



Journal of
Theoretical & Philosophical Criminology

January, 2015, 7, 84-96

Defending biosocial criminology: On the discursive style of our critics, the separation of ideology and science, and a biologically informed defense of fundamental values.

Ben Heylen¹, Lieven J.R. Pauwels², Kevin M. Beaver³ & Marc Ruffinengo⁴

Introduction

Even though biosocial approaches are increasingly present in many of criminology's subdisciplines (e.g. psychology, behavioral economics, sociology), the acceptance thereof as a valid and useful framework for the explanation of a wide array of behaviors in criminology itself remains a slowly progressing process, which appears, inter alia, from the relative absence of discussions thereon in criminological textbooks (R. A. Wright & Miller, 1998). Biosocial criminology has been facing recurrent criticisms from decades ago (Platt & Takagi, 1979) until today (Carrier & Walby, 2014), quite similar to the wider field of sociobiology (for a book-length exposition, consult Rose & Rose, 2000). The problem with this is that it gives rise to a polemic, which may install a certain reluctance in, especially young, criminologists to embrace biosocial approaches as an integral part of their analysis of crime. After all, criminologists usually are not trained in biosocial approaches (which is also changing, fortunately), and it seems a reasonable choice to steer clear of biosocial approaches when they are constantly the subject of fundamental debates and harsh accusations. Even though this article is intended for a general criminological readership, we especially hope to reach those criminologists in doubt on biosocial

¹ Department of Criminology, Criminal Law and Social Law, Ghent University, Belgium.

² Department of Criminology, Criminal Law and Social Law, Ghent University, Belgium.

³ College of Criminology & Criminal Justice, Florida State University & Center for Social and Humanities Research, King Abdulaziz University, Saudi Arabia.

⁴ Department of Criminal Justice, Boise State University.

criminology due to the controversy that is often associated with it, in large part from the pen of scholars working in the critical tradition of criminology.

In this article, we will not focus on factual refutation of misunderstandings of the sociobiological approach, as this has been done plenty of times with regard to the usual critiques of, inter alia, nihilism, determinism, inequality, imperfectability, as well as the threat sociobiological approaches supposedly present to politics, justification of violence, gender issues, and the arts (for a comprehensive book length exposition, consult Pinker, 2002). This kind of refutation does not seem to be received by critics of sociobiological approaches in any serious way as the traditional criticisms keep on popping up. We cannot force anyone to read something, but the material is definitely there. Therefore, our aim will differ. On the one hand, we want to show the reader how critics of biosocial criminology often use specific rhetorical trickeries in order to construct a specific image of biosocial criminology. We will do this in the first part of the paper, where we base ourselves on the toolbox of critical criminology in order to critically assess their discourse on biosocial criminology. In the second part of the paper, we will focus on the paradigm shift that is enthusiastically proposed by many biosocial criminologists. There the focus will be on criminology as a discipline surrounded by other disciplines, where biosocial approaches in fact have become mainstream. In the third part, we will present a biosocial defense of equality and freedom, given that biosocial criminology's presumed lack of ideology is Pandora's Box in the civilized world. We show that biosocial criminology is a *better* framework to defend these values as opposed to strictly moralistic and idealistic reasoning. By doing so, we hope to convince the hesitant criminologist that biosocial approaches are not the devil in disguise, but an honest attempt to propel the scientific maturity of criminology, give it a solid interdisciplinary basis, without even touching upon the ideological project most criminologists – including biosocial ones – pursue.

1. A critical analysis of our critics' discourse

Reading the article by Carrier and Walby (2014), we certainly have to admit they strategic *writers*, successfully discursively constructing a specific image of the biosocial criminologists which will undoubtedly appeal to the their own academic hinterland and which bears in itself the potential of scaring more neutral criminologists not familiar with biosocial theories away from the subject for once and for all. The only problem with this is that it is just that: a discursive construction that bears no relation to contemporary biosocial criminology. They apply some familiar rhetorical tricks in order to do this.

We will structure our analysis according to three discursive styles described by a champion in the field of discursive analysis, Stanley Cohen. In his *States of Denial* (Cohen, 2001), he describes three ways in which wrongs are denied or attenuated, i.c. *direct denial*, *interpretative denial*, and *implicatory denial*. Let us consider his styles – as we are sure our critics will take Cohen's technique of analysis seriously – and apply it to the discourse aimed at biosocial criminology. In this section, we will discuss three styles by which biosocial criminology is accused of being a threat to criminology and its ideological agenda: *direct accusation* or the overt accusations of a plethora of moral wrongs, *interpretative accusation* or giving other meaning to the texts and findings of biosocial criminology in such a way that they lead to moral wrongs, and *implicatory accusation* or the acceptance of the results while attaching morally wrong consequences to them.

1.1. Direct accusation

It is clear that critics of biosocial criminology do not use a very nuanced language in their criticisms. They directly link biosocial criminology to fascism, racism, sexism and a wide variety of other heinous “-isms” that every reasonable person would oppose (including biosocial criminologists). Even though Carrier & Walby (2014) seem to avoid this direct accusation to a larger extent than previous critics of biosocial criminologists do, some instances are clearly present. Examples of this are:

The repressed dialogical relationship between the observing subject and the observed object, characteristic of the ideology of the immaculate data, allows biosocial criminologists to partake, notably, in the “remaking of race” (Wacquant, 2001, P.84)” (p. 21)

No wonder that biosocial criminologists are accused of racism: *their practices abide by the Eurocentric civilizational premises of the Lombrosian project (...)*” (p. 21)

This alone shows how biosocial criminology is not merely epistemologically simplistic, *but also bluntly antisocial.* (p. 21)

In such work we (...) we find a respectful take on the complexity of human beings that eschews *biosocial criminologists' reductionism and behaviorism and their blindness to social structure*. (p. 27)

"...the *neopositivist behavioristic orientation of biosocial criminology*..." (p. 29)

"at the core of this disqualification of the Standard Social Science model (Toobey and Cosmides, 1992) as ideological is biosocial criminologists' *categorical espousal of a neopositivist Popperian conception of science*.

In the first three examples, biosocial criminology is directly accused of a variety of moral wrongs: biosocial criminology facilitates the remaking of race (we will come back to this further down the text), it is antisocial and it is Lombroso reinvented. Apart from the fact that comparing biosocial approaches to Lombroso is like comparing medieval medicine to modern medicine, these claims can be considered to be direct accusations as they are rarely substantiated by the authors; they just put it in their text as if it were factual truths. Further down, we will show how these claims are wrong.

The last three examples are an attack on biosocial criminology's methodological framework. There, it is accused of neopositivism, behaviorism and reductionism, which are "categorically espoused". All of these terms bear a negative meaning, as they have been scrutinized throughout history, and serve the purpose of directly discrediting biosocial criminologists. Again, the claims are not substantiated by evidence from biosocial criminological work; they are just presented as categorical truths.

1.2. *Implicatory accusation*

A practice that occurs more often in the Carrier and Walby (2014) paper is *implicatory accusation*. This form of accusation occurs throughout the paper by assuming specific unwarranted consequences should biosocial criminology ever become a respected field of study, without actually substantiating these associations. Some examples (*italics ours*):

"Given that aetiological speculations do not *saturate* the field, biosocial criminology *must be* viewed as an attempt to *cement the Lombrosian project*: it is an effort to *imprison* criminology in an aetiological space where the ontological status of criminology goes unquestioned, and in which the integration of *biopathologizing* processes is the *sine qua non* of a scientific practice." (p. 5)

"The aim of the revolution is to establish 'biologically informed environmental approaches' (e.g. Walsh and Beaver 2009, p. 9) as the *only viable path* for scientific criminology." (p. 7)

"from enabling crime prevention strategies *through precocious detection of, and intervention on, the dangerous few* (e.g. "psychopaths") to acting as a break from blunt retributivist punishments by challenging the juridically foundational notion of responsibility (e.g. Raine, 2008)" (p. 8)

In the first example, it is clear that the consequences of establishing biosocial criminology as perceived by Carrier and Walby is a kind of revival of Lombroso (as it *must be* viewed as such), where every criminal is pathologized, and that criminology would be strictly limited to aetiology. The fear of Lombroso is a recurrent one, and biosocial criminologists have always resisted identification of contemporary biosocial theory with Lombroso (Walsh & Beaver, 2009, p. 11) or eugenics altogether. However, it must equally be clear that the policy implication of biosocial approaches is just as much eugenics or Lombrosian as the policy implication of social learning theory is for people not to be allowed to have friends. Furthermore, it suggests that biosocial criminologists would "imprison" criminology in an aetiological space, excluding fields of research such as criminalization (as appears from a few sentences before, on p. 4). However, as we shall discuss below, criminalization and social control themselves are also susceptible to empirical study, and this is by no means excluded by biosocial criminologists (in particular, evolutionary psychology and behavioral economics have a say in this – see below: the separation of ideology and science).

The third example states that another implications of biosocial criminology is a kind of essentializing of "the criminal" – which is at stakes with the notion of biologically informed environmentalism in the second

quote. Again, such an implication is direct derivative of Lombrosian thinking, looking for the “criminal man”. We will come back to this further down the text.

1.3. Interpretative accusation

The third mechanism we want to point out is *interpretative accusation*. A phenomenon people invariably fall prey to is that of understanding statements in a way that resonates with their own ideas and ideologies – cognitive dissonance. This is displayed throughout the text very often, by means of re-interpreting the words of authors in the field of biocriminology to mean things they eventually have not really said. This sort of “mental looping” is not only a tool in the rhetoric toolbox, often it comes down to twisting the words of certain authors to mean things that cannot be derived from them. For example, on page 10, it is claimed that:

“Contemporary biocriminologists assert that asking whether biology plays a role in criminal behavior is ‘no longer interesting’, as the pressing question would now be to weigh the contribution of various bodily economies (Raine, 2008, p. 323)”

It is very interesting to see that the heavily charged term, invented in an earlier paper by the same authors, “bodily economies”, is attributed to Raine – a citation quote is used. Contrary to this, the only question Raine asks on that particular page, is:

“...the question of whether there is a genetic basis is no longer interesting, and it has been replaced by the second-generation question of ‘How much of antisocial behavior is influenced by genes?’” (italics ours)

This is a very different question, especially taking into account that the term “bodily economies” is heavily charged towards a presumed determinism which the authors see in biosocial criminology. This is backed up by the accusations of “pathologizing”, the accusation of equating the criminal (if there is such a thing) with “flawed organisms”, and, just to name one more, the fact that we allegedly “biopathologize the brains of criminals”, surely would make it seem as if Raine was explicitly claiming these things to be true himself.

However, the question asked by Raine actually proves the critics wrong. What his question says, is that there is no determinism, and that genes only play a partial role in the explanation of crime. In the abstract of that same article he says:

“Here I highlight key brain regions implicated in antisocial behavior, with an emphasis on the prefrontal cortex, along with ways these areas give expression to risk factors for antisocial behavior. Environmental influences may alter gene expression to trigger the cascade of events translate genes into antisocial behavior” (2008: 323)

This shows clearly that the interpretation given by Carrier and Walby is their very own specific interpretation, skewed towards a false interpretation, obscuring the true meaning of what Raine says: genes play a role, they provide *risk factors*, which are translated into antisocial behavior in combination with *environmental influences*. A very more nuanced and realistic image than the Lombrosian deterministic picture Carrier and Walby want their audience to believe biosocial criminology is. Furthermore, nowhere is there any mention of “flawed organisms” or pigeonholing of individual criminals into a pre-set kind of taxonomy in biosocial criminological work⁵.

There are much more examples to be found in the Carrier and Walby paper, but it would lead us too far to dissect all examples. The point we intended to make is rather clear: using specific discursive techniques, critics of biosocial criminology paint an image of the biosocial criminologist that is – to say the least – not very positive. In the remainder of the paper, where we will discuss the separation of science and ideology, the paradigm shift biosocial criminologists talk about, and the ways in which biosocial criminology may provide

⁵ A search to the book “biosocial criminology: new directions in research and practice” renders 0 hits for the words “flawed” or “malfunction(al)”. Furthermore, when the word “dysfunction” is used – and it sometimes is in biosocial criminology – this does not mean “morally wrong” but simply “empirically different from the mean”. We come back to this in our discussion on the separation of ideology and science.

better grounds to secure fundamental values compared to ideology, the false accusations mentioned in the examples above will be refuted. Again, we will use the paper by Carrier and Walby (2014) as illustrative, as they are the most recent accounts of the critique on biosocial criminology.

Now, let us consider some philosophical aspects of (i) our insistence on the separation of ideology and science, and (ii) our insistence on the need for a paradigm shift in criminology. Both of these themes are recurrent in, if not essential to, the view of science adopted by biosocial criminologists⁶. As a consequence, they are often the subject of attack by a variety of opponents of biosocial criminology. We argue that these attacks are, however, ill-informed or badly understood, and will rephrase them here in terms of philosophy of science, as there otherwise will be the recurring risk of accusations as indicated above. Again, we will use the paper by Carrier and Walby (2014) as illustrative, as they are the most recent accounts of the critique on biosocial criminology.

2. The separation of ideology and science

In their article, Carrier and Walby (2014) assert that “biosocial criminologists insist on the adverse scientific effects that an overtly sociological episode has had on criminology” (p. 3). Throughout their discussion, they suggest we adhere to an “ideology of the immaculate data” suggesting scholars involved in biosocial approaches are not aware of the fact that all data have their limitations (note the interpretative accusation here). The point that biosocial scholars make when talking about being “dragged by their data”, is that data should take up the primary role in any scientific activity, and not ideology. That is not to say that scholars taking a biosocial approach are a strange kind of being with no ideology. It merely means that they are aware that normative enterprises and scientific ones differ fundamentally from one another, without judging which one is supposed to be “best”. This can be shown in two ways.

2.1. Knowledge and applications of knowledge

First, there is a vast difference between the *generation of knowledge*, and the *application thereof*. This has already been suggested by Popper – whom they wrongfully call a neo-positivist. To use the imagery of Popper (Popper, 1979, p. 262 ff), science is like a tree growing in the opposite direction: it starts from a vast variety of roots, and grows up to one trunk⁷. That is to say, as science progresses, we find increasingly universal laws. As opposed to this, the tree of knowledge seems to be growing as a regular tree in criminology: with ever more branches. This is partly due to interpretative traditions that focus on local phenomena (e.g. specific cultural manifestations of sexism), which are local instances of more general phenomena (e.g. sexism in general). This is no problem in principle (as diversification comes before unification), but one should be cautious disregarding the more general regularities altogether. For it may give rise to a situation of overspecialization in criminology, of ever more isolated and distinct mini-fields of research. According to Popper, the only way for the social sciences is to embrace objectivity, because “*an objectivist epistemology which studies the third world [that of objective regularities] can help to throw an immense amount of light upon the second world of subjective consciousness...; but the converse is not true*” (1979, 112).

And it is precisely that which biosocial criminology has to offer criminology: higher levels of universality⁸ in the explanation of crime, and an integration of existing more locally oriented explanations (Wright & Cullen, 2012, p. e.g.). Whether or not criminologists applying biosocial approaches decide to use these approaches to pursue a normative aim is not a point of argumentation. Everyone is free to pursue his or her ideals using scientific knowledge; no one is going to contest that. The important point is that the science criminology should try to be objective in the furthest measure possible given our technologies.

⁶ A more elaborate exposition on the meta-theoretical framework of biosocial criminology will be presented elsewhere.

⁷ In contrast, to this, applications of science grow as a “regular” tree: towards ever more diverse applications.

⁸ And there are quite a lot of universals in humans worldwide. Brown lists a five page list of them. Another interesting universal is the structure of language. This has not only been investigated by evolutionary psychologists (e.g. Pinker), but also by linguists and political activists such as Noam Chomsky.

2.2 *The incommensurability of the normative and empirical*

Second, reference can be made to Brigandt’s (2010) philosophical analysis of what constitutes concepts in science. As Brigandt (2011) notes, a concept consists of (i) an empirical referent, (ii) inferential role, and (iii) epistemic goal. In short, the empirical referent is the object the concept refers to in reality. The inferential role of a concept is the place it takes up in a body of propositions, and the connections between this body of propositions and the concept. It is basically where the concept fits into the wider theoretical approaches existing with regard to the area of study the concept is part of. The inferential role of a concept is the purpose of the concept, the reason why it is invoked. Let us briefly consider the differences between the concept “racism” for example, as viewed from the vantage point of the social scientific domain versus the ideological or normative domain (and again, there is no “better” or “worse” approach, there are only two different approaches with different goals):

	<i>Empirical-scientific</i>	<i>Ideological-normative</i>
<i>Empirical referent</i>	The entire range of prejudiced behaviors, ranging from negative emotions over micro-aggressions to severe “hate crimes”	Only criminalized forms of bias motivated behaviors or behaviors that are considered to be worthy of criminalization
<i>Inferential role</i>	Placed in a web of behavioral propositions	Placed in a web of normative propositions
<i>Epistemic goal</i>	Explaining a particular form of behavior in all its manifestations	Symbolic signaling of values and constraining a particular (criminalized) range of behaviors, given certain conditions (e.g. when intent can be shown) / explaining evolutions in normativity and/or criminalization

In biosocial jargon, there are no specific names for specific crimes such as there are in a criminal code or normative discourse. The simple reason is that they operate in incommensurable inferential systems and are meant to pursue divergent epistemic goals: whereas the former seeks to explain, the latter seeks to change. The former approach, then, merely beholds a behavior as a behavior without any moral judgment. For example, in evolutionary approaches to crime, scholars consider a given crime to be a behavior as any. The only thing they are interested in, is how and why this behavior has proven to be adaptive (e.g. Blokland, 2005), in order to better understand the motives and conditions that may give rise to it. The other endeavor is quite different: there, activity is about viewing behaviors from the point of view of ideological codes, and deciding whether or not we want this to be allowed or not. One and the same person can be involved in both without any problem, but the point is that criminology as a science ought to remember this distinction.

This line of reasoning may also appease the fear that regarding a behavior as having a biological root, automatically implies that it is therefore justified. For it is impossible to make this assumption, as both are fundamentally different endeavors, operating in completely different inferential systems. By the same token, it is an error looking at biosocial criminology as something that categorizes people as either “faulty” or “not faulty”, because this, too, presupposes crossing over from one to the other system: dichotomies such as “faulty-non faulty”, “flawed-non flawed” are, just as the dichotomy “good-bad”, constructions that are derived from the normative inferential system, not the empirical-scientific one⁹. Thus, when the word “dysfunctional” is used in biosocial theory, this does not relate to a normative claim as to what is normal or not, neither does it mean that this behavior automatically is something that should be banned (leave alone the entire person in which this dysfunction is present). It merely means that a certain characteristic diverts from what is generally empirically observed (for example, the size of an amygdala diverts significantly from its mean size). Many of

⁹ This does not mean that the results of empirical research cannot be used in normative endeavors. They will need to be translated appropriately, however, to make sure no confusion of tongues comes into existence, as the same label may cover different things in the two respective domains.

these dysfunctions never result in crime, or go by unobserved as they relate to traits that have no significant bearing on behavior anyway¹⁰.

Thus, it ought to be clear that the same concepts can mean quite different things depending on the inferential role and epistemic goal they are used for. This is most likely the root of the faulty interpretations and expected negative implications critics of biosocial criminology fear. A criticism derived from the normative body of propositions, but aimed at the empirical usage of that concept, has no meaning. This distinction is never made, however by critics of biosocial criminology, who simply seem to adopt the normative realm as the only valid one from which one can reason. But their own reluctance to accept any kind of empirical framework does not justify their taking for granted that a concept always and only means what it does in normative terms.

2.3 The empirical study of norms, norm-making and norm-enforcement

For all clarity, this does not mean that the activities of norm-making and norm-enforcement, typical subject matter of the normative domain, cannot be studied from the vantage point of empirical science¹¹. As Carrier and Walby argue, they fear that a biosocial criminology puts etiology at the center stage, and rejects anything remotely related to norms, norm-making, and norm-enforcement (2014, p 5). Whilst it is true that scholars working in biosocial criminology usually take into account the divide between normative and scientific systems of inference, it is not true that this claim necessarily extends to a total rejection of anything that has to do with norms as such (note that this statement comes down to an accusation by interpretation). For, biosocial approaches actually provide a solid framework in the study of norms and their maintenance. Especially evolutionary approaches have been active in this field, studying them as a necessary component in the evolution of human sociality (Bernhard, Fischbacher, & Fehr, 2006; Bowles & Gintis, 2004; Elster, 1998 to name just a few; Fehr, Fischbacher, & Gächter, 2002; Henrich & Boyd, 2001; Jensen, 2010; Mathew & Boyd, 2011; Nowak & Sigmund, 2005). These principles have also been brought into connection with macro-sociological ideas, such as cultural learning (e.g. Aoki, 2004; Henrich & Boyd, 1998, 2001; Wakano, Aoki, & Feldman, 2004) on the one hand, but also with the micro-level neurological approaches (e.g. de Quervain et al., 2004). So biosocial criminology does offer a useful framework to study norms and their maintenance, but only to form a scientific (*how* do they emerge? *Why* do they emerge? *How* are they maintained?) rather than a normative (which norms are *best*? Which norms *should* we embrace?) sense. Again, it is perfectly possible for a criminologist to do both, as no person can be reduced to being just that one thing, but what proponents of biosocial criminology talk about is criminological *science*, not politics.

2.4 The necessity of methodology and research instruments

Of course people are not robots, and they are all susceptible to things such as the natural fallacy, cognitive dissonance reduction, selective observation, and biased interpretation of results. Such cognitive biases are in large part a result of the fact that all people, too, adhere to some ideological ideas (situated in the normative rather than the empirical system). But, whereas critics of the biosocial school usually critique the methodologies used by these scholars (e.g. fMRI's), as they lead them to "dramatically naïve ex post facto explanations" (even though these fMRI's have enabled huge breakthrough in health and medicine), we ask ourselves how this seeming rejection of *all-but-the-perfect methodology* could possibly aid in this. If, indeed, our perception is biased (and this has been a philosophical issue since the late nineteenth century, where it is usually called "the problem of induction" and "the bucket theory of mind", most recently the "blank slate"), a logical response would be to put something in between us and the observed entity that may disconnect the by

¹⁰ It might be added that finding certain dysfunctions is an utterly important enterprise from the point of view of public health. Whilst no critical criminologist opposes research into dysfunctions in order to cure disease, it suddenly does become a problem when we relate this to behavior (and disease in itself also relates to behavior).

¹¹ Problems only arise when concepts and methods are transposed from one to the other. One cannot approximate the truth better by making reference to normative standards, just as empirical data cannot provide grounds to settle a moral argument (even though they can give important background information that may bear on this process of decision making, as we will discuss infra).

definition biased observer from that which he wishes to observe: a sound methodology and adequate research tools. Arguing that fMRI's are too complex to still understand what they actually render (as did Nikolas Rose to one of the authors of this contribution), fails to be an argument against this. For, fMRI's *consistently measure the same things in the same way*, thus allowing for prediction and testing. Of course, all instruments will eventually evolve, get refined, and be fine-tuned. But this is not an argument to abandon them straight away, it merely says that our science is not perfect, and that the truths rendered by it are approximations. Again, an idea that has been in place in all sciences since centuries, and that no scientist challenges – especially not biosocial criminologists who are at the front row to observe the massive complexity of the human brain and body.

Such methodology, and especially its further evolution and refinement, is of an essential nature in every scientific enterprise, otherwise normative bias will inevitably crawl into our claims. As both of these systems can be considered to be incommensurable to the extent that they apply different inferential roles and epistemic goals, this may lead to significant problems. The question, however, is not *whether* data or observation are fully value free in reality. Rather, it is whether or not it *can be* value free in principle. Biosocial criminology believes this to be the case (realism), but this does not imply data are considered to be immaculate. It only implies attention needs to be paid to strict methodologies and research tools (such as fMRI's) that function as a barrier between what we would want to see, and what actually is there¹², and how this bears on the interpretation of results. But this, we think, is a standard practice in empirical science.

3 A criminological tunnel vision

A final element we wish to comment on is the uniqueness of criminology's opposition to biosocial theory. While Carrier and Walby (2014: 8-10) state that we fail to grasp the notion of paradigm by Kuhn (1962)¹³, we think it has been used appropriately. For, Kuhn's thesis is that scientists will adhere to the theories they believe in (for whatever reason) even if data contradict it. In first instance, abnormalities from the point of view of the reigning paradigm will be attributed to the scientist that discovered it. But, if this becomes untenable as abnormalities pile up, they may be moved to accept the "new" framework of reference (paradigm) as their own. Now, if Beaver states that there are paradigmatic changes underway, he quite rightfully does so by pointing out that some researchers that were notorious believers in the Standard Social Science Model, were *dragged by their data* (i.e., abnormalities from the point of view of the SSSM) into the new paradigm biosocial criminology has to offer. They are dragged, as they most likely first resist it (fully in concert with Kuhn), but as data keep on piling up that contradict, or at least suggest there is more to it than the SSSM, this position may be untenable. This way, it really is about being driven towards the new paradigm gradually, which is actually exactly what Kuhn intended to say about paradigm shifts. Given the fact that Carrier and Walby notoriously use an *ad hominem* way of arguing throughout their paper (they don't speak of biosocial criminology, rather of biosocial criminologists), they can be considered to be the ones that are holding on to an old paradigm from the point of view of Kuhn: they blame the scientists for the abnormalities (by means of direct accusations, implicatory accusations and interpretative accusations).

Rephrasing this last point in terms of Lakatos' research programs (Lakatos & Musgrave, 1970), may illuminate something else. A research program is composed of a hard core and peripheral hypotheses. The hard core of criminology today clearly does not incorporate biosocial approaches, even though they are gaining in terrain. Criminology is often still stuck on the same theories all over again, with only little theoretical innovation (e.g. Robinson, 2012). These are the signs of a *degenerative research program* as described by Lakatos. However, if we zoom out and look beyond the borders of our specific discipline (which claims to be an interdisciplinary science, after all), it should be immediately clear that biosocial approaches have earned their

¹² Note that the most intricate and complex computer resides in our heads. Most certainly, observation without the mediating tools methodology offers, will result in even more biased observations, due to functional mental process that occur there, such as cognitive dissonance reduction. And we certainly do not know how the brain works in detail yet – maybe our critics do, as they often rely solely on their own observation and interpretations of reality.

¹³ Their remark on arguing for the superiority of a given kind of truth (scientific versus ideological) as these are, as discussed above, two distinct and incommensurable entities.

righteous place in a wide variety of disciplines, such as psychology, neurology, behavioral economics, and even the birthmother of criminology, sociology (most prominently so in evolutionary sociology). There, biosocial approaches have been welcomed in a refreshed research program allowing for further theoretical growth, making them *progressive research programs*. Publications of these scholars are booming, and they find their way to ever more prominent journals, such as *Nature*, *Science*, and the *PNAS* editions, and similar high-quality outlets for scholarly work. In a similar vein, biosocial criminology has been dubbed criminology's paradigm of the 21st century by Cullen (Walsh, 2009, p. 1).

All this indicates that it is not biosocial criminologists that are dreaming about a paradigm shift, as this has already occurred in our neighboring disciplines. It does mean, however, that criminology has been, in many respects, an insular and self-referential enterprise, an overspecialized field of study. Thus, the paradigm shift scholars in biosocial criminology refer to in their enthusiasm is more inspired by a care for the discipline and its progress than anything else, given that it is missing out on some very relevant progress in the wider field of social sciences, which are – or at least have been – constitutive of the discipline. Examples of this are violence in general (Armit, 2011), retaliation (Boehm, 2011), homicide (Roth, 2011), regicide (Eisner, 2011), to name just a few examples from scholars outside of criminology that were invited to publish in the *British Journal*., and of course not to forget the accessible reference works dealing with the whole lot of deviance at book length (e.g. Pinker, 2011).

Thus, we argue that the critique is often founded in a narrow tunnel vision of criminology, and even in a narrow interpretation of sociology, i.e., in terms of only conflict or Marxist theories of sociology. But, if even in the “mother discipline” of criminology, sociology, evolutionary and biosocial approaches are integrated in the core of the research program, leaving its traces in the curricula taught in sociology, the only question is whether or not we are going to co-evolve with these disciplines. For, sociobiological approaches to crime and conflict are abound, and all of these in principle are the core business of criminologists. If criminology keeps on resisting biosocial approaches to crime, there is an inherent risk we are really giving away our subject area to our neighboring disciplines, and that we are left behind with only historical accounts of crime, rooted in theories that are in dire need of revision, elaboration, refinement and integration. And it is precisely this that biosocial criminology has to offer the discipline: integration, theoretical growth, and crossing the boundaries with our neighbor disciplines, to constitute an up-to-date, interdisciplinary discipline focused on crime and deviance.

4 A biosocial defense of equality and freedom

Now we will turn to one the most predominant fears that critics of biosocial criminology have, i.e., racism and sexism, as two fears related to the ideology of equality. Enough ink has already been spilled on the fear of determinism, nihilism, and reductionism, often even at book-length, so we kindly request the reader to consult this literature (especially Pinker, 2002 is very informative in this context).

We understand that the main concern of our critics is that biosocial approaches may present a challenge to certain fundamental values such as equality, which are usually translated in an accusation by implication or interpretation of racism, fascism and the like. Whilst the rhetorical style usually applied in venting these accusations is deplorable, we do share this concern for freedom and equality. In this section, we will show how biosocial approaches can provide a solid, factual ground on which these values can be defended, whilst a strictly ideological/normative approach constantly bears the risk of being overthrown by another ideology which does not provide support for these values.

The common accusation that biosocial criminology implies some kind of racism, is simply ill-founded. If biology teaches us anything, it is that there is more intra-group genetic variation than there is inter-group genetic variation (e.g., Marshall, 1998; Pinker, 2002). This means that, on average, the genetic differences of people belonging to one group or race are greater than the genetic differences one observes, on average, between two such groups of people. Taking this into account, it is simply impossible for a biosocial criminologist or any other scholar to go about and claim the superiority of one race over another and no contemporary biosocial criminologist has ever done so. The direct accusation of racism is thus rejected, as it is simply not true that “this project [biosocial criminology] naively looks for the existence of race outside the realm of meaning, i.e., as a non-social object, but from the realm of meaning, i.e. by unreflexively mobilizing race as a social object” and that our “practices abide by the Eurocentric civilizational premises of the Lombrosian project (...), making it impossible to think of racialized categories as instituted realities, to analyze racialized categories in relational terms (...)” (Carrier & Walby, 2014, p. 21).

If we compare this to how the more critically oriented, normative criminologists would deal with this, as they reject the strict methodology we apply, it must be ideological. However, relying solely on ideology in order to secure equality may be a dangerous practice, as ideology is typically not founded on facts, but on opinion and, ultimately, consensus. There is no criterion, however, to say *which ideology is the best* in a given context. Solzhenytsin already pointed out the crucial role ideology plays in genocide and large scale extermination of groups of people (Pinker, 2011, p. 328). As Pinker argues, “divisive ideologies include Christianity during the Crusades and the Wars of Religion (and in an offshoot, the Taiping Rebellion in China); revolutionary romanticism in during the politicides of the French Revolution; nationalism during the genocides in Ottoman Turkey and the Balkans; Nazism in the Holocaust; and Marxism during the purges, expulsions, and terror-famines in Stalin’s Soviet Union, Mao’s China, and Pol Pot’s Cambodia”. Of course, we do not intend to say that the ideology of equality would lead to similar consequences; it is intended as the inverse of that.

However, the problem is more subtle. No one will argue that an egalitarian ideology is more nuanced and subtle than the divisive ideologies named above. However, if we look at the reasons *why* divisive ideologies are able to mobilize masses of people, a great danger becomes immediately apparent. The main reason why ideology invites large scale violence and mass mobilization is the fact that they are often absolutist: in the utopia promised by the ideology, everyone – of course as defined by the ideology-maker – is happy. Those opposing the ideology are standing in the way of pure and absolute happiness for all, and are thus demonized, and often also dehumanized. This absoluteness in a (divisive) ideology, can hardly be matched by a more balanced and nuanced vision of equality, if it is proclaimed in the right conditions (e.g., the financial situation in Germany after the First World War). Therefore, we contend that solely arguing on the basis of ideology is a dangerous endeavor, as it can never be ascertained which ideology will prevail in the end.

What can be done to prevent these things from happening? We think it a better way to proceed on the basis of good science, which also needs to be taught to future generations. This way, the message of equality can become a fact, not an opinion, which is part of our normal education. Ideologies, on the other hand, are always at risk at being overthrown – or even demonized for standing in the way of pure happiness. Hitler, famous for his propaganda, indeed writes openly about what the key to successful propaganda is¹⁴:

Propaganda must not investigate the truth objectively and, in so far as it is favourable to the other side, present it according to the theoretical rules of justice; yet it must present only that aspect of the truth which is favourable to its own side. (...) The receptive powers of the masses are very restricted, and their understanding is feeble.

Propaganda must always address itself to the broad masses of the people. (...) All propaganda must be presented in a popular form and must fix its intellectual level so as not to be above the heads of the least intellectual of those to whom it is directed. (...) The art of propaganda consists precisely in being able to awaken the imagination of the public through an appeal to their feelings, in finding the appropriate psychological form that will arrest the attention and appeal to the hearts of the national masses.(...) This sentiment, however, is not complex, but simple and consistent. It is not highly differentiated, but has only the negative and positive notions of love and hatred, right and wrong, truth and falsehood.

Therefore, at least biosocial approaches may provide the ideology of equality with the factual tools it needs to withstand the pressures that absolutist ideologies that cannot work but on the sentiment of people, present it with. No sound biosocial research has revealed the existence of fundamental differences between ethnic groups or hierarchies between groups of people, only ideologies have claimed such things. The best way to avoid propagandists from playing the sentiment of the people when they are unclear about the facts, is make the facts clear to them, and preferably integrate them in their basic education (such as teaching evolutionary theory in high schools).

With regard to the accusation of *sexism*, a similar case can be built. Even though it is true that men and women differ from a biological point of view (which is clear if we simply compare their average phenotypes), this does not mean that men and women should have mutually exclusive responsibilities or different opportunities. First of all, the fact that both differ does not imply that they differ *on all aspects*. The

¹⁴ DISCLAIMER: Please do note we do not read these things to bring about a Fourth Reich, but simply to understand the principles behind the most heinous acts in history in an attempt to prevent similar scenarios in the future. The excerpts from Mein Kampf reprinted here can be found on the Wikipedia site commenting on Nazi propaganda: http://en.wikipedia.org/wiki/Nazi_propaganda

differences that are frequently studied, however, often focus on parental investment and mating tactics (Pinker, 2002, p. 144). This is, however, only a marginal portion of the neurological wiring of humans. For there are many issues that *both men and women* faced in our evolutionary past, which give rise to the very same neurophysiology. So, again, what biology shows is that in addition to the significant male-female differences there are also vast similarities that exist between both sexes.

To conclude, neither in the case of racism nor in the case of sexism can biology or biosocial approaches offer any argument to sustain these practices. It rather provides clear grounds outside of ideological ones, not to sustain them. Awareness on where certain characteristics come from, a clear understanding of differences and similarities is not the demon in the box it is often presumed to be. Rather, a realistic image of mankind and a realistic interpretation of the results of many research projects in these fields, can aid the normative project of criminology much more than the proverbial “yes-or-no” game that will inevitably need to be played when only ideologies are invoked to settle the matter.

5 Conclusion

In this contribution, we critically analyzed the discursive style and argumentation used by critics of biosocial criminology. In a first part, we showed that their discursive style uses three specific types of accusation of moral wrongs, based on Cohen’s *States of Denial*: direct accusation, interpretative accusation and implicatory accusation. By using these rhetoric trickeries, critics of biosocial criminology discursively create an image of the biosocial criminologist as being racist, fascist, sexist, Lombrosian, and, of course, incredibly naïve. Nowhere in contemporary biosocial literature, however, can we find traces of these accusations.

In the second part, we discussed the separation of ideology and science. We concluded that both are intrinsically different realms, and that criticisms emanating from the normative realm, but directed at the empirical realm are problematic, given that the same concept may mean different things in both realms. Given the fact that every human being is biased in his observations, inter alia by ideology, we insisted on the usage of methodology, the importance of methodological innovation, and technologies that may reduce this bias.

The third part discussed the paradigm shift biosocial criminologists enthusiastically refer to. By referring to the works of Kuhn and Lakatos, we argue that biosocial criminologist rightfully use the word “paradigm” in its original Kuhnian sense. Critics of biosocial criminology furthermore often use an *ad hominem* style of reasoning, confirming this idea. For it is blaming the scientist which usually happens when paradigms are faced with abnormalities in Kuhn’s analysis. By referring to Lakatos, we state that the classical conception of criminology as defended by our critics, is a degenerative research program, given its lack to produce new predictions and results. Our neighboring disciplines (including sociology) have in fact incorporated biosocial approaches into their hard core, as appears from biosocial courses being incorporated into their curricula, which makes them progressive research paradigms. Criminology might equally benefit from these approaches, as it might otherwise lag behind.

In the final part of the paper, we built a case for biosocial approaches as being a better way to secure ideological values sacred to criminology. By providing factual data, it may counteract the very processes that make racism and genocides possible: doubt over facts and playing people’s emotions. If biosocial approaches would be incorporated in regular curricula, facts that contradict, inter alia, racism, would become background knowledge, making it far more difficult for propagandists to play people’s emotions and mobilize them against another group.

REFERENCES

- Aoki, K. (2004). Altruism may be sexy - Comment on cultural group selection, coevolutionary processes and large-scale cooperation. *Journal of Economic Behavior & Organization*, 53(1), 37-40.
- Armit, I. (2011). Violence and Society in the Deep Human Past. *British Journal of Criminology*, 51(3), 499-517.
- Bernhard, H., Fischbacher, U., & Fehr, E. (2006). Parochial altruism in humans. *Nature*, 442(7105), 912-915.
- Blokland, A. (2005). Fit for crime? Evolutionaire benaderingen binnen de criminologie. *Tijdschrift voor Criminologie*, 47(2), 167.
- Boehm, C. (2011). Retaliatory Violence in Human Prehistory. *British Journal of Criminology*, 51(3), 518-534.
- Bowles, S., & Gintis, H. (2004). The evolution of strong reciprocity: cooperation in heterogeneous populations. *Theor. Popul. Biol.*, 65(1), 17-28.
- Brigandt, I. (2010). The epistemic goal of a concept: accounting for the rationality of semantic change and variation. *Synthese*, 177(1), 19-40.
- Carrier, N., & Walby, K. (2014). Ptolemizing Lombroso: The pseudo-revolution of biosocial criminology. *Journal of Theoretical and Philosophical Criminology*, 6(1), 1-45.
- Cohen, S. (2001). *States of denial : knowing about atrocities and suffering*. Cambridge, UK; Malden, MA: Blackwell Publishers.
- Cosmides, L., Tooby, J., & Kurzban, R. (2003). Perceptions of race. *Trends in Cognitive Sciences*, 7(4), 173-179.
- de Quervain, D. J. F., Fischbacher, U., Treyer, V., Schelthammer, M., Schnyder, U., Buck, A., & Fehr, E. (2004). The neural basis of altruistic punishment. *Science*, 305(5688), 1254-1258.
- Eisner, M. (2011). Killing Kings: Patterns of Regicide in Europe, AD 600–1800. *British Journal of Criminology*, 51(3), 556-577.
- Elster, J. (1998). Emotions and economic theory. *Journal of Economic Literature*, 36(1), 47-74.
- Fehr, E., Fischbacher, U., & Gächter, S. (2002). Strong reciprocity, human cooperation, and the enforcement of social norms. *Human Nature-an Interdisciplinary Biosocial Perspective*, 13(1), 1-25.
- Henrich, J., & Boyd, R. (1998). The evolution of conformist transmission and the emergence of between-group differences. *Evolution and Human Behavior*, 19(4), 215-241.
- Henrich, J., & Boyd, R. (2001). Why people punish defectors - Weak conformist transmission can stabilize costly enforcement of norms in cooperative dilemmas. *Journal of Theoretical Biology*, 208(1), 79-89.
- Jensen, K. (2010). Punishment and spite, the dark side of cooperation. *Philosophical Transactions of the Royal Society B-Biological Sciences*, 365(1553), 2635-2650.
- Kuhn, T. S. (1962). *The structure of scientific revolutions*. Chicago: University of Chicago Press.
- Kurzban, R., & Leary, M. R. (2001). Evolutionary origins of stigmatization: The functions of social exclusion. *Psychological Bulletin*, 127(2), 187-208.
- Kurzban, R., Tooby, J., & Cosmides, L. (2001). Can race be erased? Coalitional computation and social categorization. *Proceedings of the National Academy of Sciences of the United States of America*, 98(26), 15387-15392.
- Lakatos, I., & Musgrave, A. (1970). *Criticism and the growth of knowledge*. Cambridge Eng.: University Press.
- Marshall, E. (1998). DNA studies challenge the meaning of race. *Science*, 282(5389), 654-655.
- Mathew, S., & Boyd, R. (2011). Punishment sustains large-scale cooperation in prestate warfare. *Proceedings of the National Academy of Sciences of the United States of America*, 108(28), 11375-11380.
- Nowak, M. A., & Sigmund, K. (2005). Evolution of indirect reciprocity. *Nature*, 437(7063), 1291-1298.
- Pinker, S. (2002). *The blank slate : the modern denial of human nature*. New York: Viking.
- Pinker, S. (2011). *The better angels of our nature : why violence has declined*. New York: Viking.
- Platt, T., & Takagi, P. (1979). Biosocial criminology: a critique. *Crime and Social Justice*(11), 5-13.
- Popper, K. R. (1979). *Objective knowledge : an evolutionary approach* (Rev. ed.). Oxford [Eng.]; New York: Clarendon Press ; Oxford University Press.
- Robinson, M. (2012). The perversion of criminology. *Journal of Theoretical and Philosophical Criminology*, 4(2), 27.
- Rose, H., & Rose, S. P. R. (2000). *Alas, poor Darwin : arguments against evolutionary psychology* (1st American ed.). New York: Harmony Books.
- Roth, R. (2011). Biology and the Deep History of Homicide. *British Journal of Criminology*, 51(3), 535-555.
- Wakano, J. Y., Aoki, K., & Feldman, M. W. (2004). Evolution of social learning: a mathematical analysis. *Theoretical Population Biology*, 66(3), 249-258.
- Walsh, A., & Beaver, K. M. (2009). *Biosocial criminology: new directions in theory and research*. New York: Routledge/Taylor and Francis Group.

- Wright, J. P., & Cullen, F. T. (2012). The future of biosocial criminology: Beyond scholar's professional ideology. *Journal of Contemporary Criminal Justice*, 28, 237-253.
- Wright, R. A., & Miller, J. M. (1998). Taboo until today? The coverage of biological arguments in criminology textbooks, 1961 to 1970 and 1987 to 1996. *Journal of Criminal Justice*, 26(1), 1-19.