ABSTRACT
In an attempt to understand and explain toxic leadership, a predominant phenomenon in both public and private organizations, the paper proposes an evolutionary approach. The evolutionary theory offers nowadays the foundations of at least four disciplines that attempt to explain human behaviours as evolutionary adaptations (or maladaptations) to the natural and/or social environment: human sociobiology, human behavioural ecology, evolutionary psychology, memetics and gene–culture coevolution theory. According to gene–culture coevolution theory, articulated language was the singular phenomenon that permitted humans to become a cultural species, culture becoming itself a selection factor. Culture means transmission of information from one generation to the next and learning from other individuals’ experiences, through language. So, it is of critical importance to have good criteria for the selection of those individuals from whom we should learn. Yet when humans also choose their leaders from among those role-models, according to the same criteria, this mechanism can become a maladaptation and the result can be toxic leadership.

KEYWORDS: gene–culture coevolution theory, dominance status, prestige status, toxic leadership.

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1. THEORETICAL FRAMEWORK

When Charles Darwin published his magnum opus, On the Origin of Species (Darwin, 1859), fearing that the novelty of his ideas was too much already for his Victorian readers, he did not include almost any reference to the evolution of human species, either physical or psychological. The most important implication regarding human beings that remains unstated explicitly by Darwin himself here, but can be read between the lines by any astute reader is the idea that humans are themselves part of the animal kingdom, being members of the order of Primates, together with ape and monkey species. This idea has enormous implications, as it leads to the conclusion that not only our physical features, but also our psychological traits, the behavioural aspects of human beings, are evolved adaptations that appeared over time due to the action of natural and sexual selection. Understanding this, but still being reluctant to talk about it, in a frequently cited paragraph at the end of the book, Darwin however states that: “In the distant future I see open fields for more important researches. Psychology will be based on a new foundation, that of the necessary acquirement of each mental power and capacity by gradation” (Darwin, 1859, p. 488).

Darwin’s prediction had to wait a long time before its fulfilment, mainly due to a possible implication that could be drawn from the evolutionary theory to human psychology, namely genetic
determinism: the idea that all behaviour is genetically predetermined, that our biological nature determines our destiny, and consequently, that it can be maintained that our free will is nothing but an illusion (Dunbar et al. 2007, p. 4). Consequently, even if the theory of evolution by natural selection has enormous implications for the study of the human mind and behaviour, and provides the tools for transforming the study of human nature into a natural science of great depth and precision, “more than a century and a half after On the Origin of Species was published, many of the psychological, social, and behavioral sciences continue to be grounded on assumptions that evolutionarily informed researchers know to be false; the rest have only in the past few decades set to work on the radical reformulations of their disciplines necessary to make them consistent with findings in the evolutionary sciences” (Tooby & Cosmides, 2016, p. 3).

However, this situation began to change in the last three decades, when not only the study of the non-human animals progressed, but also evolutionary theories began to be applied to the study of human mind and behaviour, leading to the development of a new array of scientific behavioural disciplines: evolutionary psychology, human sociobiology, memetics, human behavioural ecology, gene-culture coevolution theory.

Beyond their differences in scope and methods, all these new sciences share a common evolutionary core, consisting in what the ethologist and 1973 Nobel Prize winner Nikolaas Tinbergen presented as the four fundamental methodological questions that need to be answered in order to provide an evolutionary explanation of any human (or non-human) behaviour. Tinbergen’s questions are destined to identify: (1) the phylogenetic cause of the behavioural trait (asking questions about its history and development over evolutionary time); (2) the ontogenetic cause of the behavioural trait (asking questions about its history and development over the lifetime of the individual); (3) the functional or ultimate cause of the behavioural trait (asking questions about how the behaviour in question enhances the overall fitness – the chances of survival and reproduction – of an individual); and (4) the motivational or proximate cause of the behavioural trait (asking questions about what circumstances and causes trigger a certain behavioural response of the individual) (Tinbergen, 1963).

The early attempts to apply evolutionary thinking in order to explain human behaviour were met with great reserve by the most social scientists, who believed that even we could explain animal behaviours using principles derived from evolutionism, homo sapiens represents an altogether different matter, so only cultural explanations will work in this case, because man is essentially a cultural species. The most extremists of these scholars were called “culture-vultures” by sociologist George Caspar Homans (Homans, 1984, p. 157, 159-160). However, as another sociologist, Stephen K. Sanderson puts it, culture in the end does not explain anything, because it needs itself an explanation: “Culture vultures are social scientists who explain a pattern of social behavior as being the way it is ‘because of the culture.’ Most sociologists and anthropologists are culture vultures, in Homans’ s view. What these social scientists fail to realize is that to explain a behavior pattern as being what it is ‘because of the culture’ explains nothing. What has to be explained is why the culture is the way it is, i.e., how it came to be formed” (Sanderson, 2001, p. 154).

So, the problem remained: can evolutionary theory provide an explanatory instrument powerful enough and capable to explain both cultural-induced and innate human behaviours, or is it limited to explaining physical and behavioural traits of non-human living beings? According to philosopher Daniel C. Dennet, who analysed Darwins’ argument from On the Origin of Species and emphasized the algorithmic character of the natural selection process, it can. Algorithms are a kind of formal processes endowed with a logical structure that guarantees a certain outcome whenever they are put to use. They have three key features that can be found in the case of natural selection too, if we understand it as an algorithm: (1) substrate neutrality: “The power of the procedure is due to its logical structure, not the causal powers of the materials used in the instantiation, just so long as those causal powers permit the prescribed steps to be followed exactly”; (2) underlying mindlessness: “Although the overall design of the procedure may be brilliant, or yield brilliant
results, each constituent step, as well as the transition between steps, is utterly simple. (...) Simple enough for a dutiful idiot to perform – or for a straightforward mechanical device to perform”; (3) guaranteed results: “Whatever it is that an algorithm does, it always does it, if it is executed without misstep. An algorithm is a foolproof recipe.” (Dennett, 1996, pp. 50-51).

But if natural selection is an algorithmic process, the aforementioned properties of algorithms mean that if the initial Darwinian conditions are met (heredity, variation and a selective pressure of the environment), then, according to the idea of substrate neutrality, we can use this principle to explain the apparition and evolution not only of phenotypical, but also of behavioural features of all living creatures, including those of man himself, and even of cultural phenomena, such as customs, ideas, fashions, rules of social organization, taboos and so on. The way was now open for the fulfilment of Darwin’s prophecy about a new psychology, based on evolutionary foundation, that will explain human behavioural traits as adaptations to the natural and/or social environment. Consequently, not one, but at least four different disciplines and theories were born on this foundation, as evolutionary attempts to explain human behaviour: human sociobiology, human behavioural ecology, evolutionary psychology, memetics and gene–culture coevolution theory, also known as the dual inheritance theory.

2. MAIN EVOLUTIONARY THEORIES

*Human sociobiology* owes its birth to the work of Harvard professor E. O. Wilson’s *Sociobiology: the New Synthesis*, published in 1975, and to Oxford zoologist Richard Dawkins’ book *The Selfish Gene*, published a year later, and one of the most famous scientific books of the twentieth century. It develops further the ideas of ethology (the study of animal behaviour) but introduces new key-concepts and explanatory principles, such as the gene’s-eye view, kin selection, reciprocal altruism, optimality models, game theory and evolutionary stable strategies (Laland & Brown, 2002, pp. 70-72). Using these conceptual tools, sociologists were able to solve some difficult problems regarding animal and human behavioural traits, such as the existence of altruistic behaviours (those self-sacrificial actions that decrease an individual’s chances of survival and successful reproduction and at the same time increase another con-specific’s chances to do so). If we use the idea of kin-selection and the gene’s eye view, we can see that most altruistic acts occur between individuals who are kin-related, so the decrease of one’s survival and reproductive chances only mean an increase for its brothers, sisters or offspring, who share copies of the same genes, and so the frequency of those genes in the next generation will increase.

*Human behavioural ecology* represents the result of the work of a group of anthropologists (Monique Borgerhoff Mulder, Sarah Hrdy, Ryan Schacht and others) that attempted to test some of the sociobiology’s ideas on real populations, believing that human behavioural strategies should be interpreted as adaptive behaviours in the context of different ecological and social conditions. If traditional anthropology was mainly interested in the way culture configures human behaviour, by contrast, human behavioural ecologists “are interested in how an individual’s behaviour is influenced by the environment in which he or she lives and how the alternative behavioural strategies that people adopt produce cultural differences” (Laland & Brown, 2002, pp. 109-110). For instance, they believe that “human beings have been selected to optimize their lifetime reproductive success in response to environmental conditions by flexibly altering their behaviour”, and they do that in a non-conscious or premeditated, rational way. As a consequence, fundamental behaviours, such as food acquisition, status acquisition, conflict and warfare, child and elder care will be adjusted consciously or not, in order to achieve a maximization of survival and reproductive success (Laland & Brown, 2002, pp. 114-115).

*Evolutionary psychology*, as an independent field, was born when Donald Symons, Leda Cosmides and John Tooby founded in Santa Barbara the first Center for Research in Evolutionary Psychology, that came to be known as the ‘Santa Barbara School’. They were anthropologists and psychologists
reunited by the concern that human sociobiology and behavioural ecology attempted to apply evolutionary principles directly to the manifest behaviours, and neglected the fact that those behaviours are driven by psychological adaptations, universal mental mechanisms, and consequently this is a more appropriate level of applying those principles. But, as the evolutionary phycologists stressed out, those adaptations appeared far back in our evolutionary past, in the so-called ‘evolutionary ancestral environment’, or the ‘environment of evolutionary adaptedness’ when our species had to face very different environmental and social conditions than today. Accordingly, they formulated the ‘mismatch hypothesis’, maintaining that “there is a mismatch between our ancient psychological adaptations and our modern, artificially constructed world. As a result of this mismatch, they argued, researchers should not expect human behaviour to be adaptive” (Laland & Brown, 2002, pp. 153-154). For example, the strong attachment developed by the children to their mothers was adaptive in hunter-gatherer or early agricultural societies, where children were highly dependent on their parents, but is maladaptive today, in the modern society, where separation causes stress, anxiety and depression.

Memetics is a discipline owing its existence to the aforementioned algorithmic character of natural selection, meaning that evolution by selection is not limited to genes, physical or behavioural traits, but evolutionary processes can be found in the realm of ideas. In the final chapter of his 1976 book *The Selfish Gene*, where he argues for the gene’s eye perspective, Richard Dawkins discusses the advent of a new kind of replicators (units of selection and vehicles of information transmission), very similar to genes, and he call them ‘memes’ (Dawkins, 2006, pp. 189 ff.). Memes are ideas concerning habits, fashions, customs, language, art and so on, that act as ‘viruses of the mind’, that are ‘infecting’ our brains and reproducing themselves in passing from one mind to another and have all the features necessary for evolution by natural selection: variation, heredity, and differential fitness. In order to properly understand what memetics is, we have to adopt ‘meme’s eye view’, and to think of ideas as pieces of information for whom our minds are just vehicles of replication and transmission, just as, according to Dawkins, our bodies are nothing more than vehicles by which genes propagate themselves. It doesn’t matter if those ideas are beneficial, neutral or dangerous for their hosts, the only thing that is important is that memes have more replicative power than their competitors. Accordingly, this is what distinguishes memetics from alternative approaches to understanding culture: the idea that “cultural traits evolve, not because they are of utility to individuals (although they may be), but because they aid meme propagation. They are there for the good of the memes. There is no necessary relationship between a meme’s replicative capacity and its contribution to our fitness […] Some memes (like dancing) may promote health and happiness. In contrast, others (like warmongering) may reduce our chances of survival” (Laland & Brown, 2002, pp. 204-205). This idea may be a good explanation for the persistence of so many maladaptive and dangerous behaviours, ranging from extreme sports, smoking, unhealthy diets to religious celibate or suicide bombing or, for that matter, toxic management: they are not selected for our benefit, but are memes than replicate better than their competitors, even if their effect on our survival and reproductive chances is negative.

Finally, the gene-culture coevolution theory, or the dual-inheritance theory, had its foundation laid by the work of geneticists Marc Feldman and Luca Cavalli-Sforza, and anthropologists Robert Boyd and Peter Richerson, and represents an answer to those who accused evolutionists of neglecting the cultural factor in their attempts to explain human behaviour. The dual-inheritance theory introduces culture into the explanation, trying to understand human behaviours as traits that appear in the context of interaction between genetic and cultural evolutionary processes. Consequently, it can be seen as a synthesis of evolutionary psychology and memetics: from evolutionary psychology, it takes the idea that cultural contents that a group adopts and possesses are often determined by its genetic endowment, but also can have a selective influence on this population’s gene pool, because there is a culturally determined selection force that acts on genetic systems; from memetics, it takes the idea that culture is itself a pool of ideas, beliefs, knowledge
and values that evolves, as it is learned and transmitted from a generation to another. The well-known ‘cultural leash’ that anthropologists and other social scientists talk about relentlessly is this time a bi-directional relationship: “The advent of culture was a precipitating evolutionary milestone, generating selection that favoured a reorganization of the human brain that left it specialized to acquire, store, and utilize cultural information. It was culture, loosely guided by genes, that allowed humans the adaptive flexibility to colonize the world” (Laland & Brown, 2002, pp. 242-243).

3. DOMINANCE AND PRESTIGE STATUS

Broadly defined, status in both humans and non-humans refers to the position occupied by an individual in the hierarchy or the social structure of a group or community. According to anthropologists Henrich and Gil-White (2001), „status can be viewed as either a hierarchy of rewards or as a hierarchy of displays - or both simultaneously”. Seen as a hierarchy of rewards, the status entails the enjoyment of privileges, such as greater access to resources (food, protection, mates, etc.). From an evolutionary perspective, status is directly linked to the evolutionary success (the capacity to survive and reproduce) of every individual, the efforts or costs consumed by such an individual to acquire status (or a higher position in the hierarchy of the group) being thus explained by the benefits they incur.

All the theoretical perspectives explain the dominance status characteristic for social animals, especially non-human primates, yet they do not explain the prestige status specific to humans, which was made possible by culture and the accumulation of adaptive information, passed on from generation to generation (Henrich, 2016, p. 35).

Based on this idea, Henrich (2016) operates a clear distinction between two types of human status, each of them with different sources of origin, distinctive characteristics and forms of display, and more importantly, different consequences.

The two types of status are based on two types of different psychologies, each with its own evolution in our species phylogeny. The prestige psychology, which laid the foundation for prestige status in our evolutionary history, is explained in terms of a psychological adaptation that evolved in order to ensure the evolutionary success of humans by improving the quality of information acquired through cultural transmission (Henrich & Gil-White, 2001). The accumulation of information through culture required the capability to learn from other individuals, as well as the ability to distinguish between those who possess valuable information in a certain environment and those that might possess worthless skills or know-how. Therefore, natural selection favoured both those individuals who were better at assessing the capabilities of potential models and acquiring the necessary skills, as well as those who were able to display the content of their prestige (skills, success and/or knowledge) and enjoy the deference of other individuals. Prestige status is to be found in any society and at any time, being a source of social differentiation even in the most egalitarian societies, whose social structure does not include formal leadership roles or hierarchies (Henrich, 2016). It is the source of a series of positive emotions in other individuals, such as admiration and respect. As regarding the relation between lower-status individuals and higher-status individuals, the latter will constitute a source of inspiration for the former, who manifest a preferential and automatic prestige-biased imitation behaviour.

The dominance psychology, which lies at the basis of dominance status, is prevalent throughout the animal kingdom, the dominance rank in animal species being the key element that ensures evolutionary success, translated into better chances of survival (better access to resources) and a bigger number of offspring (better access to mates) (Boyd & Silk, 2012). Simply defined, dominance refers to the unequal position of the members of a group in terms of power, influence, and access to valuable material and non-material resources (Mazur, 2005, p. 7). For many animal species, dominance hierarchies persist once established because individuals acknowledge and accept their social positions, at least until they are able to challenge and eventually replace the high-
ranking individuals. In the case of humans, dominance hierarchies are even considered „legitimate” by force of tradition and social structure (Mazur, 2005, p. 7). In many animal species, including primates and humans, the dominance status is achieved by individuals who are able to display intimidating traits or behaviours (such as a bigger stature, physical strength or stronger weapons, a lower threshold of aggressiveness, etc.), which will instil fear into other individuals. While in the case of prestige status the respect of other individuals is achieved through persuasion and inspiration, in the case of dominance status the deference is achieved through force or force threat (Henrich, 2016). Dominance status is to be found in hierarchical societies, usually the dominant position being socially recognized through the formalization of an official position or leadership role. It is the source of a series of negative emotions in other individuals, such as fear, stress and anxiety.

In real life one can hardly, if ever, find a purely dominance- or prestige-based type of status attained by individuals, as a prestige-based higher status individual might at times manifest dominance and vice versa. Nevertheless, the distinction is necessary in order to explain toxic behaviours of leaders in organizations and societies today, as it is considered that mainly dominant individuals would have a behaviour with damaging effects upon the subordinates and, implicitly, upon the activities and efficiency of an organization. Nevertheless, it should be mentioned here that prestigious leaders too might manifest behaviours with destructive effects, due to the so called „the Paris Hilton effect”, given the tendency of individuals for imitating famous individuals not for real prestige, but just for being famous (Henrich, 2016).

4. DOMINANCE-BASED STATUS AND TOXIC LEADERSHIP

It is well known that leaders in any entity, be it an informal group, a formal organization or even a society, have a great influence on the behaviour of that entity’s members, through their power of decision-making regarding the activities, performance or dynamics of the entity. Although difficult to define, a toxic leader is the one who manifests mischievous behaviours and noxious characters and personal threats, inflicting serious and persistent harms on their subordinates and leading to dysfunctions of the entity they are leading (be it a group, organization or society), through the negative impact of their decisions and actions (Lipman-Blumen, 2005, p. 44). The toxic leadership and its impact on the performance of both private and public entities has nowadays gained importance among the concerns of various management specialists, especially given the fact that toxic leadership is directly linked to a dysfunctional organization, in certain cases the malfunctional organizational culture promoted by the leader being the source of dysfunctional behaviours, policies, programmes (Goldman, 2009, p. 16, 20) and that the toxicity of a leader seems to be a widespread phenomenon, with deleterious effects on individuals and organizations (Jamieson, 2008, p. 225).

Moreover, the importance of the subject lies also in the fact that organizations are usually incapable of detecting the toxic leaders before the entire organization becomes dysfunctional, especially due to the fact that catastrophic high-status individuals will tend to select and promote congenerous low-status individuals. For instance, obsessed leaders will promote employees who share their obsessions, while histrionic leaders will recruit and promote dependent, submissive individuals so they could be the sole decision-makers (Kets de Vries & Miller, 1984, p. 38; Lipman-Blumen, 2005). In certain cases, leaders with personality disorders exhibit „extreme levels” of malfunctional behaviours, seriously damaging the course of the entire organization and requiring the intervention of an outside specialist (Goldman, 2006).

According to Henrich (2016), there is a clear distinction between the status-seeking strategies of dominant and prestigious individuals. While the former tend to manifest arrogant and domineering behaviours, taking the whole merits of an achievement, underestimating or even rescinding the efforts of the subordinates and being manipulative, the latter tend to exhibit appreciative and modest
behaviours, sharing the merits of an achievement with all the members of the team and being persuasive and unassuming. Based on these descriptions, one could easily conclude that toxic leaders are mainly dominant-status holders, as they will usually become obsessed with power and superiority, being ready to overestimate their personal value, to feel entitled to enjoy special privileges, to break conventional rules and exploit others in other to get what they assume they deserve (Kets de Vries, 2006, p. 22). Being exclusively centred on their own person and their own goals, toxic leaders will quite often make bad decisions for the members of the group (for instance, their employees) and for the group or organization, being able to sacrifice, either consciously or unconsciously, the good of the organization for their own good. Such toxic leaders are not confined to business and politics, but are to be found in all the fields of social life (Lipman-Blumen, 2005), the toxicity of leaders being an increasingly present phenomenon in various types or organizations all over the world. According to research data, one in five leaders manifest toxic threats and behaviours, although some numbers indicate that the incidence of toxic leadership is even higher (Veldsman, 2016), while other authors even suggest that the number of toxic leaders, and implicitly of toxic organizations, might be even higher than that of great leaders and good workplaces due to the tendency of current societies and organizations to promote deranged, self-interested individuals who might bring short-term financial success (Williams, 2016). In the words of William (2016), „[w]e tend to choose or follow a very different kind of leader. We hire and promote the psychopaths, the narcissists, the bullies and the autocrats dedicated to self-interest, and whose long-term impact has and can damage and even destroy organizations (and even countries). [...] Many people easily forgive these toxic leaders and the harm they cause because they measure their success solely in financial terms or because they bring charismatic entertainment value to the organization”. Nevertheless, on the long-term, such short-term benefits are certainly annulled by the hidden costs and collateral damages inflicted on people and organizations by the dysfunctional behaviour of the toxic leader, such as: reduced productivity due to the increase of absenteeism and on sick-leaves (the negative impact on physical and mental health); weak performance of employees due to lack of commitment and dissatisfaction at work; decreased brand equity due to the reputational damages of the organization and legal costs, etc. (Sutton, 2010, pp. 213-220; Sutton, 2007, pp. 27-50). The old and well-known idea according to which a great leader has to be hard on subordinates in order to increase their performance has been many times proven to be false and even dangerous, given the above mentioned costs incurred by a dysfunctional leader and the results of numerous researches proving that inspirational, prestige-driven leaders are more beneficial for both the employees and the organization. For instance, Kiel (2015) suggest „an observable and consistent relationship between character-driven leaders and better business results. Leaders with stronger morals and principles do, in fact, deliver a Return on Character, or ROC. [...] organizational leadership that ranks high on the ROC character-assessment scale achieves nearly five times the return on assets that leaders who fall at the bottom of the curve achieve”.

5. CONCLUSIONS

Toxic leadership in almost any type of organization activating in all domains of social life is on the rise in today’s societies, which are almost entirely centred on efficiency measured in terms of financial gains. Yet the toxic leaders, with their power of decision-making regarding the activities, performance or dynamics of the entity they lead, will inflict serious damages on both people and organizations, with huge long-term costs in terms of productivity, efficiency, brand equity, organizational culture and overall functionality. Numerous studies suggest that whatever the short-term benefits harsh leaders bring for any organization, on the long run the hidden costs of their behaviours are incommensurable, leading to dysfunctionalities and even destruction.
Although the toxicity of leadership is not a new phenomenon and the subject has gained importance among the concerns of a large variety of specialists (management experts, economists, psychologists, sociologists, etc.), the organizations are not usually well prepared to detect such toxic behaviours accurately and in time, before the phenomenon reaches highly destructive proportions, and are even less able and willing to take the appropriate measures for solving the problems and eliminating the „source” of toxicity.  

Even experts encounter difficulties in dealing with the phenomenon of toxic leadership, numerous scientific endeavours being limited to the descriptive stage. In order to explain and, hopefully, to work out the phenomenon, the evolutionary theory and the newest disciplines originated in it (human sociobiology, human behavioural ecology, evolutionary psychology, memetics and gene–culture coevolution theory) are of great importance and utility. All these evolutionary perspectives explain human features and behaviours as evolutionary adaptations (or maladaptations) to the natural and/or social environment. According to the gene–culture coevolution theory, language, specific only to humans, permitted the emergence and development of culture, which lead humans to become a cultural species and culture to become a selection factor. The huge accumulation of adaptive information through culture and the dependability of the individuals on such information required both the capability of social learning (learning from other individuals) and the ability to distinguish and select potential models. Therefore, natural selection favoured individuals who were better at selecting their models and learning from them, as well as individuals who were better at displaying the cues of their status.

Humans, as well as any other species of social animals, are status seekers, given the fact that status is directly linked to the evolutionary success (the capacity to survive and reproduce) of every individual. A higher status or a higher position in the hierarchy of the group automatically leads to a greater access to desirable resources, be they food, security, mates, etc. Two types of status, namely dominance-based status and prestige-based status are specific to humans, and the status held by an individual represents the cues based on which people choose their models of imitation. As we choose leaders from among those who are models of imitation, we often make mistakes by selecting dominance-status holders as leaders. There is a clear distinction between the status-seeking strategies of dominant and prestigious individuals. The dominant individuals tend to exhibit domineering behaviours, underestimating the merits of their subordinates, being manipulative and ready to sacrifice everything and everybody in order to preserve their position. The prestige-based status holders, on the contrary, tend to manifest appreciative and humble behaviours, sharing the merits of an achievement with their subordinates, being persuasive and ready to sacrifice themselves for the good of the group or organization. It is therefore evident that toxic leaders are mainly dominant-status holders, usually becoming obsessed with power and superiority.

REFERENCES


