

Clausewitz, Keegan, and the Big History of Warfare

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Abstract

As a social phenomenon, is war subordinate to politics, as Carl von Clausewitz argued in the early nineteenth century, or, instead, is it the product of an instinctive 'warrior culture', common to all peoples and times and beyond politics, as John Keegan suggested in the late twentieth? Should we emphasize 'essential historical elements in the search for a temporal continuum in warfare? In this article, we stress the relevance of the 'perennity of war' thesis, and the impropriety of a dichotomy between political rationality vs. instinct. The results of the clash between these two strands of thought about the origins of warfare face limitations due to the absence of a temporal 'play of scales', so that short-term approaches emerge as incompatible with macro-historical views. We suggest that a deep understanding of the phenomenon of warfare must consider the interaction and the feedback between processes at different time scales.

Introduction

If war (in general) is the "father of all things" as said by Heraclitus, the Wars of the French Revolution were the parents of the modern theory of coalitional violence. Carl von Clausewitz, the man behind the most notorious incursion of the Enlightenment in the rational explanation of war, served in the Prussian army during the Rhine Campaigns of 1793-1794, went through defeat and humiliation at the hands of the French army in Jena (1806), fought alongside the Russians in Borodino (1812) after Prussia's surrender, and paved the way for the Sixth Coalition that would bring down the *Grande Armée* and its allies in 1814. His wartime reflections and experiences gave birth to a treatise on modern warfare published posthumously in 1832, named *Vom Kriege (On War)*, that influenced world leaders like Bismarck, Moltke, Lenin, Eisenhower, and Mao Zedong among others. *On*

War became the cornerstone of military strategic thinking in the twentieth century and is still praised as one of the most important works on the subject. Of all topics addressed by Clausewitz, the idea that warfare is a rational endeavor caught the attention of many critics, especially after the carnage of two world wars. Naturally, Clausewitz was not trying to sugarcoat the nature of his *métier*, and in spite of the fact that he spent most of his military career away from the frontline, he was very aware of the fact that real combat is engulfed in a storm of emotions, instincts, and somatization. So, what *On War* teaches is that coalitional violence is chaotic and dreadful but is nevertheless a rational instrument in the hands of human collectives (modern states, in this case) in their dispute over scarce resources. When conflict resolution fails, Clausewitz says, a state is able to employ organized violence as a technique, as social

engineering, a means to obtain desired ends. From the viewpoint of the strategist, war is just like chess, and that is the way it should be if it is to be conducted in a "civilized" and "rational" manner (different from the "savages" overwhelmed by the lack of organization and primitive motives and methods). In the Clausewitzian tradition, war is a continuation of politics, and that is the point where a long debate begins.

John Keegan, a British military historian who never faced live rounds—actually, he was considered unfit for duty in the armed forces due to a medical condition in 1952—was brave enough to dig deeper into the nature of warfare. He dismisses all "well-behaved" and historically shallow concepts of organized violence in favor of a framework that shows the lines of continuation between warfare among non-state and state actors. Evoking the idea of a "warrior culture"

ubiquitous to all mankind, Keegan emphasizes the social function of warfare in terms of group cohesion, coordination, and identity and stratification, rather than the instrumental aspects so dear to the Clausewitzians. A conceptual debate was formed around these positions, but the aim of this article is not to take sides. Instead, our purpose is to suggest that this debate is tainted by its inability to grasp with the “play of scales” as conceived by David Christian (2005, 2018); if we “scale up” our look into human experience employing critical insights obtained from primatological, ethological, and archaeological studies, we can find enough common ground between Keeganian and Clausewitzian traditions.

In *A History of Warfare* (1994), Keegan argues that warfare should not be understood as a continuation of politics, as stated in the Clausewitzian tradition, but rather as a cultural phenomenon, a product of the collective practices adopted by a particular group or society. Thinking of warfare as a cultural product would open the possibility, according to Keegan, of escaping the artificial restrictions imposed by Clausewitz that bound warfare to human rational mind and particularly to state rationality. In this way, to formulate a theory of warfare that would explain its existence throughout the history of humankind would be possible. Although the concept of culture is broader than the concept of politics and although Keegan’s assertion gives us a wider understanding of warfare, it is still necessary to consider the ideas of Clausewitz about what constitutes the political phenomenon and contrast them with the definition given by Keegan since the controversy between these two authors is substantial enough to demand caution in the use of their concepts.

Keegan’s concept of culture is interchangeable with a loose concept of human nature. He claims that the major cause of warfare is “warrior culture” and recognizes its universality among societies (Keegan 1994); in other words, there seems to be more than enough space for us to identify a pos-

sible overlap between that object (culture) and an innate behavioral framework in *Homo sapiens*.

Warfare is almost as old as man himself, and reaches into the most secret places of the human heart, places where self dissolves rational purpose, where pride reigns, where emotion is paramount, where instinct is king. (Keegan 1994, 3)

Keegan’s assertion is quite interesting as it situates warfare as a phenomenon present in the very beginning of human natural history and, therefore, as a structural component of the social history of all human groups since Paleolithic times. In doing so, Keegan must determine a main cause for warfare that must also be transcendent in time; this procedure puts his ideas on a collision course with the Clausewitzian tradition, which places politics (and warfare, by definition) in the list of phenomena determined by human “rationality.” By stating that “instinct is king” and invoking its biological dimension, Keegan conceives culture as something beyond or even opposed to politics (in its state and formal dimensions). Nevertheless, Keegan does not insist upon bringing up the concept of instinct in its plain colors, opting for a more generic element, easier accepted by his interlocutors: something like a “human warrior culture” with local tones but a universal hue (Keegan 1994, xvi), in opposition to a supposed misuse of the Clausewitzian “war as politics” assertion. Keegan suggests that Clausewitz’s original statement tends to be inaccurately translated. Better than affirming that warfare is the continuation of politics by other means would be saying that warfare is the continuation of political interactions with the *participation* of other means (Keegan 1994, 3). Consequentially, a duality emerges in a Keeganian reading of Clausewitz: on the one hand, politics, and on the other, the so called ‘other means’; the undefined second element in the dyad definitely paves the way for theoretical exploration.

Warfare, therefore, is not a monolithic phenomenon since it carries a fundamental opposition in its core; if, in broad terms, this opposition is formed by a well-defined element (politics) and a somewhat amorphous element (the “other means”), it happens to transcend its very object (warfare), enabling us to bring into the debate the general ontological structure of the human psyche. This structure also consists in an opposition between elements with different levels of definability (conscious vs. unconscious mind), and we are convinced that it is not a mere product of analogy. In short, warfare appears as a holistic phenomenon, integrating not only the dimensions of conscious decision and rational action as a means to an end but also of the complex interaction between culture, society, and deep psychology.

That Keegan tries to break the duality that lies in his theoretical and interpretative framework by replacing the causes of warfare with a general notion of culture is true. The ‘military culture’, in particular, would be that privileged environment in which the “tribal spell” would happen and where the contingencies of civilization would be dissolved in a so-called ‘ancestral urgency’ (Herberg-Rothe 2001, 183-184). The most interesting aspect in this formulation is in the fact that it comes to us as essentially misleading in its definitional roots.

Keegan defends the primacy of “culture” from an analytical and theoretical standpoint where the very notion of culture should be dissolved. Instinctive urgency (“where instinct is king”) and the “tribal spell” are not specific cultural elements; actually, they refer to a set of ancient psychic mobilizations present in all human groups. The “culture of the warriors,” which is the key element of Keegan’s argument, is not properly cultural; on the contrary, it is clearly a pre-cultural element, which must precede the symbolic, representational, idiosyncratic and historical dimensions. In his eagerness to overcome the notion of warfare as policy, Keegan not only ends up entering the minefield of the “natural” explanation of the collective

and organized intersocietal violence but also offers an understanding of “politics” in Clausewitz that flirts intensely with contradictions.

Keegan’s understanding of “politics” in Clausewitz’s work is quite controversial because it tends to equate “politics” with “policy,” the latter referring to a rational construction, an adequacy of means to ends, particularly the improvement of human wellbeing. On the other hand, Clausewitz used the German term *Politik* with a two-fold meaning, invoking simultaneously the notion of policy and of politics. “Politics” in this sense involves a degree of conflict and non-rationality that is absent from Keegan’s construction. Warfare, then, can be violent, barbaric, and cruel and still be “political” to the extent that it deals with divergences between distinct political groups (Bassford 1994, 326-327). Certainly the conversation between Clausewitz and Keegan is disturbed by the simple reason that they both name distinct processes (in whole or in part) the same. In spite of that, two important notions seem to survive this struggle: (1) that the universal character of the warrior culture feeds back with (Keegan would say, “determines”) politics as a social organizational phenomenon, as Bassford (1994, 333) suggests; and (2) that, in Keegan’s work, the warrior culture as a concept refers to a phenomenon that does not behave as a manifestation of the social and intellectual history, but rather as an aspect of human cognitive dynamics that informs every kind of culture.

C. S. Gray takes the theme of human nature to criticize Keegan and defend Clausewitz, bringing up the idea of the “common thread of the human factor” (Gray 1999, 164). That common thread would represent a problematic and controversial “proclivity to combat” and a “will to fight” (Gray 1999, 176, 181). If it is true that something like a “human nature” exists, sustained across the evolutionary time in spite of technical and cultural changes, then we could be able to formulate questions beyond short-term transformations. The fundamen-

tal problem would be to recognize what *nature* is in order to formulate the theory with the best possible result. Clausewitz’s hypothesis of “structuring rationality”, i.e., the notion that every war has or must have a political purpose (Gray 1999, 169), is not enough though it seems to be true in its own way. The strength of the structuring rationality hypothesis lies in the notion that politics (in all its dimensions) is steady enough to function as a catalyst to the congregation of individuals with different and (most of the time) colliding agendas, leading to the cooperation necessary to make warfare possible. In essence, politics, as behavior, is related to major structuring myths in the core of our social and cultural life as *H. sapiens*:

Any large-scale human cooperation—whether a modern state, a medieval church, an ancient city or an archaic tribe—is rooted in common myths that exist only in people’s collective imagination (. . .). States are rooted in common national myths (. . .). Yet none of these things exists outside the stories that people invent and tell one another (Harari 2015, 36).

The existence of different myths is such a problem that a complete theory must investigate the birth of myths and macro-narratives rather than the social consequences of a particular narrative. To accomplish this, we have to venture into the Big History of human evolution to de-authorize unilateral readings of Clausewitz and of Keegan. A Big History of warfare that seeks to recognize the dialectical interaction between phenomena occurring at different timescales, from the *événementielle* to the evolutionary, would consider pointless the opposition between the instinctive “warrior culture” and the “rational enterprise.” Rather, the conceptual dyad formed by the “instinctual” and the “rational” aspects of warfare behavior sheds light on the very nature of the mind of *H. sapiens*.

Keegan’s belief that warfare be-

longs to a set of social phenomena endowed with a certain universality finds macro-historical support, albeit not without controversy. If some contemporary hunter-gatherer societies that do not undertake intersocietal coalitional violence exist, it is not uncommon to identify in their past (when this is ethnologically possible) evidence of engagement in conflicts with neighboring groups or with regular military forces, which ultimately resulted in demographic, political, and economic fragility (so that much of the hunter-gatherer pacifism can be associated with “defeated societies”) (Keeley 1996, 31-32). All other societies display some sort of military cultural practices that interact dialectically with religious, ideological, mythological, and political representations. Thus, the existence of something like “warrior tendencies” in a transcivilizational level seems plausible. Nevertheless, as we shall see, the notion that intersocietal violence is the result of some innate psychological impulse dedicated exclusively to this purpose (i.e., lethal action against other social groups) is based on very fragile evolutionary foundations, often associated with discussions about human nature that are tributary to the western political philosophy of the 17th and 18th centuries (Hobbes vs. Rousseau, especially). In the same tune, Keegan’s proposition that the “warrior culture” is the ultimate reason why warfare exists does not lead us farther from the clash between *doves* and *hawks* since Keegan suggests that intersocietal coalitional violence is the product of some “active principle” of human cognition, whose nature and function are to promote conflict.

Prosocial cognition: construction of the ingroup

The cognitive foundations of intersocietal coalition violence belong not to any active ethological complex in favor of warfare but to the failure of the dedicated and highly specialized modular social intelligence, built by natural selection in a very long evolutionary history that traces back to the last common ancestor between

chimpanzees and modern humans six million years in the past. Intersocietal coalitional violence, i.e., the result of processes and phenomena related to the organization of social sub-units dedicated to the exercise of power over other groups, based on the imposition (or threat) of lethal action, is quite rare in primatological terms. Among extant great apes, only modern humans and common chimpanzees have a behavioral portfolio consistent with the practice of warfare. We have no reason to reject the hypothesis that all the species that descended from the last common ancestor of *Homo* and *Pan* also engaged in intersocietal coalitional violence, even though our ability to trace evidence of this type of practice in the fossil record is restricted by taphonomic reasons and by the dubiousness in the identification of osteological markers of lethal violence

We have no evidence of warfare—in a broad sense—in any other primate lineages, extant or extinct, and in this respect, we should not be surprised. Organized lethal aggression toward other social groups emerged as a functional byproduct of the specific form assumed by socio-ethological structures emerged six million years in the past among species split from the LCA social structure that, in its more specific aspects, was another very rare condition in the primatological universe.

Two were the most likely conditions of sociability among the many species of great apes by the time of the LCA speciation. The first, older and more common, consisted of permanent kin-related female matrilineal collectives, accompanied by unstable and uncooperative non-kin groups of males (migrant individuals in volatile groups). The second one also relied on kin-related female cooperation, but associated with the exercise of strict dominance in male-male relations, with the formation of harems (with vast inequality in the distribution of copulatory opportunities among males). To think of social organization on a macro-historical scale and beyond modern human societies requires taking into account the chal-

lenges represented by the energetic needs of females in eutherian and mammal species. Females suffer a great amount of ethological pressure for accessing food resources with the highest possible nutritional value, since the costs of lactation and of a relatively long intrauterine pregnancy are far from negligible. From this evolutionary standpoint, we understand the formation (behaviorally innate) of permanent kin-related female matrilineal collectives, based on cooperative relations aimed at guaranteeing mutual energy needs in the genetic community (Foley 2003, 220; Nordhausen and Oliveira Filho 2015, 36).

Territoriality is shaped by the foraging strategies of female collectives, so males follow female groups and compete for reproductive opportunities among themselves, with intense interpersonal agonistic behavior. In species that ethologically form one-male groups, an alpha-male will strive to deny copulatory opportunities to his rivals through violence and intimidation; these primate societies are more prone to agonism and show higher levels of sexual dimorphism (morphological and behavioral differences between males and females, including body mass, temperament and behavior, canine morphology, and muscle mass) and fewer opportunities for male cooperation. In cognitive terms, intricate forms of social intelligence, with innate modules dedicated to conflict management, manifest among many of these species in both of the situations. Nevertheless, given that social relations in male groups are mostly transient, fight-or-flight behavior is highly functional and relevant so that retreat and migration to other groups can be a sufficient strategy for a male eventually confronted by an overwhelming force (Foley 2003, 223-224; Wrangham and Peterson 1996, 131).

An ecological change in habitats occupied by certain species of great apes may have led some populations to large scale migrations and others to a slow adaptation to the new context. The gradual savannization of East Africa and part of Central Africa ad-

vanced along the Cenozoic and met a critical point in the Late Miocene for most of the great apes around eight to six million years in the past. For the species that resisted in these savannized habitats, heterogeneity in the distribution of natural resources and the decrease in its average nutritional value began to take its toll, requiring adaptive responses. The rarefaction of resources in the territory would have jeopardized the strategy of kin-related female cooperation; the dispersion of resources and the lower energy value stored in each patch of bushland or woods would have led these kin-related groups to be threatened by internal competition, rendering most of the win-win strategies replicated ethologically up to that point ineffective. Avoiding internal competition would mean, to these female apes, spreading through the landscape, driving cooperative behavior to sub-optimal levels of efficiency. In this evolutionary context, kin-related matrilineal sociability is disfavored, and female migration to other groups as they reach sexual maturity becomes a pattern of behavior gradually fixed by natural selection in these species. This means, for females, that disputing resources that are more distant as possible from one's maternal genetic community renders more reproductive gains (in the evolutionary long run) than staying in natal groups. For males, this ethological change in female behavior could have led to the emergence of patrilineal kin-related cooperation, an exotic type of sociability (Aureli et al. 2008, 629-630; Foley 2008, 230).

Male patrilineal collectives, in association with non-kin female groups, would potentially create a problem: how the access to reproductive opportunities could be regulated and how a win-win strategy could be sustained in order to keep permanent cooperation behavior among males in the genetic community. As we have seen, the most common ethological strategies in other contexts were either the intensification of interpersonal male conflict with high lethality risks or the migration to other groups. Patrilineal male cooperation denies

these two strategies since the former jeopardizes a more balanced distribution of gains in terms of evolutionary fitness, and the latter dissolves male stable sociability itself. Of course, there is no reason to disregard the fact that climatic aggravation and its impacts on African ecosystems could have made, hypothetically (other factors excluded), permanent societies of great apes in the arid zones unlikely. However, gregariousness and cooperation are evolutionary assets that, once conquered, have the tendency to survive even major evolutionary bottlenecks (Shultz, Opie and Atkinson 2011, 222; Wrangham and Peterson 1996, 128; 186).

Speaking of environmental pressure, for the great apes, savannization resulted in the fragmentation of resources (and females) across the territory, making one-male social groups quite difficult to maintain, if not impossible to exist. Broadly speaking, surveillance by an alpha male in order to hinder the incursion of rival males had become unlikely, and the evolutionary opportunity was open for the cooperation between kin-related males in the control of the territory and its resources. These coalitions act to prevent access to the group females by any *outsider* male. For cooperation to work, so that the dispute between individual reproductive agendas does not produce fractures in the kin collective, a specialized and ethological social intelligence emerges, exclusively devoted to process social information, in order to operate a dynamic hierarchy of status. This socio-cognitive domain should operate the norms and forms of dispute for higher ranks and produce prosocial limits that buffer against lethal outcomes in internal conflict.

Social intelligence, differently from general intelligence, is not based on the application of simple and standardized learning rules, generating cumulative and modified content based on interaction with the environment, but on trial and error. Social cognition has the following characteristics: (1) an increased dedication and speed of processing information that allow for the prediction of the status

rank actually possessed by others through the analysis of sensorial cues and through the recall of past interactions; (2) the formulation of hypotheses about the behavior of conspecifics in a given social interaction, involving or not the observer; and (3) the designing of strategies for climbing status ranks or preserving a current rank, employing alliances and coalitions with conspecifics dedicated to the same objective. Social cognition forms, thus, an innate political ethology, present in common chimpanzees and also in the evolutionary lineage of *H. sapiens* (Aureli et al. 2008, 632; Mithen 2002, 129-131; Wrangham and Peterson 1996, 128, 186).

The ethological rite in the struggle for status among common chimpanzees in a social group follows some elementary principles, identified and thus interpreted from the observation of these primates in their natural environment (Mithen 2002; Wrangham and Peterson 1996):

The prospect of a stable dominance maintained basically through force, as occurs with gorillas, is discarded so that status relations are organized into fluid networks of power with unstable alliances between males and between females (more intense among the first); the rise and fall in hierarchy indicate that social mobility is a very important ethological aspect in the species split from the LCA, six million years in the past.

The rise and fall in the status pyramid, although part of a win-win strategy in the long run (as a prosocial mechanism that helps to prevent the dissolution of the society), in the short run results in a zero-sum game in which the gain of one is the loss of another.

Males will confront other males in an intricate dynamic of coalition formation, involving the intimidation of adversaries and their allies, and the conquest of crescent support from the group members. This growing support is expressed by the longer social time spent by a contestant with his supporters (involving grooming and other

forms of recreation and/or strengthening of social bonds). In this case, the ascension of a competitor brings non-linear status gains to all members of his coalition;

The “ritualistic” dimension (*lato sensu*, devoid of the symbolic nature present in the culture of modern humans) is a crucial aspect of disputes of status because it provides rapid sensorial information to the social cognitive mechanisms. The cycles of dispute involve precisely the violation of expected social behaviors that, when in practice, indicate the recognition of the status of a third party. A common chimpanzee bends down before a higher rank conspecific, permits being touched on the shoulder, etc., as forms of status signaling. Denying these ‘courtesies’ on a regular basis means conflict.

Status disputes indirectly involve most of the group, and their cycles are concluded through the establishment of a “consensus”, insofar as the majority of the members of the social group converge in support of a certain competitor and his allies. From this point, gains and losses are recognized, submission/dominance signaling in form of gesticulations and vocalizations are performed, and life goes on until a new contest begins.

Outgroups and coalitional violence

The prosocial ethology in chimpanzees (and presumably in the LCA) is not fail-safe. Fluid but effective limits persist in the average volume of social information that can be processed cumulatively. Thus, although composed of dedicated and specialized mental modules, social cognitive activity has a significant correlation with the neocortical volume, and both have as proxy the time spent in grooming and other forms of recreation necessary for the renewal of social bonds and for the reaffirmation of hierarchies. This means that when the number of relationships to be processed exceeds a certain limit (variable according to encephalization, in each species), the volume of sensory

information to be detected and analyzed, as well as the number of possible combinations of relationships involving two or more individuals, surpasses the power of mental processing, making cooperation and coordination less viable. In this context, the identification of the status rank of a growing number of conspecifics becomes increasingly vague, which makes the operation of prosocial mechanisms less effective. Thus, by virtue of demography or environmental factors, the operation of the prosocial ethology may be impaired, leading to the intensification of internal conflict between individual agendas; in these situations, permanent group fission tends to be the answer, leading the operation of social cognition back to manageable levels (Aiello and Dunbar 1993, 184-185; Aureli et al. 2008, 637; Ferguson and Beaver 2009, 291).

What about intersocietal relations? No prosocial ethological restraints present as capable of preventing lethal violence from being imposed on individuals about whom little or no social information is available. The unloading of excessive social information, enabled by group fission, results in framing the "foreign" as an entity external to the hierarchy pyramid and, therefore, as someone not eligible to be included in prosocial mechanisms; intersocietal relations are thus restricted to violent contacts. The logic underneath the "wars" among common chimpanzees lies in the physical elimination of "opposing" males, in the disarticulation of neighboring communities, and in the abduction of their females. This is attempted during many raids into the foraging territory belonging to neighboring groups, promoted by male raiding parties, eventually accompanied by a few nulliparous females (Roscoe 2007, 485-486; Wrangham and Peterson 1996, 6-7, 162-165).

From the process of mobilization of a raiding party to the return to their home territory, some themes are relevant:

Mobilization is triggered by a high-ranking male through vocalizations and bodily displays with strong somatic and sensorial content. Once successful, mobilization results in the formation of temporary parties organized with the sole purpose of inflicting lethal violence to the "enemy." It is not a defensive action, or the result of any need of patrolling the territory boundaries.

During the advance toward the neighboring territory, the sensorial attention for the presence of "enemy" chimpanzees is intense. The perception of features on the landscape that suggest the proximity with the border between the two territories reduces the number of vocalizations emitted and widens the attention even more. If a vocalization is responded by an enemy chimpanzee, signs of anxiety in the raiding party become visible, and prosocial ethology enters the scene: the group members most often perform gestures and specific actions, which are employed to calm and renew mutual trust under normal conditions (touches and hugs as examples).

The strategy of violence between groups of common chimpanzees seeks to exploit asymmetry of power to the maximum. An attack on an isolated opponent is the main objective; in the ecological niches explored by these primates, and probably also by our common ancestor (savannah, open woodland, or bushland), the rarefaction of resources in the territory leads to frequent dispersion in their already deconcentrated social macrogroups, creating opportunity for the engagement of a lone opponent. During a raid, if a decisive numerical advantage is not identified, the attacking group retreats. In case of contact with more than one "enemy" and if the conditions of numerical asymmetry are still favorable, the aggressors will seek to isolate their opponents to prevent them

from cooperating in their defense.

There are no observed acts of non-lethal violence and intimidation performed by an aggressive coalition against male members of an *outgroup*. Lethality seems to be always sought, and there are records of ethological demonstrations of intriguing content, such as the emasculation of dying opponents and the sharing of body parts and the blood of dead "enemies." The association between intersocietal violence and cannibalism is of particular interest, since common chimpanzees exhibit different somatic displays and vocalizations when dealing with *ingroup* and *outgroup* individuals: in the first case, all ritualistic and lethality prevention mechanisms are in place, while in the second case, raiders show body language and make vocalizations normally related to hunting activities (chimpanzees often feed on small vertebrates and even on smaller monkeys like the red colobus, *Piliocolobus badius*). Therefore, "foreigner" chimpanzees are behaviorally treated as prey. The re-signification of the enemy's nature is called "dechimpizing", clearly analogous to "dehumanization" processes (Roscoe 2007; Mithen 2002).

Raids may also be associated with attempts to coerce females from neighboring groups through intimidation and non-lethal violence so that they desert and join the aggressor's side. In case of success, the first offspring born of newly incorporated females are almost always victims of infanticide by adult males. This type of behavior is not uncommon among social mammals and has the effect of minimizing the impact of paternity uncertainty on a polygynandric mating system: since there is no sexual exclusivity among common chimpanzees, infanticide in these cases operates as a guarantee that the offspring does not belong to males

unrelated to the *ingroup*. This is an important factor (the absence of marked inequality in reproductive opportunities) that makes engaging in intersocietal violence a potentially rewarding strategy for all males involved.

The balance of power is an ethologically relevant strategy for the prevention of intersocietal violence among common chimpanzees. This is because lethal aggression, although not a rare ethological phenomenon among mammals, occurs more frequently at interpersonal levels, in asymmetric conditions, and between adults and infants (Roscoe 2007, 485-486; Wrangham and Peterson 1996, 6-7, 162-165). Lethal aggression among adults is a high-risk behavior, with the potential for killing aggressors and/or victims. What makes intersocietal violence possible in the way it occurs among chimpanzees is precisely the presence of an advanced social cognition, acting to produce intense male cooperation and coordination. The coalitional strategy has the potential for breaking the balance of power, for delivering lethal violence against the enemy with minimal risks to the aggressors, and for maximizing individual returns resulting from the expansion of foraging territory (as a consequence of the demographic decline of neighboring groups), and from the abduction of females in a polygynandrous mating system.

Warfare and the modern human mind: between Clausewitz and Keegan

Of course, all this relates to our closest evolutionary relatives, with whom we share almost 99% of the genes. In this context, anyone could quite rightly claim that human societies function in another framework, that modern humans are rational and conscious, and that they are cultural animals; thus, wars between human societies should illustrate a phenomenon of another kind, incurring another dynamic and logic. In fact, human evolution

lead us through other paths; in spite of this, the evolutionary dynamics should never be confused with the drawing board of the Creator, in which drawings are erased to give space to others, traced from scratch; the evolutionary process is a *collage* that takes place over millennia, with overlapping images, some visible, others almost imperceptible, but still present. The human mind, though distinct as a result of its metarepresentational and transdominial format, carries in its ontology and phylogeny all the evolutionary content of the deep past, substantially situated in the opacity of the collective unconscious (Stevens 2002).

In modern humans, specialized intelligences of high performance and energetic cost operate together, with their algorithms, innate and learned contents circulating freely, generating knowledge of a creative and transversal nature. As a result of this transdominiality, for modern humans a forest can contain a universe of naturalistic information regarding foraging (for the resources it contains), but, at the same time, a forest represents a socially constructed space (the “dwelling of the ancestors,” for example); for modern humans, a forest can be imbued with sentience, can talk and listen, so it must be respected as a social being. By this transversality between naturalistic and social intelligences, it is highly likely that the food resources provided by a forest can also be a “gift” of the ancestors, satisfying not only energetic needs but also renewing social bonds through symbolical and mythical representations. Automobile enthusiasts in modern industrial societies know that their cars are much more than a tool, a product of technology and capitalism; a vehicle can be treated as a social entity, an object of trust and affection, and can send powerful social messages about its owner. I believe that only a few SUV owners in the capitalist world consider of more importance the technical aspect that gives the thing a name – ‘utility’ – than the strident social message it sends to economy car drivers; although this message is also “useful” in its own way.

The articulation between cogni-

tive domains with strong presence of innate algorithms is made by a master domain, the metarepresentation module, which gains this name by producing simultaneous images of the same object in different specialized intelligences. Moreover, it is in the module of metarepresentation that holistic representations about knowledge are expressed—in the form of something like a “consciousness of the consciousness.” Evidence suggests that chimpanzees are aware of themselves and aware of others only in the realm of social relations but nowhere else. Chimpanzees do not use tools (which they produce) to convey social messages and help in their status disputes, nor do they seem to be able to use their social algorithms in their relationship with the natural world (Mithen 2002, 139). Human capacity to employ consciously or unconsciously deep-rooted ethological algorithms in tasks for which they were not evolved—a capacity for a “creative confusion”—can make the aftermath of the clash between Keegan’s “warrior culture” and Clausewitz’s “rationality of war” less trivial than it may seem.

We will insist here on the inexistence of a real opposition between these two propositions and on the fact that they emerge at different instances of the complex phenomenology of social cognition. In the first place, the question does not seem to involve a problem of rationality vs. irrationality. If the war for Clausewitz is fundamentally rational because it is a means to an end, the results of the intersocietal coalitional violence in *Pan troglodytes* also have a solid rational dimension; as a means to an end, warfare contributes to the expansion of the foraging territory of a social group and to increase the number of sexual opportunities for all males (albeit unevenly) as a result of the polygynandric mating system. It is evident that wars between modern human societies, and especially interstate conflicts, often involve different purposes. We do not need, for any reason, to postulate that modern wars, being impacted by the constant presence of “ancestral impulses,” have to result in the expansion of male reproductive

fitness and in the expansion of a society's "vital space." This is not the way these "ancestral impulses" comes to us. The ethological algorithms that echo in the metarepresentational mind and the symbols produced by it are not the cause of war, either among humans or among chimpanzees. These algorithms are ultimately one of the means to make warfare happen, even though they arise as an indispensable condition.

What modern humans do, in the mobilization and in the strategy of war, is to resort consciously or unconsciously to the ethology contained in deep layers of specialized intelligences, to combine them with hundreds of other pieces of knowledge, and to change the values of the variables in the algorithms so that they serve the expected 'rational means' that some cultural, institutional, or political context demands. In other words, we must consider that, in the minds of women and men in modern war offices, the prospecting of geopolitical scenarios and the setting up of strategies—rational actions, by definition—become credible and trustworthy only by resorting to deep ethological complexes that make some courses of action familiar and self-explanatory to the detriment of others. So, in every pursuit of a rational goal involving strategy, evolutionary algorithms are frankly present; their echoes in the metarepresentational mind reduce, at the cognitive level, the degree of estrangement and uncertainty about decisions that, at the limit, can involve the lives of hundreds of thousands of people. In preparation for modern warfare, indoctrination and training of the combatants (as well as the mobilization of public opinion) involve a large dose of massive and programmed activation of unconscious ethological complexes through the use of cultural and symbolic categories that reinforce the construction of imagined *ingroups* ('homeland', 'nation', 'class', 'brothers in arms', and the like). The Hobbesian *warre* involves also the use of cultural contents capable of triggering dehumanizing behavior through the use of con-

cepts that outlines the enemy *outgroup* ('barbarian', 'immoral', 'impure', 'pagan', 'imperialist', 'communist', among others).

War among modern humans, if reduced to its innate behavioral components, would result in an irrational phenomenon: the potential gains in reproductive fitness brought by intersocietal violence, fixed by natural selection since the LCA, do not appear as the result of engagement in modern warfare. In this way, if the expansion of the male evolutionary fitness is supposedly the purpose for which men (and women!) march toward the battlefield and something that makes strategists a living, modern warfare would be an irrational phenomenon since, in theory, it fails to contribute to this goal either in victory or in defeat. The rationality of interstate warfare is a product of transdominality and metarepresentation; it is a means for purposes that are transversal to the economic, political, and cultural realms, using strategic or incidental activation of ethological complexes on the collective unconscious. These complexes, selected over millions of years of the natural history of the Primates order, are employed by modern humans as instruments for understanding, significance, mobilization, and acceptance of lethal intersocietal violence, devoted to objectives most distinct from ancestral ones.

Pride, emotion, and instinct, the affective triumvirate of warfare in Keeganian terms, produces a false contradiction with rational purpose. This provocation against Clausewitzian principles seems to slip between two distinct dyads: rationality x irrationality, by one side, consciousness x unconsciousness, by the other. The so-called "irrational dimensions" in Keegan should be so because of the eventual inadequacy of warfare in achieving certain goals, and it does not appear that intersocietal coalitional violence has been constituted as a mere set of frivolities, distempers, or periodic tragedies. If there is a conflict between categories, it happens not in the circumstances of an "unconscious-rational" dyad but in an "unconscious-

conscious" one although the notion of conflict does not fit the complex dialectical game between these two instances of the metarepresentational mind. "Irrational" belongs to behavior and courses of action seeking or resulting in sub-optimal consequences. Those that result in optimal outcomes are rational by definition, regardless of their conscious or unconscious origins. In this way, the "warrior culture" can be a mechanism for the discharge of primal impulses without ceasing to be a means to an end.

Final considerations

Keegan is captured by the contradiction between his intuitions about a "human condition" directed toward warfare and his theoretical need to define it as "culture". Considering the mechanisms of intersocietal violence we have described, a "warrior instinct" seems devoid of evidence; in spite of this, Keegan contributes decisively in bringing the *longue durée* to the debate, something that paves the way to the interaction between the collective unconscious with evolutionary origins (Jung 2015) and particular cultural systems. We can overcome this conceptual confusion by unfolding the "warrior culture" in two separate and interlocked aspects: (a) one that requires a deep comprehension of warfare, requiring our attention to "ancestral psychic mobilizations" based on ethological projections (the observance and the violation of prosocial complexes) over the metarepresentational mind; or (b) another one that evaluates genuine "warrior cultures" in their condition of conscious and unconscious practices specific to particular societies. The "warrior culture" in Keegan is definitely not what it seems, and we believe that Clausewitzian rationality is not what it seems either if it is considered as synonym of "consciousness." Keegan resorts to a universal dimension, and thus ends up postulating his object of analysis as something pre-cultural and innate, ubiquitous to all societies. Such universality places the "warrior culture" in the ethological realm, but, as we have seen, the existence of a

warfare ethology is very unlikely; no unconscious complexes dedicated to bringing lethal violence to *outsiders* are identified. Ethologically speaking, intersocietal violence seems to be the result of the exhaustion of social cognition with the eventual inability to recognize the rank and status of an increasing number of individuals. For these “unidentified” conspecifics, pro-social mechanisms are off limits, which means that further contacts may be mediated by hunting ethological complexes—the behavioral basis for intersocietal violence.

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