Our Animal Condition and Social Construction

Jorge A. Colombo MD, PhD
Director Emeritus U.N.A. (CEMIC -CONICET)
Buenos Aires, Argentina

Abstract

This book approaches human social constructions with a comparative, evolutionary focus. Our species' origin finds its roots in ancestral habits, behaviors, and survival drives, that during millennia were crystallized in basic neurobehavioral circuits, be it as predators or potential preys. Which and how much of our current drives –individually and as a global community– are driven by ancestral, inherited traits imprinted in our animal condition? Humans are biological entities with social history; both events metaphorically expressed as the "biological-" and the "cultural tectonic plate" synthesize basic interaction dynamics of our drives, social restraints, desires, frustrations, problems of adaptation, belligerence, and social sensitivity. Friction between these "tectonic plates" conditions various aggressive or maladaptive behaviors. Yet, not all events are of a conscious dimension. Cognitive processing involves distributed neural circuits as a substrate. The most disturbing issue from an intellectual point of view is that much of the former appears to be at the subconscious level. Operatively, what appears at the conscious level, expressed temporarily at a specific time, are the events we can manipulate as a working memory in our executive behavior domain and corresponding to the explicit memory (Dietrich, 2015). Based on social repression or "socialization", cultural strata of variable "thickness" have been constructed on top of drives implicit to our animal condition. Nevertheless, it failed in their deactivation, only in reformulating or repressing them. To what extent are our behaviors associated to –or dependent on– an ancestral neurobiological substrate modulated by cultural history?

Keywords: animal heritage- human conflicts-neurobiological evolution- social comparative evolution- social ecology- brain reorganization- comparative evolution of poverty- emotion in the construction of beliefs.

Introduction

Our species' knowledge, creativity, and technological developments gave support to a dominant macro species that at the same time collectively avoided attaining full consciousness of its animal origin and fundamental biological nature –a condition that affects some of our emotional expressions and social drives (territorialism, reproductive and feeding priorities, survival, prevalence). The belligerence, cruelties, social inequities, and unrelenting individual and class ambitions are the best testimony that to change our ancestral drive we must first recognize them and assume our fundamental nature.

Profound cultural changes are only possible and enduring if we come to grips with our true primary condition.

Let us recognize that our species' origin finds its roots in ancestral habits, behaviors, and survival drives, that during millennia were crystallized in basic neurobehavioral circuits, be it as predators or potential preys. In this context, which and how much of our current drives –individually and as a global community– are driven by ancestral, inherited traits imprinted in our animal condition? An attempt to approximate this intriguing query is proposed here. It pertains to our identity and social constructions, and ecological interaction.

The history of our evolution over the last 10,000 years has been primarily about our cultural development and our adaptations to social contexts, and to new, natural and artificial environments. Humans are biological entities with social and cultural history; both events metaphorically expressed as the "BIOLOGICAL-" and the "CULTURAL-TECTONIC PLATES" synthesize basic interaction dynamics of our desires, frustrations, problems of adaptation, belligerence, and social sensitivity.

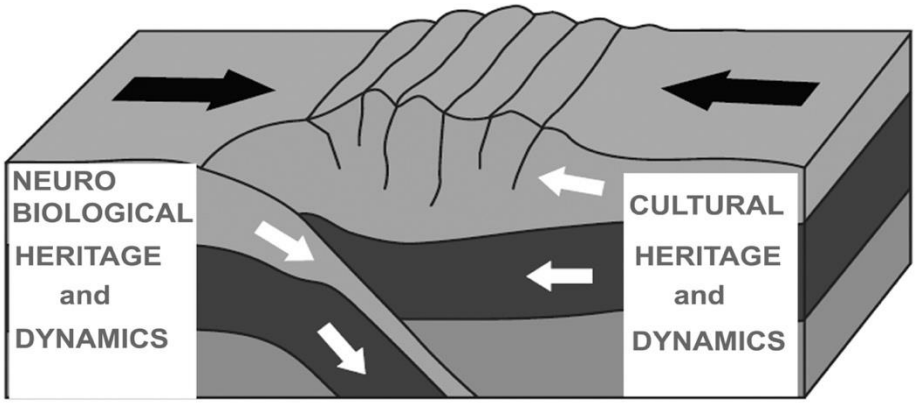

Figure 1. *Schematic illustration of the metaphor representing the "neurobiological-" and "cultural-" "tectonic plates friction", as a source of adapted/non adapted /pathological behaviors. (modified, after tectonic plate formation from*© Galapagos Conservation Trust)

Not all events are of a conscious dimension. Cognitive processing involves distributed neural circuits as a substrate. The most disturbing issue from an intellectual point of view is that much of the former appears to be at the *subconscious* level. According to some authors, what appears at the conscious level, expressed temporarily at a specific time, are the events we can manipulate as a *working memory* in our executive behavior domain and corresponding to the *explicit memory* (Dietrich, 2015). For comparison purposes, this would represent much less than the 10-15 percent that emerges from an iceberg on the surface (Dietrich, 2015)

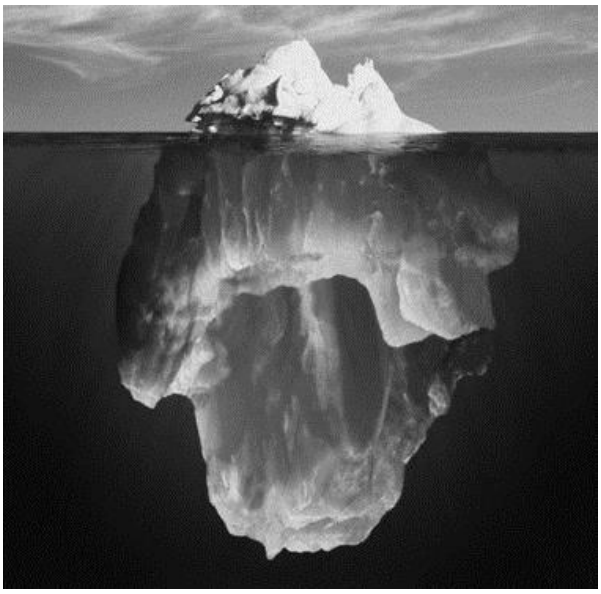

Figure 2. *Recreation of an "iceberg" to suggest the approximate relative percentage of conscious activity (estimated as working memory) if this were equivalent to 12.5 percent of an iceberg.*
(Actually, the percentage of conscious activity -working memory- could be much lower)

The evolution of our species and our civilization took place pulled by two differing vectors: cooperation and competition. These behaviors have been described for our primate relatives (chimpanzees, bonobos), albeit with different degrees of predominance in terms of aggression and female participation. These behaviors have been projected to the hypothetical behavioral structure of the *primordial Pan*, which gave origin also to the *Homo* lineage.

Such basic behaviors are intimately related with survival which, from an evolutionary point of view, highly depends on predatory behavior. The concept of predation applied to the *Natural Kingdom* appears as anticipation to our species' cultural predatory behaviors. On these grounds it seems pertinent to include a thought from Thorstein Veblen (1899), referred to a culture's predatory phase:
"*The predatory phase of culture is attained only when the predatory attitude has become the habitual and accredited spiritual attitude for the members of the group....*"

In this evolutive context, what degree of plasticity do our behaviors have that impact the extra personal universe? Are they associated –or dependent of– an ancestral neurobiological substrate modulated by cultural history, or do they have exclusive origin on the actual socio-cultural experience and lack any evolutive inertia?
It is well known of the existence of neural circuits linked to emotional behavior. They include components associated with violence linked to social prevalence, reproductive behavior, territoriality, and access to food resources. On a group behavior bases, according to Wranghan (1999), killing coalitions among neighboring communities take place regularly in several species (wolves, chimpanzees). These are attributed –

according to the imbalance of power hypothesis– to the expression of a dominant drive over neighbors. Among humans, such inter- and intragroup competence would take place on a similar basis but can be triggered by additional reasons, whether they be survival- or cultural reasons (religious, financial, ideological, expression of tribal parochialism associated to various possible slogans).

The final expression of emotional behavior (whether aggression or flight) respond through a common, final neurobiological pathway. According to Boehm (2012), the evolutive predecessor – the *ancestral Pan* of hominid primates – to *Homo*, the chimpanzee (*Pan troglodytes*, or common chimpanzee) and the bonobo (*Pan paniscus*, or pygmy chimpanzee) would have lived in social constructions based on hierarchical dominance. As mentioned before, there is a sharp difference in conflict management exerted by chimpanzees (tendency to conflict, male predominance), and bonobos (preventive behavior, female predominance). Based on the behaviors of both species, Boehm (2012) poses that humans would keep both alternatives; a potential behavioral bipolarity with uneven prevalence distribution among individual characters and social organizations. This hypothetical behavioral duality could be linked to the configuration of the human genome, and the subsequent neurobiological scaffolding. It would then be reasonable to expect that those basic tendencies could predominate in different groups and individuals, in addition to cultural conditioning.

To sum up, based on social repression or "socialization", cultural strata of variable "thickness" have been constructed on top of drives implicit to our animal (primate) condition. Nevertheless, it failed in their deactivation, only in reformulating or repressing them. Consequently, friction between these proposed "geological plates" –of biological and cultural origin–, conditions various aggressive or maladaptive behaviors. In a context of social construction, such evolutive concepts of *territory* and *neighbor to be suppressed*, ought to be replaced by a cultural construction thriving toward cooperative behavior.

From this general overview, it can be proposed that our species' distant origin emerged from a naturally violent context that challenged individual and species survival. Intra-group and intra-species cooperation, coupled with flight and aggressive behaviors, provided relative conditions to endure. Hence, it is not completely surprising that eons later, violent behavior remains as an expression in our civilization.
The central aim of this book is to offer evidence –to acquire conscience– of our biologic nature, evolutive behavioral emergence and our socio-cultural ecology. And to what extent such evolutive evolutionary inheritance is still conditioning our human social construction and individual behaviors.

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Reviews

"This book presents a true interdisciplinary approach to the burning question of how much of our actual social problems in a global world, of our behavior as individuals and of a global community is caused by our biological nature and neurobiological condition." - **Dr. Karl Zilles, Senior Professor, Research Center Jülich, RWTH University Aachen, Germany; Editor-in-Chief *Brain Structure and Function***

"I do not know of any other attempt to use new findings on the origins of humans based on DNA studies, together with new conceptions of the plasticity of brain networks based on modern imaging and neuroscience studies, to examine the human condition." - **Michael I. Posner, Professor Emeritus of Psychology, University of Oregon**