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THE RATIONAL ETHIC OF SURVIVAL AND (NON)AGGRESSION (*WITH MATHEMATICAL EXPOSITION*)

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ABSTRACT

Using a purely quantitative approach, we offer the right to pursue survival as a launching point to analyze the ethics of aggression in the context of resource confiscation. We find that the confiscation of resources may, in some rare circumstances, stochastically dominate the alternatives. However, we find that cooperative specialization and non-aggression should be generally preferred.

1. THE IS-OUGHT DIVIDE

Hume tells us that to claim a 'should' we must have a proper litmus test. It is not enough to simply show that something 'is' to justify a 'should,' we must show, from axiomatic beginnings, that a 'should' is rational in its own right.

Hume's guillotine not withstanding, we must first discern whether 'should' (i.e. an ethic) exists at all. By what rationale do we claim to assert a universal standard of behavior? Before *an* ethic can be considered rational, we must establish that *ethics* are themselves rational, a priori.

The difficulty with such an undertaking is that any starting point must be a bare assertion by its nature. Further, to agree with its subsequent conclusions, we must mutually agree with this assertion—no small ask in todays world. Even so, my [lofty] objective in this discussion is to establish the superiority of the non-aggression principle as a cogent rational principle which can lay a firm foundation for all that claims it as a logical prerequisite.

To begin, let us assume that any rational creature must be living. A creature that can reflect on the value of life must hold life in some regard, lest it cease to affirm life and die. In other words, if a rational creature were to reason that non-existence was preferable to existence, it would bring about its own death and thus be unable to debate the value of survival. Continued reason, therefore, demands the affirmation of life as a prerequisite. Life *must be* preferred to non-life. Any other position is self-contradictory.

Further, any species which has attained the complexity of reason must have, *in its nature*, the desire to survive. This inherent nature compels the organism to optimize its behavior in a manner which maximizes its probability of survival.

Rational creatures, then, optimize survival as fundamental to their nature (the 'is') and must affirm life as existent rational creatures (the 'ought'). In other words, creatures which survive will naturally tend toward behavior optimization (i.e. ethics), and reason will aid in the determination of optimal behavior. I submit, therefore, that *survival* is the only relevant litmus test for the behavior of rational creatures. In short, behavior which increases probability of survival is how one *should* behave.

This maxim has the added benefit of rationalizing ethics, a priori. Ethics are the prescriptions for behavior which increase the probability of survival. That they exist is a logical extension of the ongoing preference for life to non-life.

2. TWO STATES OF MAN

There are two basic states of man: he is either alone against nature, or he is with other men against nature. Note that when man is alone against nature, those behaviors which further survival are those behaviors which should be done. It is an odd thing to claim an ethic for behavior in the absence of other people, but by adopting the fundamental axiom of survival we can do just that. A lone man in the wild who succumbs to his aching muscles and sore back, refusing to collect his daily resources, can be properly declared immoral because he does not act in accord with our maxim. Similarly, a man who overworks, taking on an unnecessary risk of injury, also acts unethically by the standard of our maxim. It is man's ethical duty to maximize the chances of his survival.

However, it is the second state of man which is of more interest to our discussion. When men meet each other in the wild for the first time, the simple behavioral choice set is laid bare:

1. Disengage, go separate ways.
2. Fight, attempt to take the other's resources.
3. Cooperate, share resources.

As we have a litmus test for determining which choice *should* be undertaken, we can properly analyze each choice. We can infer that it is choice (3) which offers the highest potential for survivability for both men. So long as the men are not perfect clones in terms of skill, we can say, at a minimum, a comparative must advantage exist between them. Therefore, more resources could be gathered daily if they were to work together. So long as more resources yields a higher probability of survival, then choice (1) must then be inferior to choice (3). We now demonstrate this claim.

Demonstration. Let us define $\phi(t)$ as the probability of survival over period t. We can asses the probability of survival across period(s) $\{t_1, t_2, \ldots, t_n\} \in \tau$ in its most general form (chain rule of probabilities),

$$\phi(\tau) = \Pr\left[\bigcap_{t=1}^{n} \phi(t)\right] = \prod \Pr\left[\phi(t) \middle| \bigcap_{s=1}^{n-1} \phi(s)\right] \tag{1}$$

When resource production is equal across each period, $\phi(t_a) = \phi(t_b)$, this equation reduces to $\phi(t) = \phi(t)^n$. We consider this a special case.

Let the basket of resources produced in a single period be $\{r_1, r_2, \ldots, r_\rho\} \in R$ We can say a comparative advantage in production between persons A and B exists when

$$\frac{\partial r_{1,A}}{\partial r_{2,A}} \neq \frac{\partial r_{1,B}}{\partial r_{2,B}}.$$

Further let $\phi(t')$ represent resources produced in period t where specialization is present and $\phi(\cdot)$ is strictly monotonic with respect to $R_{t'}$ such that $R_t < R_{t'} \Rightarrow \phi(t) < \phi(t')$. Therefore, production gains can be had from cooperative specialization of the producers, and resource production can move from R to R' where $R < R'$.

To show the stochastic dominance of specialization, we propose $\exists t_j : \{t_1, t_2, \ldots, t_j, \ldots, t_n\} \in \tau'$. At t_j, $\exists R' : R < R' \Rightarrow \phi(t_j) < \phi(t'_j)$. Given the special case of equation (1), we can bifurcate τ around t_j, $S \in \tau : \{t_1, t_2, \ldots, t_{j-1}\} \in S \Rightarrow \phi(S) = \phi(t)^{j-1}$, $Q \in \tau : \{t_{j+1}, t_{j+2}, \ldots, t_{j+m}\} \in Q \Rightarrow \phi(Q) = \phi(t)^m$, leading to

$$\phi(\tau') = \phi(t)^m \phi(t)^{j-1} \phi(t'_j). \tag{2}$$

Because $\phi(t'_j) > \phi(t)$ and $j + m = n$, it must be so that

$$\phi(t)^{n-1} \phi(t'_j) > \phi(t)^n \tag{3}$$

meaning that $\phi(\tau') > \phi(\tau)$. We have shown, therefore, that cooperative specialization stochastically dominates the alternative—that is, choice (3) stochastically dominates choice (1) and should be preferred. ■

Choice (2) is an attractive choice in that it offers an immediate potential boost to survival. Further, if the resources can be stored, they may be consumed during later times, increasing the chances of survival in future periods. The truth, however, is a bit more nuanced.

The aggressed person, by our maxim, has a moral duty to defend his resources (so long as such defense maximizes survival). The chances, then, of surviving a raid and it being successful are likely low. Further, the potential for future cooperative resource gathering is risked in a raid as the people involved may be injured and are sure to distrust one another in future periods. Despite these likelihoods, as we demonstrate more formally below, one may, in certain instances, defend the morality of conducting a raid.

We should not find this too surprising a result. After all, individuals are often quick to defend the actions of a legitimately desperate person. This is the extreme case of the starving person stealing a loaf of bread. Indeed, many ethicists may find it a relief to declare such an action morally legitimate, as such a prohibition has oft been labeled 'heartless.'

Yet, we are left with the broader question of whether such 'justified theft' is morally defensible at scale. Can we rightly say, in the context of logical rigor, that outsourcing the theft of bread to a third party is ethically sound? In *The Ethics of Liberty*, Rothbard deals with a similar question, but in the context of recompense for unjustified aggression. Rothbard's solution is quite simple: if one has the right to do something, one has the right to request someone do it in his stead. It appears inescapable that such a conclusion is applicable here. If one has a right to steal in the extreme case, one has a right to outsource that theft.

To be certain, we are talking of an *extreme* case. Though this maxim does, perhaps, offer moral justification for a Spartan social safety net, it surely does not extend to non-extreme, non-survival situations. To generate a real-world example: while one may morally justify a food bank supported by a forced tax (or even emergency medical care supported by the same), one could certainly not justify an offer of free education.

Demonstration. As before, let $\{r_1, r_2, \ldots, r_n\} \in R$ be the resource basket produced over $\{t_1, t_2, \ldots, t_n\} \in \tau$. In addition, let R^* be the resources stored and subsequently 'produced' at t_r, after a raid to confiscate resources. Finally, we define τ as the period set over which no raid and no cooperation exists (i.e. choice (1)).

Using a similar approach to the prior demonstration, we can bifurcate τ^- around the moment of the raid, t_r : $\{t_1, t_2, \ldots, t_{r-1}\} \in S \in \tau^-$, $\{t_{r+1}, t_{r+2}, \ldots, t_{r+m}\} \in Q \in \tau^-$. Thus, $\phi(S) = \phi(t)^{r-1}$ and $\phi(Q) = \phi_r(t)^m$ yielding,

$$\phi(\tau^-) = \phi(t)^{r-1} \phi_r(t)^m \phi(t_r) \tag{4}$$

where $\phi_r(\cdot)$ is the probability of survival after the resource basket, R^*, has been acquired. We are concerned with the truthiness of $\phi(\tau^-) > \phi(\tau)$:

$$\phi(t)^{r-1} \phi_r(t)^m \phi(t_r) > \phi(t)^n. \tag{5}$$

Because $m + r = n$, we can simplify to

$$\phi_r(t)^m \phi(t_r) > \phi(t)^{m+1}. \tag{6}$$

Because $\phi_r(t) > \phi(t) > \phi(t_r)$, we cannot say that choice (1) stochastically dominates choice (2) in all cases.

We now analyze whether choice (3) is dominant to choice (2). As before, we define τ^- as the period which contains a raid and we define $\{t'_1, t'_2, \ldots, t'_n\} \in \tau'$ as the period over which cooperative specialization is pursued (thus $\phi(\tau') = \phi(t')^n$). As before, we are concerned with the truthiness of $\phi(\tau^-) > \phi(\tau')$. Employing equation (4) yields:

$$\phi(t)^{r-1} \phi_r(t)^m \phi(t_r) > \phi(t')^n. \tag{7}$$

That $r + m = n, \phi_r(t) > \phi(t) > \phi(t_r)$ and $\phi(t') > \phi(t) > \phi_r(t)$ is understood, but because the relationship between $\phi(t')$ and $\phi_r(t)$ is undefined, we cannot conclude that cooperative specialization stochastically dominates raiding in all situations. Depending on the base-state of the variables, it may be so that a raid is preferred to cooperative specialization. That said, because $\phi(t_r) < \phi(t) < \phi(t')$ and $n > r - 1 + m$, it appears that $\phi_r(t)$ would have to be extremely high and/or $\phi(t')$ extremely low to justify a raid in place of cooperative specialization. ■