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# **Paving the Way for an Evolutionary Social Constructivism**

*Provisional version - Not for citation*

*(to appear in: Biological Theory: Integrating Development,  
Evolution, and Cognition)*

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## **Paving the Way for an Evolutionary Social Constructivism**

### **Abstract:**

The idea has recently taken root that evolutionary theory and social constructivism are less antagonistic than most theorists thought, and we have even seen attempts at integrating constructivist and evolutionary approaches to human thought and behaviour. We argue in this article that although the projected integration is possible, indeed valuable, the existing attempts have tended to be vague or overly simplistic about the claims of social constructivists. We proceed by examining how to give more precision and substance to the research programme of evolutionary social constructivism, a task we accomplish by focussing on the specific selection pressures that may have shaped the psychological and cultural mechanisms that give rise to social constructions. The benefit of such an integration for social constructivism is to have a solid foundation in the natural sciences. For evolutionists, evolutionary social constructivism offers a wider assortment of methods with which to study the interplay between culture and human nature.

Keywords: social constructivism, evolutionary theory, maladaptive culture

## **Paving the Way for an Evolutionary Social Constructivism**

Did our sexual preferences and mating patterns evolve in the Pleistocene? Can one study present-day homosexuality without so much as a nod in the direction of the cultural changes that gave rise to the modern concept of homosexuality? Is the way we understand ourselves profoundly influenced by politics and ideology? Are mental disorders failures of naturally selected functions or are they created by apparatuses and techniques of power? Since the rise of the sociobiological approach in human behavioural sciences, social constructivists and Darwinians have been engaged in what seems to be a kind of turf war over these and similar questions. Social constructivists attack evolutionary psychologists because they see evolutionary psychology as a pseudoscientific cover for a plethora of reactionary attitudes like sexism, racism, and so on (compare Travis 2003). Similarly, behavioural ecologists and evolutionary psychologists tend to be less than sympathetic to social constructivism, which they portray as a rubber ideology that lacks any and all scientific standards and that prides itself in its nonsensical vocabulary (Kruger 2002; Gross and Levitt 1994).

As is often the case in many academic disputes, the parties involved are not all that well informed about the central tenets, to say nothings of the subtleties, of the adverse theory (Segerstråle 2000). Consequently, it is hard to imagine how social constructivism or evolutionary psychology could ever profit from the arguments put forward by their opponents. Hacking notes, correctly, that “[P]ublic scientists shout at sociologists, who shout back. You almost forget that there are issues to discuss.” (Hacking 1999: vii) Recently,

however, some theoreticians - mostly from the Darwinian side - have taken up the role of appeaser or bridge builder (Mallon and Stich 2000; Plotkin 2002; compare also Dickins 2004; Shakespeare and Erickson 2000). They argue that evolutionary approaches to human behaviour and social constructivism are not mutually exclusive, and that it might even be possible to integrate both fields into a new academic discipline, called "evolutionary social constructivism" (Wilson 2005). Suggestive as the idea may be, existing proposals for this integration are still very much in need of correction and elaboration. What we would like to do here is give the research programme of evolutionary social constructivism (ESC) the necessary precision and substance, by considering ways in which evolution can explain why we socially construct things.

Obviously, our concern can be seen as part of the broader desire of integrating sociology and biology. In this debate, we do not defend a biological reductionism, but rather a genuine integration. Whereas biological reductionism would just correct naïve versions of social constructivism, ESC also aims at correcting naïve - and scientifically often dubious - evolutionary approaches to human behaviour. Such naïve evolutionary approaches are widespread, and certainly not limited to the field of evolutionary psychology. Even theorists like Plotkin have argued that social constructivism ultimately fails to understand the nature and origin of so-called "social constructions" (Plotkin 2002). However, it probably goes without saying that the bridges ESC might build between nature and culture - or between "evolutionary nativism" and "blank slatism" - dovetail more with the Darwinian theories of Sperber, Richerson, D.S. Wilson, Plotkin and their likes, than with the "narrow"

evolutionary psychology of Tooby, Cosmides and Buss (Wilson 2003; Mameli 2007).

Section 1 sketches out why evolutionary social scientists and social constructivists are usually so hostile towards each other. Section 2 examines what is meant by "social constructivism". There are many varieties of social constructivism, which makes it both hard and necessary to pin the beast down. Section 3 attempts to explicate how four core elements of social constructivism can be integrated into evolutionary reasoning about human beings. A discussion of ESC's implications for current and future research concludes this essay.

### **Introducing the Problem**

Dobzhansky's dictum, that "nothing in biology makes sense except in the light of evolution" (Dobzhansky 1973: 125), reflects the synthetic potential of neo-Darwinian theory of evolution. Today, most biologists are convinced that evolutionary theory is crucial to the project of unifying all areas of biological research: palaeontology, embryology, molecular biology, ecology, and genetics. Most proponents of evolutionary psychology and human behavioural ecology go out of their way to emphasize the integrative power of Darwinism; evolutionary theory, they argue, should be the cornerstone of all psychological subdisciplines (and of the social sciences in general). After all, the insight that the human mind is shaped by natural and sexual selection to solve the adaptive problems that our ancestors confronted evidently affects cognitive, social, developmental, personality, and clinical psychology.<sup>i</sup> One undeniable result of this attempt to "darwinize" psychology and

related fields is that it has made the compatibility with Darwinism the make or break criterion of every psychological theory and approach. This compatibility with Darwinism is usually thought to imply a break with what Leda Cosmides and John Tooby have notoriously dubbed the "Standard Social Science Model" (SSSM), that is, the view that the mind is a blank slate completely determined by an autonomous or extrinsic system of symbols and values (Tooby and Cosmides 1992; see also Pinker 2002).

Even if the SSSM is not, in spite of what Tooby and Cosmides say, the prevalent ("standard") model in the social sciences (Levy 2004), a number of sociological and psychological theories are closely aligned with it; social constructivism is undoubtedly at the head of this list. It has defined itself time and again as anti-naturalistic (Cheah 1996; Bauman 1999). Obviously, its anti-naturalism should not be identified with a commitment to miraculous interventions or, in Dennett's words, divine skyhooks (Dennett 1995). Social constructivists are only antinaturalistic in the sense that they reject the image of the human subject as a natural given. According to constructivists, humans are no natural creatures, but rather effects of cultural processes. In short, they seem to promote a Münchhausen-like account of culture, in which culture provides its own foundations. The words of Berger and Luckmann clearly illustrate the social constructivist bootstrapping of culture: "Man's self-production is always, and of necessity, a social enterprise. Men *together* produce a human environment, with the totality of its socio-cultural and psychological formations." (Berger and Luckmann 1971 [1966]: 69)

This state of affairs leaves evolutionary psychologists with only two options: they must either reject social constructivism altogether, or argue that social constructivism is not as anti-Darwinian as it might seem. Before we can settle this issue, we must describe clearly what we mean by social constructivism.

### **The Many Kinds of Social Constructivism**

According to Hacking, "[p]eople begin to argue that X is socially constructed when they find that in the present state of affairs, X is taken for granted; X appears to be inevitable." (Hacking 1999: 12) To this precondition, social constructivists usually add three elements: "(1) X need not have existed, or need not be at all as it is, is not determined by the nature of things; it is not inevitable. Very often they go further, and urge that: (2) X is quite bad as it is. (3) We would be much better off if X were done away with, or at least radically transformed." (Hacking 1999: 6) Hacking's characterization is adequate, even if a little too broad and vague. Even though it has become the canonical definition of social constructivism, most social constructivists make much stronger claims than the ones mentioned by Hacking, whose account tends (quite visibly) to obscure the important epistemological pillar of social constructivism. Yes, social constructivism does offer ontological and ethical positions, but it is also - we may even say mainly - a method of analyzing people's thoughts and knowledge. Social constructivists believe that one must focus on "social epistemology" in order to elucidate how social constructions come into being (Brown et al. 1998). If that is the case, then it



will be useful to provide a more stringent definition than Hacking's: (1) because social constructivism, in most instances, wants to trace historico-political principles as well as the consequences of concepts and of their transformations, it analyses how and why concepts and their transformations induce people to think the way they think and what influence these transformations have on our behaviour; (2) social constructivists assume that "reason" is, at least partially, a function of non-reasonable processes, and that these non-reasonable forces are closely related to power (control/dominance over others/nature); (3) the influence of the conceptual transformations can also be seen in the use of narratives to structure our world and in the identities with which we attempt to navigate it; (4) and finally, social constructivists hold that scientific theories do not to escape the more general theory-ladenness of human observations.

This definition is not a reproduction of the problem we complained about in the introduction. It should not be seen as a monolithic interpretation of social constructivism, simply because the different strands of constructivist thought - including Hacking's social constructivism - do not quarrel about these claims. Obviously, it would be silly to deny the differences within the broad field of social constructivism, but most - if not all - intra-constructivist discussions are about how to operationalize these ideas or insights, and about the scope and/or reach of their application. E.g., a great many concepts and forms of "reason" have been analysed with the help of social constructivist methods, and science has been from the very beginning one of social constructivism's favourite targets. The upshot of a social

constructivist analysis of science is almost always the claim that in science everything is invention, nothing discovery (Bunge 1996: 297). However, social constructivism can also be more moderate. There is in the social sciences a continuum of acceptance of social constructivist ideas, and social constructivist researchers from different disciplines vary in the distance along that continuum that they are prepared to travel (Burr 1998: 15). Many psychologists, for example, often do not regard social constructivism as a profound philosophical criticism of the general project of a scientific psychology, but as a research programme *within* this project (compare, e.g., Haslam and Levy 2006). That said, it is also the case that this moderate social constructivism found in psychology holds a reflexive and critical stance towards the practice of scientific psychology.

Still, even a moderate social constructivism sees itself as anti-naturalistic (in a sociological sense) in general and anti-biologistic in particular. Bruner, for instance, writes that "it is culture, not biology, that shapes human life and the human mind, that gives meaning to action by situating its underlying intentional states in an interpretive system." (Bruner 1990: 34) Or, as Berger and Luckmann put it, "[t]he human organism lacks the necessary biological means to provide stability for human conduct. Human existence, if it were thrown back on its organismic resources by themselves, would be existence in some sort of chaos." (Berger and Luckmann 1971 [1966]: 69) Not all social constructivists are this dismissive, and many acknowledged that social constructivism is not a plea for the absurd claim that there is no such thing as (an evolved) human nature. Collier, for instance, writes:

There are quite a lot of things which no one can seriously dispute belong to human nature: we breathe oxygen, use language, cannot survive unassisted in infancy, fear death, dislike intense pain, get scurvy if deprived of vitamin C, get tense if sexually frustrated, get drunk if we imbibe too much alcohol, die if we are plunged into boiling water, and so on. Anyone could extend this list a few pages without getting controversial. (Collier 1998: 39)

This last position implies that social constructivism is not intrinsically opposed to certain evolutionary approaches to human psychology, though it is obvious that this compatibility need not lead to an integration of evolutionary psychology and social constructivism. It might also lead to the view that each cobbler has to stick to his last. Some evolutionary scholars, for instance, have defended the view that both disciplines are consistent and maybe even complementary (Mallon and Stich 2000), but that they are not synergic because one discipline cannot be substantially enriched by the scientific findings of the other (Gintis 2004). What we would like to show is that it is not only possible, but desirable, to go beyond what is often called "vertical integration" (Barkow 2006). The latter indeed seems to imply nothing more than one-way traffic, from evolutionary theory towards social constructivism that is. But in order to bring about a genuine, horizontal, that is synergic, integration of the two disciplines, we need real linking pins, allowing for interdisciplinary traffic in *both* directions. We believe a good starting point for finding these linking points consists of the evolved social abilities in which social processes such as essentialization and identity-formation are grounded.

## **Bridging the Gap**

Social constructivism comes in different shapes and sizes, so that we must start by pinpointing which kind of social constructivism we are trying to connect with evolutionary theory. Needless to say, the philosophical strand of social constructivism that makes it its business to undermine science as such can never be reconciled with evolutionary theory (or with any other scientific theory for that matter).<sup>ii</sup> But even if social constructivism sees itself as a discipline within the disciplinary matrix of the more "regular" social sciences, reconciliation is still far from evident. David Sloan Wilson distinguishes two such social constructivist positions: the first claims that individuals have enormous flexibility, the second that human flexibility is absolutely limitless (Wilson 2005). According to Wilson, the second position exemplifies the "blank slatism" or anti-nativism that can never be reconciled with evolutionary approaches to the human mind and to human behaviour. But Wilson does believe that the first social constructivist position may be incorporated into evolutionary positions, especially given the almost general agreement among evolutionists that the potential for change is an important part of human nature. In particular, Wilson sees ESC as a middle ground between two extreme claims, namely: that the human mind is a flexible and general-purpose learning device; that the mind should be seen as a kind of Swiss army knife full of adaptive (or adapted) specialized tools – a mirror image, as were, of a discussion endemic

to the current variety of evolutionary approaches to human behaviour.

Wilson's argument is not free of problems. He is obviously right that it is easy to establish a middle-ground position between extreme nativism and extreme anti-nativism. Many evolutionary theorists, Wilson included, have contributed to our understanding of the interaction between culture and nature (Pulliam and Dunford 1980; Boyd and Richerson 1985; Cronk et al. 2000). But the problem is that Wilson's description of social constructivism obscures some of the more specific social constructivist claims. It is in fact true that social constructivism emphasizes the flexibility of human nature and the variability of human thinking and behaviour, but is also true that the same emphasis can be found in many other psychological or sociological theories. Hence, if one wants to set social constructivism on an evolutionary foundation, one must not neglect to take into account its more specific claims.<sup>iii</sup>

A number of evolutionists believe that social constructions exist, though this does not keep them from being rather sceptical about the explanations for their existence offered by social constructivism (Plotkin 2002). We want to show that this sceptical attitude is at least partially unwarranted, and that the mechanisms described and studied by social constructivism are objects susceptible of legitimate evolutionary explanations. In what follows, we will discuss four core elements of social constructivism we have encountered earlier, and suggest how they may be incorporated into evolutionary thinking. These elements should not be seen as part of a monolithic interpretation of "social constructivism". But since they are present in nearly every variety of psychological social

constructivism, ranging from the extreme social constructivism of Gergen (1985) to Hacking's moderate version of it, an integration or reconciliation of these four elements with evolutionary theory is necessary to establish a viable ESC. We will address each of our social constructivist core elements using the following structure. First we clarify what the elements mean within social constructivism. We then elucidate why, at first sight, they may seem difficult to reconcile with evolutionary approaches to human behaviour. Thirdly, we show how, nonetheless, they could be addressed within both adaptationist and non-adaptationist evolutionary frameworks. Finally, we briefly explicate the added value of an integrated approach, focusing on the neglected possible interdisciplinary traffic from social constructivism towards evolutionary theory.

### **Essentializing Reason**

Social constructivists argue that social constructions arise when the continuous flow of contingencies is stabilized through generalizations and concepts. These concepts, moreover, tend to become reified: people start to think that these abstract concepts have real and tangible existence. The concept of "mental illness" is a good example. Hacking has shown convincingly how "fugue" (Hacking 1998) and "multiple personality disorder" (Hacking 1995) are cultural artefacts ("social constructions"), since they are not bounded entities with fixed properties, and they are not indifferent to changing conventions in psychiatric diagnostics. They are not natural kinds, in other words, even though most people, including

many psychiatrists and their patients, once considered "fugue" and "multiple personality disorder" to be natural kinds.

How do these social constructivist approaches to "mental illness" compare with their evolutionary counterparts? For one thing, it is true that successful social constructivist approaches to mental disorders can be fatal for (certain) Darwinian accounts of mental disorders (Adriaens 2007). But that is not the real issue here. The real issue is whether or not there are good evolutionary reasons for our tendency to consider and treat cultural artefacts as natural kinds. Why do humans think that words and concepts denote natural kinds or essences? Or more precisely, why do we think that category membership remains the same despite striking differences and/or transformations? Susan Gelman has shown quite convincingly that "psychological essentialism", i.e. the phenomenon that people are basically essentialists in their reasoning (Medin 1989), is to a large extent innate. Preschool children from a variety of cultural contexts treat biological species *and* social categories as if both had an innate basis, a stable category membership, and sharp boundaries (Gelman 2004).

Some Darwinians have relied on the innate character of psychological essentialism to suggest that it has an adaptive value even if true essences do not exist. Keller and Miller, for instance, argue that perceiving mental disorders as a coherent category may have been functional

not because it [the disorder] is a 'natural kind' with a common aetiology at any level, but because it was evolutionarily or culturally adaptive for people to categorize others in particular ways, in order to make certain social decisions

about them. Thus insanity may be like ugliness, dishonesty, or aggressiveness - things to avoid and stigmatize in social and sexual interactions - not because they have a unitary aetiology, but because they have a common set of fitness costs for observers. (Keller and Miller 2006: 28)

Another camp of Darwinian scholars, however, have argued that our innate tendency to treat social artefacts as natural kinds is just an unwelcome side-effect of a generally beneficial cognitive bias. More specifically, Atran has suggested that essentialist representational systems guide inductive inference more successfully than other representational systems, at least with regard to biological taxa and biological substances (Atran 1990). The essentialization of social constructs or other cultural artefacts may result from an overextension of this adaptive system. In Atran's view, essentialism is a domain-specific mode of thinking, part of our "natural history module". But the fact that this module is far from being fully encapsulated means that it allows for many misfires. Hirschfeld has argued that this position runs aground on the fact that the essentialist thinking associated with biological taxa differs quite substantially from the kind of essentialist thinking applied to, e.g., race and ethnicity (Hirschfeld 1996). The alternatives he proposes, however, are more concerned with proximate than with ultimate or evolutionary causes. Yet, automatic categorization and stereotyping on the basis of rather arbitrary group labels can be a necessary precondition for the sustenance of adaptive cooperation with ingroup members (Axelrod et al. 2004; compare also McElreath et al. 2003).



Our point is that many evolutionists actually agree with social constructivists about the fact that psychological essentialism is often ontologically unwarranted. Evolutionists also acknowledge that psychological essentialism may lead to morally reprehensible behaviour and attitudes, like stigmatization and ostracizing. But, unlike social constructivists, they add that such essentialism is, or was, on average more adaptive than more politically correct (and more adequate) modes of thinking (Barrett 2001). By explicitly introducing the social constructivist core element of essentializing reason into evolutionary theorizing, however, it becomes possible to reorient sometimes heated debates towards more constructive ends. This may even lead to additional insights on how to counteract socially unwarranted instances of essentialist thinking, thereby enhancing both Darwinism's and social constructivism's potential for furthering societal change.

### **Dominance and Subordination**

Like many disciplines in the social sciences, social constructivism focuses its analyses on how power relations influence human behaviour. What is distinctive to social constructivism is the belief that these power relations are not (only) the outcome of a struggle between fully aware subjects striving for power, but they result predominantly from social practices and from the language used by these social practices. Essentialist social constructions of the kind discussed above are indeed often regarded as a function of processes associated with dominance and subordination. The so-called "birth of the addict" illustrates the social constructivist point. Social constructivists argue that "addiction" is best understood not

as an independent medical or scientific discovery, but as part of a transformation in social thought which corresponds with fundamental changes in societal structure. These fundamental changes led to the assumption that all social problems were solvable or curable (Goffman 1968): from then on, all deviant behaviour was treated as an abnormality. Individuals who might otherwise have led full, but perturbed, lives were from all of a sudden subjected to a form of private exclusion and bureaucratic interference which transformed what was once seen as somewhat eccentric behaviour into something that called for treatment, maybe even institutionalization (Foucault 2003 [1963]). Strangely enough, the people subjected to this did not seem bothered about it themselves. Their ready acceptance of their subordinated position only aggravated their situation (Russell 2002). Looking back at his famous 1973 study about how remarkably easy it was for Vietnam vets to kick their addiction to heroin, Robins writes:

Heroin is or was thought of, by law enforcement personnel and users alike, as the 'worst' drug, virtually instantly and permanently addictive and creating craving so extreme that it overcomes all normal ability to resist temptations to theft and robbery to acquire it. Users who share that view show by their use that they are ready to commit themselves to their concept of an addictive life style. The public's rankings of drugs with respect to 'hardness' probably has more to do with the drug's legal status, the government's commitment to discouraging its use, and its price, than with any intrinsic addictive liability. (Robins 1993: 1052)

From a Darwinian point of view, there is something awkward about this process. Because enhancing one's status is beneficial for

one's reproductive success, selection has built our neuro-endocrinal and cognitive-behavioural systems to pursue high positions in social hierarchies. So how is it possible that socio-cultural practices (modern medicine, psychiatric labelling, legal categories) sometimes - or even very often - override our inborn desire for power and status? In other words, why do so many of us accept a culture that is apparently hostile to our natural inclinations?

An evolutionary solution to this problem can build on the idea that the socially constructed behaviour of the addict is less maladaptive than it seems. For instance, the individual's "commitment to the concept of an addictive life style" can be seen as a costly signal (Zahavi 1975) for vigour. Such self-handicapping behaviour may not be devoid of social benefits like popularity among one's peers.<sup>iv</sup>

Boyd and Richerson suggest another solution. These authors acknowledge the generally adaptive character of culture, but they emphasize in the same breath that our evolved psychological predispositions to *acquire* culture inherently contain the possibility of reaching maladaptive outcomes. More specifically, it is argued that genetically determined and adaptive learning biases, such as conformist and prestige biases, always involve trade-offs (Richerson and Boyd 2005; Henrich and Gil-White 2001). The tendency to imitate successful and prestigious individuals, for instance, is - under specific circumstances - favoured by selection, even if making this bias so perfect that it will reliably reject maladaptive beliefs over the whole range of social experiences is too costly. Boyd and Richerson compare our evolved psychology with the human immune system: "The psychology of social learning is like an immune

system in that it is adapted to absorb beneficial ideas but resist maladaptive ones. And like the immune system it is not always able to keep up with rapidly evolving cultural pathogens". (Richerson and Boyd 2005: 165) In short, there is a good evolutionary explanation for why some of us willingly accept the concepts and thought-processes that determine our subordination, especially if these concepts and beliefs are held by our peers (conformist bias) or by prestigious individuals (prestige bias).

Here, incorporating social constructivist sensitivities into evolutionary approaches to human behaviour opens up more possibilities to consider ways in which evolution can explain why we socially construct things, rather than limiting the inquiry to investigating how evolution could explain these social constructs directly. This considerably broadens the scope of hypotheses to consider when studying dominance and subordination from an evolutionary perspective.

### **Narratives and Identities**

The overwhelming importance of language returns - and with a vengeance at that - in the emphasis on narratives: social constructivists are fond of pointing out whenever they can that that the construction of reality takes on a narrative form (Bruner 1991). Social constructivists argue, persuasively, that narratives are a pervasive feature of the reality of everyday life which shape not only our modes of thought but also, and perhaps more importantly, reality itself, giving meaning and a sense of coherence to it (Baudrillard 1996). In discussing what they call the "politics of narrative", Hinchman and Hinchman note that "[p]eople tell stories

because they need to know who they are and how to behave in a world that is complex and often dangerous" (Hinchman and Hinchman 1997: xxviii). Social constructivists nonetheless often focus their analyses on the dysfunctional effects of narratives on individuals of our species. If humans use stories for their own benefit, it seems no less true that stories may use humans.

Besides stressing the importance of narratives for structuring the world surrounding us, social constructivists also see narratives as playing a crucial role in the formation and maintenance of social and personal identities (Nelson 2003; Gergen and Gergen 1983; Singer 2004; Harré 2002; Callero 2003; Giddens 1984). Groups and individuals alike employ stories to invest themselves (and others) with a sense of integrity.

More so than is the case for the other social constructivist core elements, the core element of narratives and identities has already gained some foothold in evolutionary theorizing about human behaviour. Darwinian scholars, however, are in general more interested in accounting for the human story-telling capacity as such, and for the recurrent features of the resulting narratives. They also tend to emphasize stable dispositional personality traits over and above narrative features of identities.

According to Scalise Sugiyama, for example, the fact that there is what she calls a "thematic universality" to narratives "lends support to the hypothesis that storytelling originally emerged as a means of storing and transmitting certain types of fitness-related information" (Scalise Sugiyama 2001: 242). Other evolutionary accounts of the origin of narrative focus more on the relation between narratives and literature as a form of art in general

(Carroll 2004; Wilson 1998). One hypothesis, for instance, holds that the arts evolved to solve a new adaptive problem, namely the confusion and uncertainty that goes hand in hand with a sharpened intelligence. The ability to create simulated realities would have allowed humans to deal adaptively with the downsides of their otherwise very useful big brains. For these evolutionists, social constructivists are on the right track when they assume that stories are more or less trustworthy guides in a dangerous world.

Even if the emphasis on the autonomous power of stories that can be found in social constructivism may clash with evolutionary theories about the origins of story-telling, scholars who regard themselves as adaptationists would be the first to acknowledge that once the capacity to narrate is in place, the spread of stories need not necessarily entail a match between the (groups of) organisms that somehow propagate them, and the environments in which they live. Memetics enthusiasts like Dennett (1995) are quite fond of stressing the virus-like qualities of catchy stories, which tend to infect their hosts in a non-adaptive fashion.

As to the matter of identities, there is no doubt that evolutionary psychologists and (human) behavioural ecologists alike might quibble with social constructivists - and with good reason - about the extent to which certain personality traits are hard-wired adaptive results of natural and sexual selection (Buss 1991; Dall et al. 2004; Nettle 2006; compare also MacDonald 1998).

But there would be little reason to do the same with regard to identity-formation in the sense commonly used by social constructivists. Evolutionists of various denominations are well aware of the fact that one can differentiate between organisms or

biological individuals and persons or "people" (Dennett 1988; Sterelny 2003; Ross 2006). Indeed, most of them, albeit to varying degrees, agree that non-genetic input is required to endow us with human identities. Typical Darwinian accounts of "how cultural symbionts turn primates into persons" (Dennett 2003: 170) thus already acknowledge the largely "storied" nature of the self. Indeed, these and similar accounts seem to accept the importance of narratives as vessels for the transmission of the ideational entities that constitute our identities. They also provide us with a possible explanation for both biologically adaptive and (seemingly or effectively) maladaptive personal identities; as such, they are open to the same arguments we put forward with regards to dominance and subordination, and to essentializing reason.

So it would seem that evolutionary and constructivist approaches to narrativity generally and the role of narratives in constituting identities, are to a large extent running on the same track. In any case, interdisciplinary research that is certainly not averse to evolutionary thinking already appears well underway, providing a good illustration of the power of an integrated approach. Fireman et al. (2003) for instance use what they call the "expanded natural method" to investigate how exactly narratives contribute to the formation of selves. Their method involves amongst other things psychology, neurobiology, anthropology, literature, as well as - quite unavoidably - some evolutionary theory. Likewise, acknowledging that "[p]ersonality is an individual's unique variation on the general evolutionary design for human nature", McAdams and Pals (2006: 212) aim to combine social constructivist insights with evolutionary ones in one and the same framework.

### **Theory-ladenness of Observation**

Finally, social constructivists believe that language and the narratives it makes possible shape our knowledge of the world. Our observations are said to be at least partially influenced by the concepts and stories that our society has adopted (Hanson 1958; Quine 1960; Kuhn 1970; Berger and Luckmann 1971 [1966]). Different conceptual or theoretical backgrounds give rise to qualitatively different perceptions. Social constructivism never misses a chance to emphasize just how theory-laden our observations are, and how this fact undermines, in their view, the objectivity of science (Latour and Woolgar 1979). Scientists belong to a field staffed predominantly by other males and funded by the wheels of capitalist society, and so their views are profoundly affected by sexism and capitalism. Current science is just the continuation of politics by other means. This is (supposedly) reflected in the scientists' choice of subjects and in the outcomes of their studies.

Evolutionary psychology, for instance, focuses excessively on sex differences and cheating, and finds that men are primarily attracted by women with a 0,7 waist-hip ratio. They (often) bring to their work the cultural values of their sex, race, and class (Haraway 1989), thus carrying on a tradition that was started by Darwin himself, as Michael Ruse has noted: "Not only do we learn [from *The Descent of Man*] that men are strong and brave and brainy, whereas women are kind and gentle and sensitive; that whites are intelligent and hard working whereas blacks are stupid and lazy; but that, on the whole, capitalism is not a bad thing." (Ruse 1999: 70) Unfortunately, it would appear to be the case that the social



constructivist core element of the theory-ladenness of observation would even be particularly damning for evolutionary theory. However, the issue at stake here is not only how evolutionary psychologists and other Darwinian scientists can avoid the pitfalls of doing ideologically driven (pseudo-)science, but also *why* human observations are in general theory-laden.

Some evolutionary psychologists think that this is simply a bad question. They bluntly reject Hanson's description of how our observations are theory-laden by adopting a modular view of the mind. Even if many evolutionists quarrel with Fodor's view of the modular nature of central systems (Sperber 1996), they agree with him at least on the following point:

If perceptual processes are modular, then by definition, bodies of theory that are inaccessible to the modules 'do not affect the way the perceiver sees the world'. Specifically, perceivers who differ profoundly in their background theories [...] might nevertheless see the world in exactly the same way, so long as the bodies of theory that they disagree about are inaccessible to their perceptual mechanisms. (Fodor 1983: 38)

While the emphasis on the mind's modularity is to some extent at right angles with Hanson's view of our observation's theory-ladenness, it does not completely do away with the notion that theories affect our perception and thinking. Evolutionary psychologists hold that different perceivers see the world in the same way in part because the *innate* perceptual and other modules of different people *share the same content*. We perceive the world and reason about the world with the help of evolutionarily helpful and more or less hard-wired "theories" (theory of mind, intuitive

physics), theories that are universal because they were shaped by similar environmental conditions.

Obviously, when social constructivists emphasize the theory-ladenness of observation, they are not talking or thinking about this modular kind of theory-ladenness. Social constructivists suppose an enormous flexibility of the human mind which fundamentally blurs the distinction between theory and observation, because the theories we have *learned* or *acquired* in our social environments determine what we perceive and how we perceive it. But the "theory-informity" of observation (Hibberd 2005) is not necessarily at odds with the weak version of mental modularity most evolutionists have adopted. Carruthers' defence of the massive modularity hypothesis, for instance, still allows for (a) flexibility in the mind's processing of information, (b) a substantial influence from the (social) environment on the fine-tuning and even the construction of modules, and (c) the presence of mechanisms of intermodular integration (Carruthers 2006). Likewise, the proposals put forward by Mithen (1996) and Sperber (1996) seem to go at least some way in blurring the dividing line between cognition and perception, thus allowing the distinction between theory and observation to be relaxed, in much the same way as more moderate social constructivists envisage it.

Both stronger and weaker evolutionary takes on modularity can profit from taking seriously the more moderate social constructivist approaches to the theory-ladenness of observation, scientific or otherwise. For instance, research into these modules could thus shed light on how exactly the *innate* theory-ladenness of observation affects scientific theorizing (see, e.g., De Cruz and De Smedt

2007). Conversely, if cognitive fluidity appears to lie at the origin of science, as Mithen (1996) claims, this undoubtedly helps to explain why it is not immune to knowledge *acquired* through social transmission.

## **Discussion and Conclusion**

It may be unfortunate for some that not everyone “reading *Evolutionary Psychology* is above taking social constructionism and environmentalism seriously” (Kanazawa 2006: 103).<sup>v</sup> We have tried in this paper to take social constructivism seriously by taking a closer look at some of its core elements, which are often overlooked in evolutionary attempts at reconciliation. The theoretical core of social constructivism revolves around essentializing reason, dominance and subordination, narratives and identities, and the theory-ladenness of observation. And we have argued that a viable ESC must be able to incorporate these elements into its theoretical framework. We have shown to that end that such an ESC can explain (a) why these core elements exist, (b) what the function is of the adaptive core elements of social constructivism, and (c) what evolutionary reasoning can add to the study of the non-adaptive (maladaptive, vestigial, ...) core elements. This places ESC firmly within naturalist approaches, even though its naturalism is quite broadly conceived. Conversely, we have tried to demonstrate how specific social constructivist sensitivities can complete strictly evolutionary approaches.

Our view is that this opens up the possibility for a genuine cross-fertilization between two actually quite adjacent approaches. We are

well aware, of course, that readers with a more social constructivist orientation could, should they be so inclined, simply dispose of our proposal as yet one more attempt at the "nihilation" of their views. According to Berger and Luckmann, "nihilation involves the more ambitious attempt to account for all deviant definitions of reality *in terms of* concepts belonging to one's own universe". (Berger and Luckmann 1971 [1966]: 133)<sup>vi</sup> We can only stress once more that this is not our intention. Moreover, a few examples from different fields of enquiry may clarify even more the potential usefulness of a genuine and more carefully elaborated middle-ground position like the ESC we have presented in this paper. Consider for instance the field of comparative law. One of the more recent theoretical currents in comparative legal studies, sometimes called "difference theory", emphasizes the overwhelmingly constructed nature of culturally grounded legal systems. For instance, Legrand claims that comparatists "must purposefully privilege the identification of differences across the laws they compare" (Legrand 2001: 1049). Better still, "in the quest for thick or deep understanding, the comparatist must maintain alterity in its specificity while at all times avoiding the tendency to essentialize it" (Legrand 2003: 297). Other contributions in more or less the same theoretical vein highlight other core constructivist elements, such as the theory-ladenness of observation (see, e.g., Ainsworth 1996; Curran 1998). Conversely, other legal theorists explicitly point to evolutionary psychology and related efforts in cognitive anthropology as a way to understand the equally remarkable similarities amongst various legal systems. For instance, according to Jones "the legal features of any legal system [...] will also

reflect specific features of evolved, species-typical, human brain design" (Jones 2001: 858). Caterina, for his part, interprets the resurgence of nativist theorizing as a rebuttal of more radical versions of difference theory that at the same time opens up new possibilities for the comparative study of law (Caterina 2004).

ESC can make forcefully clear that both stances obviously have it right, to a certain degree, and can explain why - in both Darwinian senses of the word - this is so. This enables us to reframe naïve versions of both extreme stances. What ESC adds to this perhaps somewhat less exciting - but, given the amount of scholarly debate still surrounding these matters, no less important - assertion, is a way to assess to what extent either of them is right and how they effectively interact in producing certain outcomes that would otherwise be difficult to explain.

The latter can be illustrated more concretely by the example of homosexuality. In a recent paper, Adriaens and De Block have argued that (occasional) same-sex sexual behaviour has a long evolutionary history, as is obvious from the fact that same-sex sexuality is part of the behavioural repertoire of many animal species. Such same-sex sexuality (in humans and other animals) may have been designed by natural selection to create or strengthen male-male alliances by allowing marginal males to reposition themselves in the group hierarchy. Adriaens and De Block claim, however, that exclusive homosexuality is truly an eighteenth century social construction, though they also argue that this fact need not imply that some aspects of this new kind of homosexuality cannot also be illuminated by evolutionary theory (Adriaens and De Block 2006). More specifically, they show that the socio-historical conditions around

1700 were in fact quite similar to the conditions that once led, in our ancestral environment, to a substantial increase in, and intensification of, same-sex sexual behaviour - conditions that are accounted for quite well by the alliance formation hypothesis. In other words, cultural processes may generate superstimuli, which release strong homoerotic tendencies. These strong homoerotic tendencies are not identical to the homosexual identity, but it seems at least likely that they pave the way for the construction of such an identity.

Even areas where "narrow" evolutionary approaches score heavily, such as human avoidance of close inbreeding and kin detection (Van den Berghe 1983; Lieberman et al. 2007; but see Kitcher 1985), would seem to fall within the scope of ESC's line of reasoning. Against the followers of Levi-Strauss, Freud and Durkheim, Lieberman and colleagues argue persuasively that incest avoidance makes perfect sense from a Darwinian point of view because close inbreeding increases expression of deleterious recessive genes. They also show that such adaptive incest avoidance might generate opposition to incest in others either as a by-product of self-regulation or because most third parties that an individual could influence in the ancestral environment were kin (Lieberman et al. 2003). However, there are at least three reasons why this valuable evolutionary approach would benefit from ESC. First, many evolutionary authors mix up incest and inbreeding (Spain 1987), thereby leaving out the likely exploitation of a biological outbreeding avoidance by cultural kin terms (Cronk 1999). Social constructivists expose this omission, by emphasizing that meaning matters and that the meaning of cultural terms such as "incest" or "family" often influence human

behavior. Or as Berger and Luckmann put it: "the incest taboo itself is nothing but the negative side of an assemblage of typifications, which define in the first place which sexual conduct is incestuous and which is not." (Berger and Luckmann 1971 [1966]: 73). ESC would only add to this "pure" social constructivist claim that the direction, in which the meaning of cultural terms steers human behavior, makes evolutionary sense. Secondly, the "natural" and adaptive character of sexual aversion towards close relatives, does not exclude the possibility that a law that strictly forbids incestuous relationships can - at least slightly - transform our attitude towards incest. Such a law may have effects on the emotions experienced by victims and wrong-doers. And if the law is seen as sacred (a "taboo"), one can expect that it will perhaps affect the desires of the individuals subjected to it, for instance because incest is presented as a privilege of the gods or the nobility (Serrano and Gunzburger 1983). Incest is then no longer simply disgusting, but can also become a forbidden and fascinating fruit. This transformation is not irreconcilable with evolutionary theory, nor is it just a complement of it: it is exactly what one would expect, given the - on average - adaptive character of a prestige bias and of our evolved tendency to rely on stories as guides for our own behaviour. Thirdly, the categories "incest victim" and "sexual abuser" are often treated as natural kinds, with more or less stable category membership. Yet, historical and social-constructivist research has revealed that the essence ascribed to the "incest victim" and the "abusing father" depends to a large extent on socio-political circumstances and psychiatric practices (Guarnieri 1998; Hacking 1995). More often than not, evolutionists

neglect these social facts. And while social constructivists recognize the importance of these ontologically unwarranted essentializations and their effects, they leave the social factors largely unexplained, primarily because they think that the socio-cultural realm is autonomous. Hence, the surplus value of ESC for this debate is quite obvious. ESC could correct (1) the naïve evolutionary belief that cultural identities play no role in the motives and effects of incest, and (2) the naïve social constructivist belief that the psychology of incest victims and abusers is not an evolved psychology. Most importantly, however, ESC may also generate new hypotheses on, e.g., the question *why* some people willingly accept the label of abuser.

To conclude, our central claim is that incorporating social constructivist elements into evolutionary approaches to human thought and behaviour has important benefits for both parties. Social constructivism derives from it the benefit of a solid foundation in the natural sciences. Social constructivist ideas which had previously been regarded as problematic, may gain legitimacy when viewed from an evolutionary perspective. For evolutionists, ESC offers a wider assortment of methods to study the interplay between culture and human nature. ESC is likely to be an indispensable building block for actually realizing the synthetic potential the neo-Darwinian theory of evolution has to offer to the social sciences.



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<sup>i</sup> Obviously, there are differences between (various brands of) evolutionary psychology and human behavioural ecology in this and other respects. We have chosen, here and in other parts of this paper, not to give detailed accounts of these - mostly surmountable - differences. But see, e.g., Smith 2000, Laland and Brown 2002. We are, likewise, well aware of the fact that we have not included each and every evolutionary and social constructivist approach relevant to the issues we deal with.

<sup>ii</sup> Many social constructivists of the anti-realist kind, refer to Bruno Latour as their intellectual godfather. Latour himself however, distanced himself from his admirers' effort to dismantle the natural sciences: "The mistake would be to believe that we too have given a social explanation of scientific facts. No, even though it is true that at first we tried, like good critics trained in the good schools, to use the armaments handed to us by our betters and elders to crack open - one of their favourite expressions, meaning to destroy - religion, power, discourse, hegemony. But, fortunately (yes, fortunately!), one after the other, we witnessed that the black boxes of science remained closed and that it was rather the tools that lay in the dust of our workshop, disjointed and broken. Put simply, critique was useless against objects of some solidity." (Latour 2004, 242)

<sup>iii</sup> Mallon and Stich admit that their paper on the reconciliation of evolutionary psychology and social constructivism is in fact first and foremost about the reconciliation of evolutionary psychology and the SSSM: "all SSSM advocates are social constructionists in our sense". (Mallon and Stich 2000: 134)

<sup>iv</sup> Alternatively, it could be argued that, while it generally promotes social dominance, a personality trait like extraversion also entails sensation seeking (Nettle 2005, 2006), which can possibly lead to addictive behaviour.

<sup>v</sup> In the scientific literature, "social constructivism" and "social constructionism" are often used as synonyms.

<sup>vi</sup> Berger and Luckmann continue with the following: "The deviant conceptions are not merely assigned a negative status, they are grappled with theoretically in detail. The final goal of this procedure is to *incorporate* the deviant conceptions within one's own universe, and thereby to liquidate them ultimately.

The deviant conceptions must, therefore, be translated into concepts derived from one's own universe. In this manner, the negation of one's universe is subtly changed into an affirmation of it. The presupposition is always that the negator does not really know what he is saying. His statements become meaningful only as they are translated into more 'correct' terms, that is, terms deriving from the universe he negates". (Berger and Luckmann 1971 [1966], 133)