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The Motivational Staircase: Evolutionary insights from reversal theory

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This paper discusses key insights from Reversal theory in evolutionary perspective. Reversal theory proposes four motivational states that may serve to justify and motivate the act of fighting. Individual soldiers are variably motivated in combat. Consequently, they respond to different construals of war depending on their idiosyncratic motivations. This paper proposes that these variable motivations are rooted in our genetic baggage and that they have evolved to cater for different demands posed by our shared environment for evolutionary adaptation. Specifically, the paper outlines a motivational staircase comprised of four evolutionary stages, namely survival, social instincts, reciprocity and social contract, which have provided us with a range of motivations that bear on individuals' decisions to act, including combat. The paper concludes by arguing that understanding variable motivational states furthers our understanding of when individuals choose to collaborate with each for competitive purposes.

Reversal theory (Apter & Deselles, this issue) provides an explanation for soldiers' motivations to engage in warfare at significant personal risk. The issue of soldiers' motivations is an interesting one. Whilst public opinion on matters concerned with international relations may be broad and farreaching, a much more limited number of people than the ones entitled to holding an opinion (i.e. citizens/civilians) typically pick up arms and wage war on behalf of their nation (i.e. soldiers). Clearly, it is one thing to hold an opinion about whether the country should be fighting a certain war, and quite another to put oneself in the direct line of fire to satisfy national aspirations. The issue is further compounded by the reality of selfless, or altruistic, actions that are observable in wars amongst humans and that seemingly benefit the group but not the individual, such as when soldiers put themselves in the line of fire to give opportunity to their fellows to retreat to safer positions, or when they sacrifice their own lives to inflict maximum damage on the enemy (Orbell & Morikawa, 2011).

Reversal theory proposes that individual soldiers experience the battle situation through four interrelated motivational states. In each state, the individual experiences psychological tension that is resolved by acting one way and not another. In the telic-paratelic state, the individual focuses on the present moment or adopts a broader future orientation. In the conformist-negativistic state, the individual rebels against the prevalent order or abides. In the mastery-sympathy state, the individual strives to care for others or control them. In the autic-alloic state, the individual strives to advance either self or group interests.

The critical question that underpins these precepts is a fundamental one concerning human nature and how this has evolved over the passage of time. Specifically, an emergent question considering the fact that human beings are social beings, concerns the extent to which evolution exercises an influence at the individual-level – by maximising the reproductive potential of particular individuals whose dispositional traits grant them a competitive advantage over peers through their ability to attract partners and pass on their genes to the subsequent generation? Or does evolution exercise an influence at the group-level – by enabling individuals to 'swarm' and compete with other groups for limited resources even if this requires self-sacrifice? Whilst every incidence of suicide-bombing lends support to the group-selection hypothesis, every incidence of free-riding or social loafing supports the former individual-selection hypothesis. Though seemingly contradictory, it is clear that in the human species we observe incidences of both.

Multilevel selection

Recently, scholars have aimed to integrate the two selection hypotheses. Haidt (2012) argues that the human species is characterised by multilevel selection that involves an interplay between individual and group evolutionary influences. According to Haidt, self-interested motivations confer an evolutionary advantage in the human species, as they do in other primate species, by maximising the reproductive potential of the self-interested individual. This is rather obvious. A self-interested individual will strive to acquire personal resources that are used to attract partners or provide better quality care to offspring. Either or both of these outcomes help individuals to pass on their genes to future generations more successfully than others.

Haidt further proposes, however, that in certain situations humans can switch to 'swarming', casting self-interested motivations aside and adopting higher-order group-interested motivations. It does not benefit an individual to outcompete peers then lose to an outgroup challenge. Individuals, aside from competing with ingroup peers, also need to collaborate with peers to face challenges from the outside. In certain situations, it pays individuals to pursue self-interested motivations alone. In certain other situations, it pays individuals to sacrifice their personal interests at the altar of the

group, to maximize its very survival and thereby the possibility to secure longevity beyond the individual's lifespan. This is known as the multilevel selection hypothesis. In what follows, I propose that reversal theory may be useful in understanding soldiers' motivations to fight, as Apter & Deselles (this volume) argue, both when these confer individual-level proceeds as well as when these serve group-selection purposes.

The Motivational staircase

Evolutionary psychologists argue that human minds, rooted in human brains, are made up of distinct psychological modules which, like biological organs, have evolved to serve specialist adaptive functions. There is a longstanding debate regarding how many mental modules have evolved, whether these are networked or whether they operate distinctly, and the extent to which mental modules are specialised and located within specific brain structures (Franks, 2011). Nevertheless, mental modules are held to have evolved as a result of environmental demands, by conferring an adaptive advantage to their carrier. For instance, a facial recognition module would enable an infant to recognise their caregiver and seek resources from such a secure source. Arguably, another infant lacking this module would face additional risks if unable to recognise their primary caregiver. In advancing the multilevel selection hypothesis, Haidt (2012) argues that human nature went through a sequence of evolutionary steps. I argue that each of these may have given rise to a mental module tasked with resolving each of the motivational states proposed in reversal theory (Apter & Deselles, this volume). In the natural order, these modules would enable individual soldiers to construe the fighting situation in a certain characteristic way. I propose that these modules function like a motivational staircase with a sequence of steps, each of which may fuel or curb the decision to fight.

Before human beings are motivated to band in groups to increase their chances of survival, they are motivated to survive individually, as independent agents. An individual banished from a group faces the motivation to seek survival or perish alone. The survival stage, the first step of the motivational staircase, resolves the present-future concern presented in the telic-paratelic state by focusing attention on present nourishment needs if individual survival is thrown into question. Resolving this task enables the individual to proceed a step up and face a second motivational challenge. The second step constitutes the social instincts stage. According to Haidt (2012), loners make for easier prey than other, more socially-inclined, group members. Social instincts would have enabled some people to band with others more successfully than others. Accordingly, in the social instincts stage, individuals face the challenge of caring for others to establish social bonds that aid communal survival or, conversely, seek ways to profit from group resources individually. Once this psychological tension is resolved, the individual either moves up one step into a state of community, or steps down to focus on the costs and benefits of the present opportunity for exploiting the group. The third step constitutes the *reciprocity stage*. Haidt notes that people who helped other people were more likely to get help in return when they would have needed it themselves. In this stage, individuals must resolve the psychological tension between accepting the community and conform to its dictates, or challenge it to foster communal change. Individuals either step up to consider abstract rules and principles guiding community, or step down to negotiate the relational forms they wish to pursue with the community. The final social contract stage, involves psychological tension directed at abiding by higher-order, abstract duties and principles that transcend the individual's own construal of the situation.

The motivational staircase (Figure 1) is a multilevel selection model. In the survival stage, an individual maximises fitness by pursuing individual-level selection options. Similarly, in the social instincts stage, banding with others to face a common predator or enemy, helps individual members survive to tell the tale. In the reciprocity stage, individual-level selection choices start bearing an

influence on the nature of community that takes form. At this stage, group-level selection comes into play but is intertwined with individual selection nonetheless. At the social contract stage, however, group-level selection predominates and individuals subscribing to the group ideals are willing to both fight and die for the cause.

[Insert Figure 1]

Conclusion

As Apter & Deselles (this volume) note, individual soldiers' motivations to fight are complex and multiply motivated. Soldiers may fight out of fun one day and fear the next; they may fight to win and triumph, or to flee a superior enemy; and so on. The motivational staircase proposed in this paper suggests that there is neither a single motivational state that compels individuals to fight, nor a single construal of the battle that will serve the same motivational purposes for different actors. It also suggests, along with reversal theory, that trait-based predictions are misplaced as inclinations towards specific behaviors change depending on situational circumstances. On the other hand, the motivational staircase suggests that different situational circumstances may prime individuals to adopt self-interested strategies at certain times, or group-interested strategies at others. As Sammut, Foster & Andrisano-Ruggieri (2017) have argued, behavioural inclinations are subject to an interplay of influences involving the species, the individual subject's own constitution, as well as the cultural groups in which human-minds are embedded. The motivational staircase outlined in this paper helps further our understanding of how individuals collaborate to compete.

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