving as it spins on its axis at just over 1,000 miles per hour while hurtling through space at about 67,000 per hour, and we do see the sun rise in the east, move across the sky, and then set in the west. These cues, seen and unseen, shaped the views of Greek and Roman scholars—views that would be challenged, empirically and mathematically, by other scholars. Ptolemy thus served an important role in the process of science even if his initial theories were incorrect.

Science increases incrementally and messily and rarely (if ever) gets it right the first time. Copernicus got it right; with more elegant mathematics than Ptolemy's and more astute observations he provided strong evidence for the heliocentric model (Hartner, 1973). However, he was not completely right. He thought the sun was at the center of the universe and was stationary and that the planets moved spherically rather than elliptically around it. The book announcing the heliocentric model was not released until after Copernicus's death because he feared the wrath of the church and the ridicule of fellow scientists. Aristotle, taken at that time by most scientists to be the ultimate authority on all things scientific, had supposedly refuted heliocentricity, a refutation held by almost all Copernicus's contemporaries as self-evident (Eichner, 1982). It took the invention of the telescope and the brilliance of Galileo Galilei to further advance the heliocentric model (Radhakrishna, 2009). But even Galileo lacked a theory to account for the movement of the earth. It was Isaac Newton who, many years later, provided the crucial proof for heliocentricity with his universal laws of motion and theory of gravity (Kuhn, 1970).

The static nature of Ptolemaic thinking resonates more with mainstream social science than biosocial science, and it lacks the excuses of inadequate tools and the assistance from more advanced sciences that Ptolemy could have claimed. It so often turns out that mainstream social scientists—much like Ptolemy—only *describe* what they see with the “naked eye” and they complain that to go further below the surface to uncover *explanations* for what they see is gratuitous reductionism. For instance, social scientists observe that crime is most prevalent in poor, socially disorganized neighborhoods and conclude that poverty and slums cause crime; they see criminals abusing drugs and alcohol and surmise that these substances cause their criminal activities; they note that the sexes are treated differently and conclude that this differential treatment accounts for sex differences in criminal behavior—the list goes on. Biosocial criminology, on the other hand, takes the path of science and seeks to go beyond the readily observable to the underlying “causes of the causes” by utilizing the techniques provided for us by geneticists and neuroscientists. To see danger and despair in this process rather than excitement and discovery emerging from these techniques is lamentably reminiscent of the handloom weavers of 19th century England swept aside by the mechanical loom.

Until recently, social science was hampered with the same limitations on its ability to plumb the depths of its subject matter that Ptolemy was with his. Criminologists in the past could be excused for ignoring biology, and even for being “militantly and proudly ignorant” of it (van den Berghe, 1990, p. 177), but in this day and age with its bounty of informational sources, it is inexcusable (we are not saying that Carrier and Walby share this ignorance because they have obviously read biosocial literature). Lilly, Cullen, and Ball (2007, p. 291) note that the most dramatic developments in science come most often from new observational techniques rather than new developments in theory, and now we have these observational techniques available to us. No science advances very far without the technology to adequately test its theoretical ruminations. Many chemists in the late 19th century refused to accept the existence of atoms, but chemistry advanced by leaps and bounds when the discipline as a whole finally accepted the atomic theory of matter (Knight, 1992), as did biology when it accepted the molecular approach gifted to it by chemistry and physics (Coffey, 2008).

Criminology is in a similar position today that chemists were 150 years ago. The concepts, methods, and measuring devices available to us today may do for the progress of criminology what physics did for chemistry, what chemistry did for biology, and what biology is increasingly doing for psychology. Thanks to these advances (which are Copernican-like for the social sciences), "Never before has the sublime interplay between nature and nurture been available for scientific discovery" (DeLisi, 2009, p. 266). Carrier and Walby (p. 7) fear such a prospect, and appear to believe that we can ignore one-half of the biosocial whole of human behavior and thereby obtain a better grasp of it! They are prime examples of "Sociologists [who] have allowed the fact that we are social beings to obscure the biological foundations upon which our behavior ultimately rests," as former ASA president Douglas Massey (2002, p.1) asserted in his presidential address.

The Methods of Science and Human Nature

Carrier and Walby (2014) do not deny the virtues of scientific technology when it is limited to studying the nonhuman world, but are deeply concerned that in the hands of biosocial criminologists it is "about distinguishing, visualizing and categorizing organisms" (p. 18). Of course it is; isn't it the task of science to observe things, to distinguish those things from other things, and then to categorize them? Not when it comes to human beings say Carrier and Walby; for them we "need to assert the need to study the social *differently* than nature (p. 22; emphasis original). Ah; there's the rub; humans are "above all that." Humans are so special that they are set above nature and thus require a different set of epistemological and ontological principles to understand their behavior. Humans are certainly unique, but they are not uniquely unique. All animal species are unique in one way or another. We know this through the process of "distinguishing, visualizing and categorizing organisms."

All animal species have acquired their natures and habitual ways of behaving by extended periods of natural selection. Natural selection responds to environments, as they exist at the time, by selecting gene variants that enabled their possessors to out produce possessors of alternative variants (Barkow, 2006; deWaal, 2008). The implication that humans require divergent mechanisms from other animals to acquire their natures is species-narcissistic. Kenrick and Simpson (1997, p. 1) state that: "to study any animal species while refusing to consider the evolved adaptive significance of their behavior would be considered pure folly. ...unless the species in question is *Homo sapiens*." John Alcock (2001, p. 223) makes a similar point: "To say that human behavior and our other attributes cannot be analyzed in evolutionary terms requires the acceptance of a genuinely bizarre position, namely, that we alone among animal species have somehow managed to achieve independence from our evolutionary history." If we are products of evolution, then our traits, characteristics, and behavior can be "distinguished, visualized, and categorized" in the same manner that they can in other species because species-specific traits, characteristics, and behaviors are the result of evolutionary adaptation. These products of evolution include the genes underlying behavior—criminal or otherwise. As Plomin and his colleagues (2003, p. 533) have put it: "The behavioral genomic level of analysis may be the most appropriate level of understanding for evolution because the function of the whole organism drives evolution. That is, behavior is often at the cutting edge of natural selection."

Carrier and Walby might respond that there are layers of culture and individual experiences to account for, and that biosocial types ignore culture and are blind to "aetiological speculations...anchored in a constructivist epistemology, de-ontologizing 'crime'" (2014, 13). We will address social constructionism and the ontological status of crime later in this paper; for now we wish to remind them that "psychology underlies culture and society, and biological evolution underlies psychology" (Barkow, 1992, p. 635). In other words, culture cannot be decoupled from biology, as Douglas Massey reminded his fellow sociologists above. But it is not a matter of "privileging the *bios*," as Carrier and Walby (2014) constantly complain, because biosocial scientists have revealed many examples of cultural practices driving natural (and therefore, genetic) selection (reviewed in Walsh & Bolen, 2012).

The social and self-reflexive nature of human behavior emphasized by Carrier and Walby is obviously something biosocial criminology cannot—and certainly does not want to—ignore. There is an old saying that: "Each man is like every other man, like some other men, and like no other man." One of the implications of this adage is one could argue that humans have three natures—the natural, the social, and the existential. Our evolved Darwinian nature is universally shared by all humans and supplies the foundation and scaffolding for the entire building we call human nature. Durkheim's social nature is common to all who partake of a particular culture at a particular time and is forged by developmental history that fashions different facades around the Darwinian framework. With biological foundations and cultural veneers in place, each person

constructs his or her unique Sartresque interior décor; their existential nature. Biosocial social sciences see their goal as uniting all three parts so that we can understand the whole.

The Ontological Status of Crime and Criminality

As noted above, Carrier and Walby accuse biosocial criminology of causal speculations coming from constructionist epistemology that de-ontologizes "crime." We agree; biosocial criminologists thoroughly disavow such nihilistic skepticism. Ronald Akers (1997, pp. 176-177), a distinguished *non*-biosocial criminologist, has opined that such approaches to crime and criminality as postmodernism and its offshoots:

[Take the extreme position that denies crime as such really exists. Crime exists only because it is a 'discursive production,' that is, a product not only of the interaction of offenders, control agents, criminologists, or other people, or simply by talking about it...This implies that that there is no such thing as crime as an objective behavioral reality to be explained....Does this mean that criminal behavior would not exist if we did not talk about it?]

Akers accuses the approach favored by Carrier and Walby as something philosophers call "fact constructionism." What is meant by this is that not only the reasonable position that our theories, beliefs, and referents about things socially constructed and differ sharply from culture to culture, but also that putatively natural phenomenon exist only by cultural consensus. After discussing truth, knowledge, and fact social constructivism, Paul Boghossian claims that fact constructivism is the most influential, which he finds "somewhat surprising given that it is the most radical and the most counterintuitive." He goes on to say that: "Indeed, properly understood, fact-constructivism is such a bizarre view that it is hard to believe that anyone actual endorses it. And yet, it seems that many do" (2006:25). According to the eminent philosopher of science Ian Hacking (1999:67), people drawn to such odd views hate science because they are fearful of the inconvenient facts it reveals: "What is true is that many science-haters and know-nothings latch on to constructionism as vindicating their impotent hostility to the sciences. Constructionism provides a voice for that rage against reason. And many constructionists do appear to dislike the practice and content of the sciences."

The ontological status of crime for the strong social constructionist is that it is a cultural artifact with no palpable independent referents, as denoted by Carrier and Walby putting scare quotes around "crime." We assume that they do not deny that crime is real for its victims, or that it hurts. The arbitrariness said to characterize the labeling of a particular act as criminal may be traced to Emile Durkheim's (1933:81) statement that "we must not say that an action shocks the common conscience because it is criminal, but rather that it is criminal because it shocks the common conscience. We do not reprove it because it is a crime, but it is a crime because we reprove it." Then we have William Chambliss' classic bait-and-switch tactic involving the nature of crime that so impressed many leftist types. Chambliss explained how the vagrancy laws of 13th century England were implemented to favor the elite by providing them with workers (which was probably true) and concluded: "What is true of the vagrancy laws is true of the criminal law in general" (in Nettler, 1984:197).

What Durkheim forgot to add is that there are acts that shock the collective conscience everywhere and are universally condemned. Saying that we cannot know what real crime is or equating vagrancy (a *malum prohibitum* if ever there was one) with crimes "in general" minimizes the suffering of victims of intrinsically evil (*mala in se*) crimes. *Mala in se* crimes produce *real* palpable physiological responses in victims in all places and in all times because, except in the most bizarre of circumstances, nobody wants to be victimized by murderers, rapists, robbers, and thieves. Built-in physiological responses (anger, helplessness, sadness, desire for revenge) are not added to and subtracted from our emotional response repertoires every time some legislative body decides to add or delete an act from its criminal code. The statute forbidding the act is socially constructed, but the act forbidden is as ontologically real as the knife in the chest or the house denuded of its contents. *Mala in se* acts engage our emotions because they hammer at our deepest primordial instincts. They are evolved response to acts that militated against our ancestors' survival and reproductive needs and function to help us both to avoid victimization and to motivate us to punish offenders (Krebs, 2008; O'Manique, 2003).

Biosocial Epistemology: Phenomena and Noumena

Biosocial criminologists are primarily interested in criminality crime. Crime is an intentional act of commission or omission contrary to the law; criminality is a property of individuals that signals the willingness to commit those acts (Gottfredson & Hirschi, 1990). Criminality is a continuously distributed trait which is a combination of other continuously distributed traits such as negative emotionality, impulsiveness, egoism, low empathy, and many others traits that make a person less than desirable as a friend, mate, or employee. It is the propensity to use and abuse others for personal gain that defines criminality independent of the labeling of an act as a crime or of the person being legally defined as a criminal. Biosocial criminologists measure a person's propensity to prey on others by measuring traits such as low self-control, low empathy, negative emotionality. They then test to see if these measures are heritable, which genetic polymorphisms are associated with them, and/or what other biological process accounts for variation in them (e.g., differential ANS and brain functioning) in what environmental circumstances.

This strategy recognizes that criminality is a complex phenotype consisting of a number of subtypes (the traits comprising it) that biologists call *endophenotypes*. Endophenotypes are parts of the complex chain leading from genotype to phenotype, with each perhaps having only minor effects on the phenotype, and then only if combined with other relevant endophenotypes and environments. The point is, when we get down to the nitty-gritty of molecular genetics, reducing the criminality phenotype to the constituent and less complex endophenotypic parts makes it easier to identify and study their genetic basis than if we tried to map the more elusive phenotype itself (Glahn, Thompson & Blangero, 2002). This is so simply because constitutive traits (the endophenotypes) "sit closer to the genotype in the development scheme" (Gottesman & Hanson, 2005:268).

Carrier and Walby abhor such practices as reductionism and call it "the pathologization of the bios." They (p. 20, emphasis theirs) also accuse biosocial criminology of embracing an absolutist form of realism based on "immaculate data" that "presupposes an accessibility to things as if one could distinguish the world as it is from the world as it is observed." Carrier and Walby seem to support the distinction between a Kantian or Platonic noumenal world (reality as it "really" is) and a phenomenal world (reality as we perceive it). In the Platonic-Kantian tradition, we can know the objects of phenomenal world, but we can never directly know their noumena, the "things-in-themselves." If we can only experience the Platonic Forms (including the criminality "Form") that exist "in a realm beyond the heavens" imperfectly, that is all we ask; to know the world empirically and pragmatically. But surely this noumena/phenomena argument is a tad dated. As Thomas Kuhn (1996, p. 206) put it: "[T]he notion of a match between the ontology of a theory and its 'real' counterpart in nature now seem to me illusive in principle...I am impressed with its implausibility."

We have no problem accepting the notion that our thinking should be sufficiently tinged with postmodern skepticism to recognize the precariousness in the relationships between our theories, perceptions and data. Thomas Kuhn made much of the concept of the theory ladenness of data and of our observations derived from them (this is explored at length in criminological matters in Walsh [2014a]). Biosocial criminologists are not as philosophically naive as Carrier and Walby seem to think. We know that by following the methods of science our discoveries do not directly correspond to big-T Truth. This is especially true of the social world. While the natural world is intransitive (or nearly so), the social world is transitive. The historical successes of science strongly suggest that it tells us a lot about the complexities of reality, but scientists do not claim that what they find is un-interpreted reality—the way things "really" are. To do so is to fall afoul of what philosophers call naïve realism. By the same token we should also rule out both extreme forms of idealism that promote the notion that mental concepts are more real than the physical and a globalized philosophical skepticism asserting that we can never know anything objectively.

If we follow any philosophical school at all it is that of critical realism. Critical realism is associated with British philosopher Roy Bhaskar (1978), and is a philosophy of knowledge that claims the possibility of gaining mind-independent knowledge of the world as it is, not merely as it is subjectively perceived. At the same time, it holds that science is fallible and that our perceptions of reality are functions of the mind, and consequently, that we must always critically reflect on our perceptions. Critical realism maintains that science has the ability to progressively close the gap between our views of the world and reality itself: that is, the chasm between the phenomenal and the noumenal can be bridged incrementally as scientists go about interpreting and reinterpreting their data. This is the "realism" in critical realism; the "critical" element lies in the belief that nothing should go unchallenged; if it isn't challenged, no reinterpretation is possible and no progress is made.

Critical realism wants us to remember that our theories and data are maps of reality, not reality itself. We all realize that when we look at a map we are looking at a representation of the terrain, not the terrain itself. Likewise, when we conduct experiments and surveys we are artificially constructing a closed world to

isolate regularities between and among variables that we rarely can directly observe in in the more chaotic open world. But maps, experiments, and surveys are tremendously helpful in getting us where we want to go and give they us some idea of what it will be like when we get there. In other words, critical realism is ontologically realistic (it affirms that there is a mind-independent world out there) and epistemologically fallibilistic (no theory or model of the world can ever be rationally justified in an absolutely conclusive way). We imagine that all scientists agree with critical realism, even if it has to hit them in the eye occasionally to remind them when they become too dogmatic.

The Commensurability of the Sciences

Carrier and Walby (2014, p. 22) note that biosocial criminology is presented as a synthesis of the natural and social sciences and argue no such synthesis is possible because of the “incommensurability of sciences.” Not many philosophers of science were convinced by Kuhn’s thesis of incommensurability, and even Kuhn wrote that his claim of incommensurability “is more modest than many of my critics have supposed” (1982, p. 671). Social scientists enamored with constructionism loved the strong interpretation of incommensurability because they took it as a claim that science is irrational, a claim that Kuhn, as “a convinced believer in scientific progress” (1970, p. 206) emphatically repudiated. “Incommensurable” is not the same as “incompatible,” as some seem to think. Incompatible theories are theories making contradictory claims, such as the Ptolemaic and Copernican theories. Incompatible theories can be resolved with advances in observational techniques, but incommensurable theories have no common measure or standards by which to judge the superiority of one over the other in this way.

Carrier and Walby enlist Kuhn’s example of a physicist and chemist disagreeing over whether a single atom of helium is a molecule to demonstrate incommensurability. Helium is an unreactive gas; helium atoms do not bond with any other element to form molecules, which by standard definition are *combinations* of atoms. A single atom of helium is thus not a molecule by conventional standards, but it can be considered a “widow” molecule because it behaves like a molecule according to the kinetic theory of gases (Liboff, 2003). One the other hand, because helium atoms are free, they do not absorb visible light and thus are not displayed on the molecular spectrum, and by this criterion they are thus not molecules (Zawischa, nd).

Our answer to this is “so what;” this hardly constitutes an ontological crisis. Both physicist and chemist were looking at the same atom, and that atom will continue to behave in the same way regardless of paradigmatic differences about how to nominally classify it and how they treat it in their own practice; neither claims different properties for helium.

Niels Bohr’s principle of complementarity; i.e., the wave-particle dual nature of light, is another old scientific disagreement, the resolution of which provides an ideal comparison for understanding biosocial criminology. Despite initial resistance to this counterintuitive duality, as it became more and more empirically grounded it led to quantum theory (Polkinghorne, 2002). Albert Einstein and Leopold Infeld (1938:262-263) had the following to say about it:

But what is light really? Is it a wave or a shower of photons? There seems no likelihood for forming a consistent description of the phenomena of light by a choice of only one of the two languages. It seems as though we must use sometimes the one theory and sometimes the other, while at times we may use either. We are faced with a new kind of difficulty. We have two contradictory pictures of reality; separately neither of them fully explains the phenomena of light, but together they do.

Substitute human behavior for light, and biology and environment (nature and nurture) for waves and particles, and we can likewise conclude that neither biology nor environment alone is sufficient to understand human behavior most of the time; we need both. Just as there is no longer a paradox in the wave-particle duality of light in physics, there should be no paradox among criminologists about human behavior being a function of the interaction of genes with the environments they find themselves in. Incommensurability in criminology is lessening by the day as scholars raised in the post-genomic age and not petrified by the necessity to learn human biology enter the discipline. They understand the relevant measures and standards of biology and thus no longer incommensurably “talk past” their biological cousins as their older peers do.

What then of biosocial criminology's agenda of discipline integration that so bothers Carrier and Walby? More than 50 years ago British chemist, novelist, and politician C. P. Snow famously wrote of "two cultures" in the intellectual world that were alien to one another. These two cultures were the scientific and the literary (humanists and social scientists) which were unable to communicate across the cognitive chasm that separated them (in Kuhnian terms, they were incommensurable). Because Snow straddled both cultures with ease and thus did not find them incommensurable at all, the divide greatly troubled him. In a later work he optimistically proposed a "third culture" that would eventually provide a way to bridge the chasm between natural and social science. He proposed that the bedrock of this third culture would be molecular biology because "it is likely to affect the way men think of themselves more profoundly than any other scientific advance since Darwin" (1964, p. 74).

Biosocial criminology is a discipline-specific example of Snow's third culture bridging the river dividing former alien disciplines. Karl Marx, the darling of those most opposed to biosocial research today, was enamored with the idea of disciplinary consilience. In his *Economic and Philosophic Manuscripts of 1844* (1978, p. 91), he wrote that: "Natural science will in time subsume under itself the science of man, just as the science of man will subsume under itself natural science: there will be one science." Many other great thinkers such as philosophers Aristotle, Heraclitus, and Plato, and scientists such as Einstein, Julian Huxley, Ernst Mayr, and E. O. Wilson have written of the desirability of discipline cross-fertilization and integration (Walsh, 2014b).

Carrier and Walby concede that physics and chemistry can cross-fertilize (p. 23) despite their tiff over helium, but biology and criminology cannot. We, on the other hand, aver that biology and criminology can, do, and should cross-fertilize promiscuously. Biosocial criminology is forced to cross-fertilize because of its recognition that humans are both biological and cultural creatures. One can only disagree with this in good conscience if one is a radical social constructionist who insists that humans cannot be studied the way everything else in the known universe is studied and/or that social science is about advocacy rather than sciences.

Charles Leslie (1990, p. 896) is such a person who tells us with refreshing honesty that he does not want objective science to infect social science and thus divert it from its true mission: "Non-social scientists generally recognize the fact that the social sciences are mostly ideological....Our claim to be scientific is one of the main academic scandals...By and large, we believe in, and our social science was meant to promote, pluralism and democracy." Ironically, Leslie wrote this upon resigning in a huff from the editorial board of *Social Science and Medicine* because it published a paper he considered racist. Apparently Leslie's pluralism and democracy extends only to his circle of like-minded scholars; ideas and works coming from outside the circle should be censored and shunned. Contrary to Leslie and others of like mind, we wholeheartedly believe in criminology as a science and will leave the advocacy to the self-anointed elite who are convinced that they alone have the truth and feel compelled to foist their vision of "justice" on the rest of us.

Rage Against Reason: The Vacuity of Postmodern Criminology

We have endeavored to address the philosophical criticisms of biosocial criminology leveled by radical and post-modernist criminologists, namely Carrier and Walby (2014). In this section, however, we broaden our sights and turn the tables on postmodern criminology. We discuss the devastating influence political ideology has in the social sciences and juxtapose our vision of science against that offered by postmodern criminologists. We transition in content and tone to discuss how biosocial science, or any science, improves in tangible ways the lives of individuals while postmodern criminology constructs its way into irrelevancy.

Before we proceed, we note that we recognize the various strains of thought that fall under the umbrella of "critical criminology." Our criticisms are aimed primarily at the more radicalized elements that call themselves "critical criminologists," but they apply to varying degrees to the area in toto. Thus, we use interchangeably the terms "critical," "radical," and "postmodern," to reflect the shared, overlapping views of science amongst these perspectives recognizing that differences between them exist.

We have written elsewhere on the ideological and political influences that actively discriminated against biosocial perspectives and biosocial criminologists (Beaver and Wright, 2013; Wright and Cullen, 2013; Walsh, 2013). These influences, rooted in a leftist political orientation, systematically barred biological theorizing from the social sciences, including criminology, for decades and in doing so stunted scientific insight and advancement (Pinker, 2003). Exactly how did leftist scholars ban a large part of science from the social sciences? Haidt (2012) offers the most nuanced explanation. According to Haidt, many academic disciplines in the social sciences have all the trappings of "tribal moral communities." These communities share and reify sacred values, values that both "bind and blind" (Haidt, 2012). Haidt argues that sacred values often contrast with the aims of science. As Haidt and others (Gottfredson, 1994) have discussed, the core sacred value of leftist academics is a belief that individuals, the sexes, and racial groups are equivalent—that is, they are equal

in all aspects of intelligence, behavior, and ability. Gottfredson (1994) refers to this sacred value as the “egalitarian fiction,” in part because the sacred value is not supported by empirical evidence, and in part because many scholars will craft discussions of their studies in the language of the egalitarian fiction. For example, Haidt notes that discussions of racial differences, sex differences, and intelligence differences have to be framed in ways that are politically tolerable but maybe are not scientifically accurate. He names one other area, too, where sharp political lines are drawn to enshrine another sacred value—the area of “nativism,” or the linking of biological functioning to social behavior. We call this “biosocial criminology.”

Almost by default, biosocial criminology violates the sacred values of the discipline and the political values of scholars within the discipline. Biosocial criminologists have published studies on sex and race differences (Vaske, Makarios, Boisvert, Beaver, & Wright, 2009), studies on intelligence (Beaver & Wright, 2011), studies questioning the effects of parenting on child misbehavior (Beaver, Ferguson, and Lynn-Whaley, 2010; Wright, Beaver, DeLisi, and Vaughn, 2008), and they have questioned whether race is a social construction (Walsh, 2013). Indeed, biosocial criminologists regularly and unapologetically violate not only the egalitarian fiction, they violate all of the sacred values of the social sciences (Wright and Cullen, 2013). And this, we believe, is the motivation underlying postmodern critiques of biosocial criminology. Biosocial criminologists openly reject these culturally derived and politically motivated limits. Framed within this context, we see the critiques of Walby and Carrier (2010a, 2010b, 2014) not only as a fundamental scholarly disagreement, but as a reaction any dominant group has to a minority group who challenges the status quo.

To place our argument in context, we note that in criminology the largest group of scholars in the discipline is composed of critical criminologists. By last count, the Division of Critical Criminology was the largest division in the American Society of Criminology, with almost 700 members. In a striking numerical imbalance, there are far fewer biosocial criminologists—the majority of these criminologists having been trained in the last 10 years. We hazard a guess that most of the research in biosocial criminology is being conducted by scholars who identify themselves as geneticists, neuroscientists, psychiatrists and psychologist rather than criminologists. Thus, we have little doubt that the political sensitivities of criminologists and of postmodern criminologists specifically, are provoked by biosocial research. Enraged that these “sacred values” have been so openly violated, some scholars seek to tarnish “through any means necessary” both the reputations of biosocial criminologists and our area of study. Carrier and Walby “rage against reason” in an effort to delegitimize science they politically and ideologically don’t approve of. Given this, we explore next the working ideology of critical criminologists broadly and postmodern criminologists specifically, exposing what we believe to be the obvious hypocrisies.

Broadly speaking, critical criminology has concerned itself with three substantive issues: the power of the state in defining crime and in enforcing laws, the alleged crimes of the powerful, and the social construction of reality. We have no dispute with questioning how laws are crafted and some of our own work has investigated the crimes of the rich and powerful (Shover and Wright, 2001; Wright, Cullen, and Blankenship, 1995). Indeed, critical criminologists have provided important insights into the various ways that political power has been used, subjugated, and even manipulated by competing interest groups. Our concerns lie not with critical criminologists’ efforts to draw attention to power imbalances, to state corporate crime, or to environmental justice—indeed, many biosocial criminologists share these concerns. Instead, our concern rests firmly on the postmodernist idea that reality is socially constructed and thus can be de-constructed through narrative. Ours is a conflict about the proper role of science in a free society, a vision that is at odds with that offered by Carrier and Walby and others such as Charles Leslie.

In the last few paragraphs, we describe our views of science and of scientists and discuss how our views of science are in direct conflict with postmodern priorities. First, we believe it fair to say that most biosocial criminologists at least attempt to understand how their biases affect their scholarship and they make efforts to limit the influence of their own biases in their scholarship. In this sense, biosocial criminologists claim no loyalty to any theoretical perspective, no loyalty to any specific outcome in their study, and no loyalty to the discipline. For postmodernists, however, bias is everything and is elevated to an academic value. Underlying postmodern critiques of American jurisprudence, criminal justice, and criminology is a shared socio-moral view of the world exemplified by Charles Leslie’s (1990) belief that advocacy is the proper role of social science. This view begins with the assumption that postmodern criminologists know, often times without data or supporting evidence, the nature of truth. They “know” for example, that minority groups are discriminated against, they “know” that business leaders are selfish amoralists who care only about profit, and they “know” that science—or should we say, certain science—is done with evil intent and is conducted by scholars motivated by malice. Moreover, they “know” that the only way to reduce crime is to eliminate capitalism, to eliminate social and economic inequality, and to eliminate the very concept of “crime.” They “know” these things much like Ptolemy “knew” what he observed with his unaided perceptions was true.

Because critical criminology is overtly politically motivated it seeks to advance an ideology, a moral ideology, that labels some people and institutions as immoral and worthy of scorn. The narratives are always neat and tidy, always supported by their interpretation of historical record, and usually written with a passion that betrays objective analysis. In keeping with the socio-moralizing that characterizes much of critical criminology and almost all of postmodern criminology, it is important to point out that critical/postmodern criminologists are highly selective in their moralizing. Would they stand up for the rights of gun owners, for example, who many politicians wish to legislate out of existence? Would they stand up for the rights of the unborn—arguably the least protected minority group in Western society? And where is the clarion call to arms over the Obama administration's NSA surveillance state, his increased use of military drones to kill suspected terrorists (including American citizens), or his unconstrained use of executive action to bypass Congress? These are not rhetorical questions because they expose the selective consciousness that is endemic in the field. In short, the use of the criminal law and negative social labels is favored by critical criminologists when it targets individuals, for example, Bernie Madoff, and groups, such as Wall Street, that they see as political threats and deserving of punishment. To this end, they subjugate science to these purposes—that is, to validate their socio-moral views.

Second, biosocial criminologists have a shared belief that all hypotheses should be tested with the best data possible. As a group, biosocial criminologists are entirely empirically minded and they see science as a process of constant testing and retesting. Even some critical criminologists share this view. Hamm's (1993) interviews of skinheads for his work on hate crime, Tunnell's (2004) discussions of work-place drug testing, Michalowski's (1997) tests of the employment-crime relationship, and Stretesky and Lynch's (2004) important contribution showing air lead levels covary with rates of violent crime, all stand out because they followed rigorous social science standards. But at the more extreme end of the critical criminology spectrum—where many critical criminologists are now found—science is reduced to a tool that oppresses certain groups, or worst yet, is viewed as a dubious method to find the truth that results in mere folly.

Framed as folly, postmodern writers set about to “deconstruct reality.” The deconstruction of reality, however, appears highly problematic, difficult, and intellectually so demanding that it requires the invention of words and phrases not to be found in the dictionary, not based in science, and unknown by any reasonably intelligent person. In a fascinating irony, these criminologists “deconstruct” a “non-reality” with “non-words.” Even so, we are thankful that postmodernism can only be found in the social sciences and humanities, because postmodern accounts of polio, sickle-cell anemia, and schizophrenia would have led to untold human suffering. Instead of discovery, correction, and counter-correction, which the process of science offers, postmodernists take a position that denies any objective reality—a position that inadvertently leaves powerless individuals to fend for themselves against disease as well as criminal victimization. In this sense, postmodernists simply overlook the quantifiable improvements in human life brought about by science, including research on how best to intervene with at-risk youth and dangerous adults. Postmodernism offers nothing comparable to the contributions empirical science has made to the quality of life now experienced in many countries. Nothing.

Third, we agree that science, including the social sciences, exists within a broader socio-cultural environment. Indeed, we argue that it has been the broader socio-cultural environment that has so openly discriminated against biosocial research and researchers. This is why biosocial criminologists rage against ideology—because ideology is the dominant reason why the study of biological life was virtually eliminated from the social sciences, and was eliminated from criminology (Wright, Beaver, DeLisi, Vaughn, Boisvert, and Vaske, 2008). In place of ideology, which differentiates “acceptable” from politically unacceptable science, biosocial criminologists advance the idea that all matters of human social interaction should be available to study.

One way sociologists, critical criminologists, and especially postmodern narrators have stigmatized biosocial criminology is by arguing that it is a “dangerous idea.” Indeed, time after time we are reminded by reviewers of our empirical work that, while our results may be methodologically reasonable, our work is dangerous and, indeed, we have been accused multiple times of reviving the ghost of Lombroso (Beaver and Wright, 2013). What is interesting about this criticism is not the fact that it is leveled at us with a fair degree of consistency, as though we engage in a séance with Lombroso seeking his advice, but that scholars generally and critical criminologists specifically cannot or will not see the danger in their ideology. Applying a similar standard, we could argue that the work of Marx and Engels is not only dangerous but demonstrably dangerous. After all, communism subjected over one-half the world into slavery (Pinker, 2003). World leaders who were informed by the writings of Marx, who quoted Marx, who put into action Marxists ideologies, murdered over 100 million people, created starvation where there had once been abundance, formed gulags (concentration camps) where criminals, political prisoners, and enemies of the state—including scholars—were incarcerated, tortured, and killed. We are not playing tit-for-tat. In other writings we have openly acknowledged

sociobiology's sordid past (Wright and Cullen, 2013). Somehow, however, the abuses of leftist political ideology—including the radical reforms that lead to the bloodbath that become the French Revolution or that created murderous reactionaries, such as Che Guevara, or that lead Progressives to support eugenics (Goldberg, 2008; Hart, 2010) escape the attention and scrutiny of academics—especially those academics who profess sympathy for Marxist philosophies.

Are other theoretical traditions also dangerous? Since the 1960's the United States has spent trillions of dollars of tax money on eliminating or reducing "blocked opportunities," and in addressing "social disorganization." There is a case to be made that much of the effort was for naught. Crime rates were not reduced, indeed, they even went up. Put into more concrete terms, crime rate increases mean more individuals, especially those individuals who are powerless and on the margins of the economy, are murdered, raped, and beaten. Are the theories that lead to the massive intervention of the government, and consequently to the expansion and militarization of the police, to be discarded because they too are dangerous? And what about critical perspectives that substitute radicalized views of relationships, institutions, and behavior? Is there any danger to be found in a group of individuals not bound by any empirical reality, not bound by the rules of science, and not beholden to limits or introspection? If societies governed by radicals are any indication, the answer may be a resounding "yes."

Finally, as critical criminologists have taught us, one mechanism used by majority groups to stigmatize less powerful individuals is to impugn the integrity and motives of the minority. Embedded in Carrier and Walby's various criticisms (2010b, 2014) is the assumption that biosocial criminologists are ignorant of history, are unsympathetic to issues of power differentials, or that we are simpletons when it comes to matters of race, sex, class, and inequality. We are not but we see these issues as matters in need of objective scientific investigation, open debate, and scholarly scrutiny. We believe that human life is improved when we better understand why people differ in their traits and capacities. We believe life is made better when we understand the similarities and differences between the sexes. And we believe that science, not rhetorical moralizing discourse, is the time-proven method to discovering the truth and to improving the lives of the less fortunate. Biosocial criminology offers penetrating insights into human behavior—some of which will be proven correct, some of which will be proven wrong. Conversely, postmodern criminology offers contrived narratives founded on bedrock of leftist moral ideology.

REFERENCES

- Akers, R. (1997). *Criminological theories: Introduction, evaluation, and application*. Los Angeles: Roxbury.
- Alcock, J. (2001). *The triumph of sociobiology*. New York: Oxford University Press.
- Barkow, J. (1992). Beneath new culture is an old psychology: Gossip and social stratification. In Barkow, J., Cosmides, L., & Tooby, J. (Eds.). *The Adapted mind: evolutionary psychology and the generation of culture*. (pp.627-637). New York: Oxford University Press.
- Barkow, J. (Ed.) (2006). *Missing the revolution: Darwinism for social scientists*. Oxford: Oxford University Press.
- Beaver, K. M., & Wright, J. P. (2011). The association between county-level IQ and county-level crime rates. *Intelligence*, 39(1), 22-26.
- Beaver, K & Wright, J. (2013). Reflections on the Ascendency of Biosocial Criminology. *ACJS Today* 38:3
- Beaver, K., Ferguson, C., & Lynn-Whaley, J. (2010). The association between parenting and levels of self-control: A genetically informative analysis. *Criminal Justice and Behavior*, 37: 1045-1065.
- Bhaskar, R. (1978). *A realist theory of science*. Brighton, England: Harvester Press.
- Boghossian, P. (2006). *Fear of knowledge: Against relativism and constructivism*. New York: Oxford University Press.
- Carlson, S. M., & Michalowski, R. J. (1997). Crime, unemployment, and social structures of accumulation: An inquiry into historical contingency. *Justice Quarterly*, 14(2), 209-241.
- Carrier, N., & Walby, K. (2014). Ptolemying Lombroso: The pseudo-revolution of biosocial criminology. *Journal of Theoretical and Philosophical Criminology*. 6:1-45.
- Coffey, P. (2008) *Cathedrals of science: The personalities and rivalries that made modern chemistry*. Oxford: Oxford University Press.

- DeLisi, M. (2009). Psychopathy is the unified theory of crime. *Youth Violence and Juvenile Justice*, 7:257-273.
- de Waal, F. (2008). Putting the altruism back into altruism: The evolution of empathy. *Annual Review of Psychology*, 59:279-300.
- Durkheim, E. (1933). *The division of labor in society*, New York: The Free Press.
- Eichner, H. (1982). The rise of modern science and the genesis of romanticism. *PMLA*, 97:8-30.
- Einstein, A & L. Infeld (1938). *The evolution of physics*. Cambridge: Cambridge University Press.
- Glahn, D., P. Thompson, & J. Blangero (2002). Neuroimaging endophenotypes: Strategies for finding genes influencing brain structure and function. *Human Brain Mapping*, 28:488-501.
- Goldberg, J. (2009). *Liberal Fascism: The secret history of the American left, From Mussolini to the politics of meaning*. New York, NY: Random House
- Gottfredson, L. (1994). Egalitarian fiction and collective fraud. *Society*, 31(3) 53-59.
- Gottesman, I. & D. Hanson (2005). Human development: biological and genetic processes. *Annual Review of Psychology*, 56, 263-286.
- Gottfredson, M. & T. Hirschi (1990). *A general theory of crime*. Stanford: Stanford University Press.
- Hacking, I. (1999) *The social construction of what?* Cambridge, MA: Harvard University Press.
- Hamm, M. (1993). *American Skinheads: The Criminology and Control of Hate Crime*. Westport, CT: Praeger Press.
- Hart, B. W. (2010). Watching the 'eugenic experiment' unfold: The mixed views of British eugenicists toward Nazi Germany in the early 1930s. *Journal of the History of Biology*, in press.
- Hartner, W. (1973). Copernicus, the man, the work, and its history. *Proceedings of the American Philosophical Society*, 117: 413-422.
- Kenrick, D. & J. Simpson (1997). Why social psychology and evolutionary psychology need one another. In Simpson, J. & D. Kenrick (Eds.), *Evolutionary Social Psychology*, pp. 1-20. Mahwah, NJ: Lawrence Erlbaum.
- Klein, D., & Stern, C. (2006). Sociology and classical liberalism. *The Independent Review*, XI: 37-52.
- Klein, D., Stern, C., & Western, A. (2005). *Political diversity in six disciplines*. New York, NY: Springer.
- Knight, D. (1992). *Ideas in chemistry: A history of the science*. New Brunswick, NJ: Rutgers University Press.
- Krebs, D. (2008). The evolution of a sense of justice. In J. Duntley & T. Shackelford (Eds.), *Evolutionary Forensic Psychology*, pp. 230-246. Oxford: Oxford University Press.
- Kuhn, T. (1970). *The structure of scientific revolutions*. Chicago: University of Chicago Press.
- Kuhn, T. (1982). Commensurability, comparability, communicability. *Proceedings of the Biennial Meeting of the Philosophy of Science Association*. 2: 669-688.
- Kuhn, T. (1996). *The structure of scientific revolutions (3rd ed.)*. Chicago: University of Chicago Press.
- Leslie, C. (1990). Scientific racism: Reflections on peer review, science and ideology. *Social Science and Medicine*, 31:891-912.
- Liboff, R. (2003). *Kinetic theory: Classical, quantum, and relativistic descriptions (3rd ed.)*. New York: Springer.
- Lilly, J., F. Cullen, & R. Ball (2007). *Criminological theory: Context and consequences (3rd edition)*. Thousand Oaks, CA: Sage.
- Marx, K. (1978a). Economic and philosophical manuscripts of 1844. Pp. 66-123, *The Marx-Engels reader*, R. Tucker (Ed.). New York: W.W. Norton.
- Nettler, G. (1984). *Explaining crime (3rd Ed.)*. New York: McGraw Hill.
- O'Manique, J. (2003). *The origins of justice: The evolution of morality, human rights, and law*. Philadelphia: University of Philadelphia Press.
- Pinker, S. (2003). *The blank slate: The modern denial of human nature*. New York: Viking
- Plomin, R., (2003). General cognitive ability. In Plomin, R., J. Defries, I. Craig, & P. McGuffin (Eds.), *Behavioral genetics in the postgenomic Era*, pp.183-201. Washington, DC: American Psychological Association.
- Polkinghorne, J. (2002). *Quantum theory: A very short introduction*. Oxford, UK: Oxford University

- Press.
- Radhakrishna, B. (2009). Galileo Galilei (1564–1642): The 400th anniversary of the invention of the telescope causing a great revolution in astronomy. *Journal of the Geological Society of India* 74:429-432.
- Shover, N. & J. Wright (eds.). (2001). *Crimes of Privilege: Readings in White-Collar Crime*. New York, NY: Oxford University Press.
- Snow, C. (1964). *The two cultures and a second look*. New York: Cambridge University Press.
- Stretesky, P. B., & Lynch, M. J. (2004). The relationship between lead and crime. *Journal of Health and Social Behavior*, 45(2), 214-229.
- Tunnell, K. (2004). *Pissing on demand: Workplace drug testing and the rise of the detox industry*. New York, NY: New York University Press.
- van den Berghe, P. (1990). Why most sociologists don't (and won't) think evolutionarily. *Sociological Forum*, 5:173-185.
- Vaske, J., Makarios, M., Boisvert, D., Beaver, K. M., & Wright, J. P. (2009). The interaction of DRD2 and violent victimization on depression: An analysis by gender and race. *Journal of affective disorders*, 112: 120-125.
- Walby, K., & N. Carrier (2010). Dreaming of biosocial criminology? Political blindness, ontologization of crime and other criminological nightmares. *American Society of Criminology*, San Francisco, CA.
- Walby, K., & N. Carrier (2010). The rise of biosocial criminology: Capturing observable bodily economies of 'criminal man.' *Criminology and Criminal Justice*, 10: 261-285.
- Walsh, A. (2014a). *Criminological Theory: Assessing philosophical assumptions*. Waltham, MA: Anderson/Elsevier.
- Walsh, A. (2014b). *Biosociology: Bridging the biology-sociology divide*. New Brunswick, NJ: Transaction Press.
- Walsh, A & J. Bolen (2012). *The neurobiology of criminal behavior: Gene-brain culture co-evolution*. Farnham, England: Ashgate.
- Walsh, A., & Ellis, L. (2004). Ideology: Criminology's Achilles' heel. *Quarterly Journal of Ideology*, 27, 1-25.
- Wright, J., F. Cullen, & M. Blankenship (1995). The social construction of corporate violence: Media coverage of the Imperial Food products fire. *Crime and Delinquency*, 41:20-36.
- Wright, J., K. Beaver, M. DeLisi, M. Vaughn, D. Boisvert, & J. Vaske, J. (2008). Lombroso's legacy: The miseducation of criminologists. *Journal of Criminal Justice Education*, 19: 325-338.
- Wright, J. P., Beaver, K. M., Delisi, M., & Vaughn, M. G. (2008). Evidence of negligible parenting influences on self-control, delinquent peers, and delinquency in a sample of twins. *Justice Quarterly*, 25: 544-569.
- Wright, J. & F. Cullen (2012). The future of biosocial criminology: Beyond scholars' professional ideology. *Journal of Contemporary Criminal Justice*, 28:237-253.
- Zawischa, D. (nd). Atomic spectra. <http://www.itp.uni-hannover.de/~zawischa/ITP/atoms.html>. University of Hanover, Germany.
- Zizek, S. (1989). *The sublime object of ideology*. London: Verso.