Evolution and Anarchism in International Relations: The Challenge of Kropotkin's Biological Ontology

This project will utilize Peter Kropotkin's theory of Mutual Aid to reconsider ontology in IR. Mutual Aid Theory holds that the evolution of organisms is shaped by cooperation within a group of species against a variable ecology; thus giving rise to a sociality instinct (Kropotkin 1902). This is in stark contrast to the Malthusian assumption that evolution takes place at the individual level according to their intraspecific fitness. Mutual Aid Theory, applied to the realm of politics, overturns collective action problem-grounded theories that hold that the egoistic and competitive drive of humans must be overcome to promote cooperation. Thayer (2004) applied the orthodox individual-fitness interpretation of evolution to shore up Realist arguments. I argue that such reductionist approaches to studying politics are archaic and not congruent with current scientific understanding. A critical realist approach, placing analytical priority on ontological investigations over epistemological/methodological assumptions, is employed to assist in the criticism of orthodox reductionist ontologies. However, equally in line with Kropotkin's anarchist ideas, I argue that this critical realist approach also provokes ontologically-driven inquiries into post-sovereignty global politics and can inform the emancipatory intent of critical IR theory.

Keywords: Ontology, Critical Realism, biology, evolution, anarchism, emancipation

Introduction

This paper treats Kropotkin's Mutual Aid Theory as a prototype biological theory that feeds into an emergent understanding of social ontology. The direction that Mutual Aid Theory takes in informing social theory is reinforced by modern developments in such fields as evolutionary biology, complexity theory, critical anthropology, animal ethology, and biosemiotics. The developments of interest to social theory in each of these fields surround the view that the atomistic ontology of reductionist approaches to both the natural and social sciences are increasingly giving way to holist ontological approaches reliant on the logic of self-organization and emergent complexity phenomena, where seemingly disparate parts are, sometimes inexplicably, better understood as integrated in a larger whole. This paper aims to introduce Mutual Aid Theory, give an overview of the shift in ontological understanding it prompts, and touch upon the implications this ontological shift has for International Relations theory. The specific engagement with IR theory takes a layered approach, the first entry point is a critique of the application of sociobiology made by Thayer to support the arguments of Realism; and, the second entry point is a general argument to re-understanding ontology in global politics.[1] I conclude that Kropotkin's social and natural theorizing are two sides of the same coin and can inform the emancipatory agenda of critical IR theory.

Peter Kropotkin (1842-1921) was a Russian geographer, zoologist and anarchist. His corpus of work is primarily political in nature, but his main scientific work was *Mutual Aid: A Factor of Evolution*. This work established his Mutual Aid Theory and it arose in a little-known context of polarized opinions on the topic of natural selection, as described by Darwin in *On the Origins of Species*. An important epistemological lesson may be drawn from the case of the controversy on the driving force behind natural

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[1] See Bradley Thayer, 'Bringing in Darwin: Evolutionary Theory, Realism, and International Politics' *International Security* Fall 2000, Vol. 25, No. 2, Pages 124-151 and Bradley Thayer, *Darwin and International Relations: On the Evolutionary Origins of War and Ethnic Conflict* (Lexington: The University Press of Kentucky, 2004).

selection—the 'struggle for existence' metaphor. Having the strong anarchist legacy that he did, one would be inclined to think that his scientific work would be inflected by his political ideals; however, Kropotkin's anarchist ideas were preceded by his observations of the natural world.

Mutual Aid presents a counterargument to the interpretation of Darwin's theory of natural selection as being driven by competition within a species (intraspecific). Kropotkin's argument centered on dispelling this flawed account of natural selection, and it was specifically aimed at T.H. Huxley's interpretation in his *The Struggle for Existence.* Kropotkin assailed the overemphasis on intraspecific competition in the natural world, and he drew parallels to the similar overemphasis of war and domination in human history. Cooperation, which Kropotkin terms Mutual Aid, has a much more important role to play than competition in both the natural and social worlds.

To properly introduce Mutual Aid Theory, I will begin by first contextualizing it juxtaposed against the traditional interpretation of Darwin. The basis for the traditional interpretation of Darwin was found in metaphor. The power of metaphors to communicate complex ideas cannot be understated; however, as Alexander Rosenbluth and Norbert Weiner have said, "The price of metaphor is eternal vigilance."[2] This brief wisdom holds significant meaning for critical approaches to science. The way a metaphor is interpreted by both scientists and their audiences is inexorably influenced by political and social currents—this necessarily inflects a scientific idea with a social one. The role of metaphor is crucial to facilitate the dissemination of those ideas among the uninitiated, yet the implications of this to science, which is a necessarily fallibist enterprise[3], mire the progress of knowledge accumulation in what could be considered antiquated social thought. The employment of metaphor to better understand a scientific idea

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[2] Richard Lewontin, The Triple Helix: Gene, Organism and Environment (Cambridge, Mass. : Harvard University Press, 2000.), 4.

[3] Colin Wight, *Agents, Structures and International Relations: Politics as Ontology* (Cambridge: Cambridge University Press, 2006).

or to affect parsimony on a theory betray not only the scientist's own social and cultural inclinations, but also reveal the social process of knowledge production, itself.

For Charles Darwin, the use of metaphor was crucial in both his formulation of the theory of natural selection and his communication of that theory to his British audience. His metaphor of choice was the 'struggle for existence' and the way it was interpreted by him, his audience and his successors was in a distinctly Malthusian sense. Commenting on the implications of Darwin's choice of metaphor, Daniel Todes has written that "[s]uch rhetorical authority contributes to a metaphor's cognitive function, enabling it to clarify certain points and obscure others, to encourage exploration of certain questions and distinctions, and to relegate others to relative unimportance".[4]

The Malthusian-inspired metaphor implied that natural selection was dominated by organism-to-organism competitive interactions in an overpopulated environment. Darwin depicted the 'face of nature' as a crack in a surface packed tightly with wedges, where one wedge is pummelled another relents.[5] The term 'struggle' was often used interchangeably with competition, and Darwin acknowledged that the dynamics of the struggle were between the same species by virtue of their like food sources, habitats and predators.

While the obviously dated Victorian terminology and biases towards less-technologically advanced peoples can be dismissed as being a blatant product of the era, there are more basic political assumptions in his writings that are still taken as axiomatic today. For example his negative views on increasing populations: "It is impossible not bitterly to regret, but whether wisely is another question, the rate at which man tends to increase; for this leads in barbarous tribes to infanticide and many other evils, and in

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[4] Daniel Todes, *Darwin Without Malthus: The Struggle for Existence in Russian Evolutionary Thought* (New York: Oxford University Press, 1989), 7.

[5] Ibid., 9.

civilised nations to abject poverty, celibacy, and to the late marriages of the prudent".[6] The political implications of this negative view on population expansion become much more explicit as Darwin correlates the effects of improved human material conditions with an increase of 'undesirables':

> *The advancement of the welfare of mankind is a most intricate problem; all ought to refrain from marriage who cannot avoid abject poverty for their children; for poverty is not only a great evil, but tends to its own increase by leading to recklessness in marriage. On the other hand, as Mr. Galton has remarked, if the prudent avoid marriage, whilst the reckless marry, the inferior members will tend to supplant the better members of society. Man, like every other animal, has no doubt advanced to his present high condition through a struggle for existence consequent on his rapid multiplication; and if he is to advance still higher he must remain subject to a severe struggle[7]*

The idea of the 'struggle for existence' taking the form of intraspecific competition did not sit well with Darwin's Russian audience, however. There was a tradition in Russian scientific thought to acknowledge that life was difficult, that a struggle was needed to overcome its obstacles, and that organisms would draw on all resources, which included themselves to surmount the difficulties.[8] This view was less an explicit political stance than a 'commonsensical' one, considering that Kessler and many other scientists who embraced the Mutual Aid tradition were either centrists or conservative. David Livingstone comments that the production and consumption of science varies considerably across time and space; thus,

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[6] Charles Darwin, *The Descent of Man, and Selection in Relation to Sex*, (Princeton: Princeton University Press, 1981), 180.

[7] Darwin, *The Descent of Man, and Selection in Relation to Sex*, 403.

[8] Todes, *Darwin Without Malthus: The Struggle for Existence in Russian Evolutionary Thought*, 105.

myriad of factors come into play in our formulation, understanding, and application of scientific ideas.[9] In the case of Russia, it could be argued that perhaps climate played a role in shaping the reading of Darwin's metaphor and the evaluation of his conclusions.

Kropotkin was the most famous scientist to adopt and argue for the Mutual Aid tradition. Born into a noble family, his interest in science and natural observation led him to Siberia by way of the Russian army. He is most remembered as being an anarchist, but at the time of his observations in Siberia his political views had not yet crystallized.[10] The result of his Siberian expedition was one of Kropotkin's most captivating ideas— Mutual Aid Theory. He wrote a series of articles, which he later consolidated into book format, in response to T.H. Huxley's 1888 article *The Struggle For Existence in Human Society*. The articles railed against Huxley's interpretation of Darwinian natural selection being nothing higher than a gladiator show. In his theory, Kropotkin placed greater emphasis on the intraspecific cooperation of organisms, rather than the Malthusian-inspired intraspecific competition paradigm put forward by Darwin's successors. Kropotkin gave greater importance to the direct action of the environment on organisms to produce a natural selective force. It was in the face of these harsh conditions that Mutual Aid arose as an adaptive strategy.

The importance of Huxley's interpretation to biology was in the role he played to disseminate Darwin's ideas on natural selection—he was known by his contemporaries as 'Darwin's Bulldog'. Darwin was known to be hesitant in sharing his ideas—and even hesitated to publish his theory of natural selection for 20 years before finally being prompted to put it to print by Wallace's co-discovery of natural selection. Therefore, Darwin's role in purging both theological and teleological (for example Lamarck's transmutationist theory of evolution) assumptions from explanations for natural processes was articulated

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[9] David Livingstone, 'Science, site and speech: scientific knowledge and the spaces of rhetoric', *History of the Human Sciences* 20, 2 (2007).

[10] Todes, *Darwin Without Malthus: The Struggle for Existence in Russian Evolutionary Thought.*

through Huxley. However, Huxley easily translated this natural worldview into a social worldview—he thought of society as being specific to humans, comprised of self-interested individuals, and constructed to protect individuals from themselves. However, in the context of evolution, Huxley also held that society would inevitably collapse and the natural brutality would resume, thereby strengthening the human gene pool.

Huxley's use of the Malthusian metaphor necessarily fostered a view of nature as brutal—'red in tooth and claw'. It is the Malthusian metaphor that played the most crucial role in supporting an argument for intraspecific competition. Huxley viewed the Malthusian catastrophes as 'species friendly'—which is to say that a catastrophic depopulating event such as a disease or natural disaster benefits a species by returning populations to numbers more in balance with their environment. This had the paradoxical effect of reducing intraspecific conflict by way of a sparser population, but also indirectly feeding intraspecific competition by weeding out the weak. Huxley even argued that these natural checks should not be abated—complex human organization, which can mitigate these Malthusian catastrophes (presumably by social assistance) can also serve to produce "developed checks" in the form of poverty, warfare etc.[11] This transformed a previously value-neutral scientific theory into a political issue.

In this orthodox Malthusian-inspired interpretation the competition for dwindling resources was the corollary of a burgeoning population, and this logic led to the species-friendly view of the inevitable Malthusian catastrophes—the weak died out and the strong survived. However, Kropotkin viewed Malthusian catastrophes as species-hostile due to the decimation of organism numbers. Further, under these circumstances intraspecific competition would be counterintuitive considering that it would only amplify the existing hostile conditions and drive species numbers further down. Kropotkin posited that migration allowed organisms to escape such harsh ecologies, especially dwindling food resources.

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[11] Michael Glassman, 'Mutual Aid Theory and Human Development: Sociability as Primary', *Journal for the Theory of Social Behaviour* 30, no. 4 (2000).

Migratory habits in species resulted in the selection of genotypes that favoured the pre-conditions required for such migration—namely, sociability, which engendered trust among individuals of the same species.

Despite viewing these natural checks as hostile to species development, Kropotkin also argued that the inevitable nature of natural checks selected against those species who lacked the sociability to overcome them.[12] Even should some individuals survive natural checks through competing intraspecifically, those individuals will have survived merely one onslaught because of certain traits that have permitted it to do so; however, those traits may not allow it to overcome subsequent adversity which requires different traits.

In contrast to the orthodox emphasis on the importance of individual-oriented traits like speed, strength etc., which best serve to aid in the survival of a lone organism in a certain situation, Kropotkin argued that sociability is an evolutionary panacea—communities of organisms could handle many more varieties of situations. For example, the variability of ecologies in sometimes erratic and dynamic ways seemed to contradict theories reliant on the slow process of genetic variation. Therefore, carrying Kropotkin's argument to its logical ends would entail adopting the position that *any* trait that favoured sociability over individuality would be selected for—this includes intelligence (when it serves the purpose of mitigating conflict and conceiving of more efficient forms of cooperation) as well as traits that might be characterized in some scientific circles as redundant and even self-defeating, such as empathy and kindness. Yet, the highly social nature of humans (second only to eusocial insects, perhaps) could account for humans being the preponderant mammal in the complex web of life.

Kropotkin argued that the strength of the social instinct transcends individually-oriented instincts, such as self-preservation. He observed individual animals that would engage in reckless behaviour in the face of danger for what appeared to be the sake of the herd. This led organisms that engaged in Mutual Aid to benefit with increased fitness, less individual energy expenditure in rearing offspring, more successful

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[12] Peter Kropotkin, *Mutual Aid: A Factor in Evolution* (1902).

migration and greater intelligence.[13] Glassman synthesizes three general principles for the intraspecific cooperation argued by Kropotkin: 1) organisms struggle against their environment, 2) species which engage in cooperation to overcome their ecology are successful, and 3) egoism becomes detrimental when cooperation is so crucial to survival.[14]

This alternative theory is not alone in dethroning the orthodox reading of natural selection; the complexity science revolution has also added to a more sophisticated understanding of evolution. Michod argues for an emergent reading of evolution which holds that cooperation achieved through a dynamic mechanism of natural selection leads the units of selection (biological entities, including genes) to be subject to increasingly more complex rules as the unit complexity increases.[15] Fitness at a lower level of organic complexity is traded for fitness at a higher level through the cooperation of individuals at the lower level. Therefore, the effects of natural selection are, by their very nature, an open-system and in continual flux; its parameters and method of function cannot be tidily accounted for with mathematical models or meta-theories which describe the preconditions for fitness. This prompts a re-conceptualizing of "new levels of individuality".[16]

However, cooperation is also a term that often goes unproblematized. Cooperation, seen on individualistic terms, is seen as benefitting both individuals. This view holds that the equal reciprocation between organisms to increase fitness is an epiphenomenon of the egoistic interests of individuals—this is represented in evolutionary explanations for altruism which have spawned individual- or gene-based explanations such as Hamilton's 'inclusive fitness', Axelrod's 'tit-for-tat', Trivet's 'reciprocal altruism',

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[13] Daniel Todes, *Darwin Without Malthus: The Struggle for Existence in Russian Evolutionary Thought*.

[14] Glassman, 'Mutual Aid Theory and Human Development: Sociability as Primary'.

[15] Richard Michod, *Darwinian Dynamics: Evolutionary Transitions in Fitness and Individuality* (Princeton: Princeton University Press, 1999).

[16] Ibid., 13.

and Smith's 'kin selection'. In contrast, Group Selection Theory[17] recognizes a behavioural continuity among less-complicated organisms (such as eukaryotic cells) combining to form more-complicated organisms (such as humans) and complicated organisms combining to form even-more-complicated superorganisms—this is the phenomenon known as eusociality.[18] This complexification often takes place at the detriment of individual organisms.

Equally of interest is Lynn Margulies' theory of symbiosis, where cellular evolution was characterized through the integration of separate non-nuclear microorganisms (prokaryotes) into other microorganisms to form the first nuclear cells (eukaryotes).[19] This counters the traditional mutation and environmental adaptation theory-driven approaches to the rise of multi-cellular organisms. As multi-cellular organisms grew increasingly more complex, speciation among multi-cellular organisms arose producing categories (species) of 'individual' organisms which further cooperated to expedite survival. This theoretical approach calls into question the unit-level analysis supported by Huxley's paradigm—the error of biologists is stopping their analysis at the individual level. This process prompts us to question why we have arbitrarily chosen to limit our expressions of ontology to that of the individual organism when cooperative acts occur on a daily basis at the societal level to produce a higher order of complexity, thereby producing a new referent on which selective pressures act.

The Importance of Critical Realism

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[17] Elliot Sober and David Sloan Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behavior*, (Cambridge, Mass: Harvard University Press, 1998).

[18] Edward O. Wilson, *Sociobiology*, (Cambridge, Mass: Belknap Press of Harvard University Press, 1980).

[19] Lynn Margulis, *Origin of Eukaryotic Cells: Evidence and Research Implications for a Theory of the Origin and Evolution of Microbial, Plant, and Animal Cells on the Precambrian Earth* (New Haven: Yale University Press, 1970).

My methodological/meta-theoretical approach, Critical Realism, attempts to overcome individual-based ontologies, which includes the 'selfish gene' ontology popularized by Dawkins[20], by not reducing all ontological assumptions to pure empirical observation.[21] The observable unit of selection—the gene—has been determined through scientific investigation, and has become the favoured primitive ontology in natural selection. However, recognizing the limitations of current scientific capacity for understanding ontological realities through strictly empirical observation, contradictory empirical observations of the *necessity* of human sociality for species survival point to ontological realities beyond the gene that play a significant role in natural selection.

Bhaskar's formulation of Critical Realism hinged on his recognition that science examines existing practices and does not rely on transhistorical truths, such as emancipation.[22] This is in contrast to philosophy, which is generally grounded in history as it examines social practices. Critical Realism (CR) maintains epistemological relativism—which is to say that beliefs are social products, knowledge is transient and neither truth values nor rationality exist outside of historical context.

In applying a CR approach to ontology in the social sciences, Wight states that we must adopt the view that societies are irreducible to people (social forms are required for any social act), since social forms pre-exist, they are autonomous and may be studied as objects, and the causal powers of social forms establish their reality.[23] In addition, Wendy Wheeler notes that science is taking a turn in the late 20th and early 21st centuries away from the 'Age of Reduction' and towards the 'Age of Emergence', where

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[20] Richard Dawkins, *The Selfish Gene,* (Oxford: Oxford University Press, 1989).

[21] Alexander Wendt, *Social Theory of International Politics* (Cambridge: Cambridge University Press, 1999); Colin Wight, *Agents, Structures and International Relations: Politics as Ontology* (Cambridge: Cambridge University Press, 2006).

[22] Roy Bhaskar, *Reclaiming Reality: A Critical Introduction to Contemporary Philosophy*, (New York: Verso, 1989).

[23] Colin Wight, 'Social Action without Human Activity', *Review of International Studies,* 30, 2, 2004, 46.

holistic methods to understanding reality are growing in usefulness.[24] This ontological shift recognizes the limits of observation in modern methodological frameworks and is particularly critical of reducing the unit of selection in evolutionary theory to the deterministic genetic level.

In relation to the move away from positivist approaches in the social science encouraged by CR, Wight writes;

> *The* raison d'être *of the social sciences consists in the move from the specification of manifest phenomena of social life, as conceptualised in the experience of the social agents concerned, to the uncovering of the social relations that necessitate and regulate such experiences and phenomena. This gives social science a critical impulse insofar as the agents, whose activities are necessarily for the reproduction of these relations, may be unaware of the social relations which (in part) explain their activities. It is through the capacity of social science to illuminate such relations that it may come to play an emancipatory role.[25]*

The questions that CR poses always start with ontology. Therefore, any theoretical debates must surround ontology, and not epistemology. True to its Scientific Realist roots, Critical Realism does not make any *a priori* claims on the validity of one epistemology over another. This principle is of interest to poststructuralists when they implicitly rely on the causal force of discourse to substantiate their claims.

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[24] Wendy Wheeler, *The Whole Creature: Complexity, Biosemiotics and the Evolution of Culture* (London: Lawrence & Wishart, 2006).

[25] Colin Wight, 'Social Action without Human Activity', 50-51.

CR actually works to bring back scholarly work that has been marginalised by the mainstream for being unmethodical, unsystematic or politically biased.[26]

Wight argues that the pursuit of knowledge should not be defined and demarcated into a specific scientific method, but channelled in a necessarily fallibist manner to understand ontology as entirely distinct from the methods we use to come to understand it. Positivism is anti-realist in nature in that it attempts to limit the boundaries of knowledge through the privileging of a certain method.[27] As Wight notes, "[e]pistemological questions cannot be settled in advance of, or distinct from, ontological questions". [28]

Attempting to settle ontological questions relies on the depth realism congruent with scientific realist philosophy—assumptions on the existence of entities/mechanisms existing independently of our capacity to know them; thus, appearances do not exhaust reality.[29] Using this realist approach to science implies hypothesizing about the potential existence of unobserved entities, and using a large repertoire of "metaphors, analogies, similes, models and conjectures" to "infer from the known the unknown".[30] Thus, there are three key factors associated with a realist approach to social ontology: 1) societies cannot be reduced to people (social forms are required for any social act); 2) since social forms pre-exist, they are autonomous and may be studied as objects; and, 3) the causal powers of social forms establish their reality.[31] Wight continues, "these can be seen as arguments for the *reality* of social forms that are not explainable solely in terms of individuals".[32]

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[26] Milja Kurki, 'Critical Realism and Causal Analysis in International Relations', *Millennium: Journal of International Studies* 35, no. 2 (2007).

[27] Wight, *Agents, Structures and International Relations,* 24.

[28] Ibid., 25.

[29] Ibid., 29.

[30] Ibid., 46.

[31] Wight, *Agents, Structures and International Relations, 46.*

However, in making ontological assumptions, a thorough account of the nature of causality is required. Kurki emphasizes the importance of an accurate understanding of causation in critical (scientific) realist terms. She enumerates four basic CR assumptions on causation: 1) causes are ontologically real and omnipresent, 2) causes are often unobservable and this hinders an empiricist-based approach to causal analysis, 3) causes work in a complex manner, rather than the parsimonious 'if A, then B' manner, 4) social causes come in many forms—from norms to discourse, reasons to social structures—thus positioning interpretation in an integral position within social scientific analysis.[33] This CR stance on causation also implies that empirically-grounded positivist approaches to understanding causality in a linear and often repetitive fashion are unhelpful to understanding patterns in the social realm. Rather, Kurki argues, it is the CR position that seeks to provide an account of the underlying causal powers, which can explain why those patterns may exist.

Kurki calls for 'deep ontological' inquiry into unobservable structures that form the foundation of social patterns.[34] This deep ontological inquiry requires a variety of conceptual and metaphorical repertoires to conceive of ontologies which are not readily observable, apparent or even intuitive. Causes within the social realm are classified in congruence with the terminology adopted by the agent-structure debate with added material causes also playing a factor; this classification can lead to causes being either constraining or generating.[35]

Grounding my own position in realist terms, I suggest that Kropotkin's Theory of Mutual Aid offers a convincing biological argument to the existence of a deep structural sociality that repositions the ontological primary of analysis away from the individual and to a species level. The observable effects of

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[32] Ibid.

[33] Kurki, 'Critical Realism and Causal Analysis in International Relations'; Ibid., 364.

[34] Ibid., 365.

[35] Ibid., 366.

this deep structural sociality include the spontaneous and non-coerced association of individuals engaging in what practices which Kropotkin terms as Mutual Aid.

Kropotkin's sociobiological approach differs from other sociobiological approaches to politics by way of his ontological positioning—where orthodox sociobiology, based on the Neo-Darwinian synthesis of natural selection with genetics, takes an ontological reductionist approach and results in competitive/aggressive interpretations of 'human nature', Kropotkin's approach implicitly summons a larger inclusive ontological basis for analyzing our species. The lynchpin of this analysis is the idea of individual rationality and its consequences for politics.

The attack on individualist ontology of rational choice has been plentiful but primarily limited to methodological weaknesses.[36] However, exploring altruistic behaviour as being derived from physiologically-determined traits is a novel way of adding to the debate against the ontological assumptions of Rational Choice Theory. Studies in primatology assail the Enlightenment-inspired rationalist ideas concerning human morality as a product of higher cerebral functions. Morality, empirically observable in apes, suggests continuity in sociality/morality among humans and other animals.[37]

Anthropological studies by Marshall Sahlins point to a departure from the biologically-bound *homo economicus* assumption and suggest that culture takes an asymmetrical role in forming human behaviour,

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[36] See for example Amartya Sen, 'Rational Fools: A critique of the behavioral foundations of economic theory', *Philosophy and Public Affairs*, (1977).

[37] Frans De Waal, *Good Natured: The Origins of Right and Wrong in Humans and Other Animals* (Cambridge: Harvard University Press, 1996); Ibid., *Chimpanzee Politics: Power and Sex Among Apes* (Baltimore: Johns Hopkins, 2000); Ibid., ed., *Tree of Origin: What Primate Behavior Can Tell Us about Human Social Evolution*, (Cambridge: Harvard University Press, 2001); Ibid., *Our Inner Ape: A Leading Primatologist Explains Why We Are Who We Are* (New York: Riverhead Books, 2005).

especially in the realm of economic logics.[38] The stance that radical anthropologists, such as Sahlins and David Graeber, take recognizes culture as an integral component to our biology; however, from the variety of human cultural forms made known through ethnographic studies, no culture is entirely reducible to a biologically-grounded 'nature'. Accordingly, Morris argues that the preponderant preoccupation of anthropologists to study non-state societies has produced an 'elective affinity' between radical thought (in the form of anarchism) and anthropology.[39]

The 'radical' view that culture is derived from biological evolution but not dependent upon it has also been taken up in recent years by the fledgling field of biosemiotics. Hoffmeyer describes biosemiotics as that which:

> *implies that processes of sign and meaning cannot, as is often assumed, become*
> *criteria for distinguishing between the domains of nature and culture. Rather, cultural*
> *sign processes must be regarded as special instances of a more general and extensive*
> *biosemiosis that continuously unfolds and acts in the biosphere*[40]

Biosemitoics is also considered as process philosophy, where the biological is considered to be in the process of emerging from the non-biological. Consequently, the crucial nature of semiosis leads to a semiotic interdependence of organic creatures. Signs are innate to human biology, and culture emerges from this. Thus, the social individual becomes the discursive representation of the biological individual.

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[38] Marshall Sahlins, *Stone Age Economics* (Chicago: Aldine-Atherton, 1972); Ibid., *The Western illusion of human nature : with reflections on the long history of hierarchy, equality and the sublimation of anarchy in the West, and comparative notes on other conceptions of the human* condition (Chicago: Prickly Paradigm, 2008).

[39] Brian Morris, *Kropotkin: the politics of community* (New York: Humanity Books, 2004)

[40] Jesper Hoffmeyer, *Biosemiotics: An Examination into the Signs of Life and the Life of Signs* (Scranton: University of Scranton Press, 2008), 4.

Privileging the ontological individual as the primary unit of analysis in politics leads to many of the base assumptions of politics. Namely, that the egoistic drive of humans must be overcome (either by force or through institutions where self-interests can align) to promote cooperation. Further, this egoistic drive, being always implicitly vested in an individualistic ontology, has been naturalized through Hobbesian social contract theory. The process of naturalizing political assumptions along these lines through biological inquiry has a long, dark history of legitimating status quo inequalities and justifying tyranny. However, the broader nexus of the life sciences and inquiries into the social realm has manifested itself as a growing field since the 1970s. Roger Masters provides a broad overview of the transformations in knowledge that contributions from life science subfields, such as neuroscience and primatology, have enabled in understanding social and political forms.[41] He notes that;

> *ultimately, these transformations in the natural sciences cannot fail to change our understanding of human nature. And such a change, in turn, will ultimately influence our conceptions of right and wrong, of justice and injustice, and of good policy and bad decisions*[42]

These are not perfunctory assertions. They are grounded in the acknowledgment of a seamless continuum between the social and the natural on all levels, a recognition of the material limitations of our biological conditions, and the interdependent nature of all the biomass within our ecosystem.

Shifting Political Ontology

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[41] Roger Masters, 'Human Nature, Biology, and Justice', *International Political Science Review* 15, no. 4 (1994).

[42] Masters, 'Human Nature, Biology, and Justice', 324.

The application of evolutionary theory to International Relations was most notably done by Axelrod when he collaborated with W. D. Hamilton to write the article "The Evolution of Cooperation" (1981), where selfish individuals cooperate through modeling on the 'Tit-for-Tat' paradigm. Robert Trivers's concept of reciprocal altruism is similar in that non-reciprocators are punished.[43] However, the premise behind these various cooperative strategies is that of a self-serving logic—organisms act on an individual level to, ultimately, further their own interests.

Finding ways to cooperate in the face of the collective action problem seems to be at the heart of the liberal enterprise in the same way that finding ways to stabilize power relations seems to be at the core of realism. However, these two normative commitments have their own—often tacit—ontological assumptions. It is these embedded ontological assumptions that have established individualism as the reference point for understanding social and political interactions. Thus, this ontological orientation has deterministically led to the same consequences for concepts key to IR theory, such as anarchy. Equally, some scholars have sought to naturalize the individual (either conceived of in human or statist terms) as the sole referent for understanding the nature of social/political interaction.

It may seem counterintuitive to attempt to predict social interactions based on the study of an individual ontology; however, this is done regularly and unproblematically. It is in the contemplation and questioning of ontological assumptions that is of central importance within the realm of my approach. Reconsidering what we consider as 'real' results in a cascade of analytical consequences. A specific example of this is Thayer's attempt to explain Realism in biological and anthropological terms.[44] In doing

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[43] Robert Trivers, 'The Evolution of Reciprocal Altruism', *Quarterly Review of Biology* 46-1, (1971).

[44] See Bradley Thayer, 'Bringing in Darwin: Evolutionary Theory, Realism, and International Politics' *International Security* Fall 2000, Vol. 25, No. 2, Pages 124-151.; Ibid., *Darwin and International Relations: On the Evolutionary Origins of War and Ethnic Conflict* (Lexington: The University Press of Kentucky, 2004).

so, he naturalizes this individualistic approach to international politics through a reductionist application of evolutionary theory.

Thayer argues that the two theoretical foundations for classical Realism—Niebuhr's theological assumption of evil within humans and the Hobbes/Morgenthau metaphysical assumption that humans possess an inherent *animus dominandi*—lost influence with the rise of Waltz's structuralism. However, Thayer takes to task the resurrection of these classical assumptions by integrating Darwinian evolutionary theory to substantiate the two human traits of egoism and domination.[45]

In addition to his theoretical contribution to the Realist school, he also posits that evolutionary theory assists in understanding the ultimate causes of war by examining organized violence in other species and the evolutionary adaptive value of ethnocentrism and xenophobia in contributing to ethnic conflict. Thayer's justification for applying evolutionary theory to Realism is to provide a verifiable theoretical framework to reinvigorate the tradition.[46] To explain egoism, Thayer invokes Dawkins' 'selfish gene' theory, which reduces the level of analysis to the gene as a self-interested replicator.[47] Domination is explained through the biological production of 'dominance hierarchies' in 'competitive situations' where particular individuals in groups achieve greater access to resources; and, the 'ubiquity' of this model of social organization in the animal kingdom suggests a generalisable principle of hierarchy that may contribute to an organism's level of fitness.[48] The evolutionary need to belong to a 'dominance hierarchy', Thayer argues, accounts for human allegiance to the state, ideology and institutions.[49]

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[45] Thayer, 'Bringing in Darwin: Evolutionary Theory, Realism, and International Politics', 125.

[46] Ibid, 126.

[47] Ibid, 132.

[48] Ibid, 133.

[49] Ibid, 136.

Thayer offers three characteristics of evolutionary theory that provide a "better foundation for realism than the theological or metaphysical arguments advanced by Niebuhr or Morgenthau": 1) it meets Hempel's criteria for Deductive-Nomological models of science and also holds true to Popper's principle of falsification, 2) it is widely accepted by the scientific community as a valid explanation for human evolution, and 3) it supports the offensive realist position that in the 'competitive environment' of international anarchy, states naturally seek to dominate one another.[50]

However, where some would criticize his positivist epistemology, his epistemological claims pre-determine his ontological primary to be at the individual—or possibly even gene—level.[51] It should come as no surprise that, true to his realist theoretical orientation, Thayer freely abstracts his individualistic ontology up to the state level and can posit that interactions among states existing in conditions of 'anarchy' lead to conflict. It is in this notion of predetermined behaviour in 'anarchy' that concerns me most.

Anarchy is a widely misconstrued term. It is often analogized as 'chaos'[52], and the implications from this semantic treatment signify a natural state of conflict. Ashley argues that the concept of anarchy has been given 'foundational truth' status in International Relations, despite its arbitrarily constructed nature; the discourse of the anarchy problematique is "always in the process of being imposed".[53] Yet, it is in line with this imposed political construction that the dichotomy of inside/outside and domestic/international

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[50] Thayer, *Darwin and International Relations: On the Evolutionary Origins of War and Ethnic Conflict*, 74.

[51] I will leave a comprehensive critique of Thayer's epistemology based on Kropotkin's Mutual Aid Theory for another time, however.

[52] Such as within *Webster's Dictionary of English*.

[53] Richard K. Ashley, 'Untying the Sovereign State: A Double Reading of the Anarchy Problematique', *Millennium - Journal of International Studies*, Vol. 17, No. 2, (1988), 229.

arises, where it is incumbent upon the sovereign to maintain order against the naturalized disorder outside of territorial boundaries.[54]

Milner is unconvinced of the central importance of the concept of anarchy in understanding international politics.[55] Her arguments surround the ambiguity of the term, and its tendency to reinforce the division between international and domestic politics. This division is analytically unhelpful on heuristic grounds, insofar as it paints International Relations as a *sui generis* field "where international politics is seen as unique…one is less likely to use the hypotheses, concepts, and questions about politics developed elsewhere".[56] Instead, Milner posits anarchy to be a lack of perceived legitimacy in a centralized authority which regulate the relations among political entities—a definition that can be applied domestically and internationally.

However, Milner also stresses the value of the concept of interdependence in understanding relations among states. "Strategic interdependence", as she argues, serves to secure for an actor what he or she wants through cooperation with others.[57] There are no preconditions of equality among the actors; thus, it is conceptually independent from her definition of anarchy. Indeed, power relations operate separately from interdependence and "one cannot determine the extent of [actor] interdependence from the degree of hierarchy/anarchy present in their relationship".[58] Interdependence is so integral in understanding political relations, however, that Milner notes that the contributors to *Cooperation Under Anarchy* implicitly use

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[54] R.B.J. Walker, *Inside/Outside: International Relations as Political Theory* (New York: Cambridge University Press, 1993).

[55] Helen Milner, 'The assumption of anarchy in international relations theory: a critique', *Review of International Studies*, 17, (1991), pp. 67-85.

[56] Ibid., 161.

[57] Ibid., 163.

[58] Ibid., 163.

the notion of strategic interdependence in iterated PD games despite their lack of acknowledgement of its fundamental nature to the actors represented in their models.[59]

While Milner acknowledges the crucial nature of including notions of interdependence in political analysis, she stops short of problematising the root and logical consequences of interdependence. Implicit in her view, as well as those perspectives that internalize interdependence as a value of political interaction, the causes of interdependence, a phenomenon seen both domestically and internationally, becomes an unquestioned assumption, much the same as the assumptive causal force of anarchy as necessitating conflict. In addition, Milner's interpretation of the form interdependence takes, namely the 'strategic interdependence' of cooperation among actors predicated on their respective individual benefits, takes the individual unit as its core ontological assumption.

However, to probe the root cause of such integral interdependence is to begin to form an understanding of the imperative nature of sociality and the ontological implications of this imperative social interaction. Where interdependence is as important to understanding politics as hierarchical relationships, then ontology becomes the primary question of political analysis at both the domestic and international levels.

However, there has been a stunning silence of anarchist voices in helping to interpret what 'anarchy' in IR is really about. Anarchism is a social philosophy above all, and anarchy, as it is conceived of in anarchism, is typified by free association[60]. In stark contrast, the 'anarchy' in IR is not free association—it is humans brought together under mutually incommensurable and irreconcilable legal and authoritative frameworks known as states. In anarchist philosophy it is near universally accepted that society precedes the state, and that free associations occur on a day-to-day basis despite the looming presence of the state—morally, economically and militarily—in the lives of humans.

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[59] Ibid., 165.

[60] Adam Goodwin, 'Anarchism and its Critique of Marxism', *Social Anarchism: A Journal of Theory and Practice* 42 (2008-2009).

However, there are larger sociological implications resulting from coercive legal frameworks that exist at the state level. Namely, it is through the codification and blanket application of specific modalities of cooperation that forces individuals to cooperate in a restricted manner and this inhibits emancipation. Thus, anarchism applied to IR begins its critique by problematising the state. Reading into the ontological assumptions of Kropotkin's style of anarchism, both through his scientific and political writings, provides us another way to consider how social interactions have taken place in our evolutionary past(s). In turn, I argue, it is this shifting of ontology that most benefits the emancipatory intent of critical IR theory. Simply by changing the ontological referent based on Mutual Aid Theory, cooperation and anarchy are understood in entirely different terms.

Emancipatory Conclusions

Critical IR theory, especially Critical Security Studies (CSS), is preoccupied with the ideal of emancipation[61]. It is through the uncovering of "social constraints and cultural understandings" that

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[61] See Ken Booth, 'Security in Anarchy: Utopian Realism in Theory and Practice', *International Affairs* Vol. 67, No. 3 (Jul., 1991), pp. 527-545; Ibid., 'Security and emancipation', *Review of International Studies* (1991). 17, pp.313-326; Ibid., ed., *Critical Security Studies and World Politics*, (Boulder: Lynne Rienner, 2005); Ibid., *Theory of World Security* (Cambridge: Cambridge University Press, 2007); Chris Brown 'Turtles all the way down: Anti-Foundationalism, Critical Theory and International Relations', *Millennium - Journal of International Studies* 1994; 23.; Andrew Linklater, 'The Question of the Next Stage in International Relations Theory: A Critical-Theoretical Point of View' *Millennium - Journal of International Studies* 1992; 21; 77; Andrew Linklater, *The transformation of political community: ethical foundation of the Post-Westphalian era* (Columbia: University of South Carolina Press, 1998); Ibid., *Critical Theory and world politics: citizenship, sovereignty and humanity* (New York: Routledge, 2007); Ibid., 'Political Community and Human Security' in *Critical Security Studies and World Politics*, edited by Ken Booth, (Boulder: Lynne Rienner, 2005); Ibid., 'Towards a sociology of global morals with an 'emancipatory intent'', *Review*

critical theory is inherently emancipatory.[62] However, critical theory in IR has not followed a unified approach. Commenting on this disunity, Wyn Jones has noted that it should be considered as "a *constellation* of rather distinctive approaches, all seeking to illuminate a central theme, that of emancipation"[63].

The 'emancipatory project', as Linklater has termed it, has been under continuous attack by poststructuralist and postmodernist thinkers in IR for the universalising metanarrative of progress it imposes. However, Linklater is not satisfied with the rejection of universalisms and the adoption of a purely relativist perspective where 'anything goes'; rather, he insists there is a "thinner notion of progress that refers to the expanding circle of human sympathy".[64] It is in this 'thinner notion' of progress that he would later derive the importance of the 'no harm' principle in global politics to build a global moral community.[65]

Yet as Wyn Jones has asserted the 'emancipatory project' is bound by neither a common epistemology nor ontology.[66] Considering the moral implications of supporting such a project, finding a common ontology and a subsequent appropriate epistemology seem to me to be crucial future issues in setting the course of critical IR theory.

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of International Studies (2007), 33, pp. 135-150; *Critical Theory and World Politics,* ed. Richard Wyn Jones (Boulder: Lynne Rienner Publishing, 2001).

[62] Linklater, *Critical Theory and world politics: citizenship, sovereignty and humanity.*

[63] Wyn Jones, *Critical Theory and World Politics*, 4.

[64] Linklater, *The transformation of political community: ethical foundation of the Post-Westphalian era*, 76.

[65] Ibid., 'Cosmopolitan Political Communities in International Relations'.

[66] Wyn Jones, *Critical Theory and World Politics,* 9.

In CSS, Booth has acknowledged that the ontology of security for utopian realists necessarily takes on a "holistic character and non-statist approach".[67] This is the closest that we can come to Kropotkin's biological ontology as it can be understood through anarchism. Following Booth's definition of emancipation as "the theory or practice of inventing humanity…freeing people…from contingent and structural oppressions", Kropotkin's understanding of biologically-grounded social ontology and the antithetical role of the state to human development can inform critical IR theory of where it should place it's ontological foundations.[68] The adoption of Kropotkin's ontology would help critical theory to overcome the theoretical incoherence of its emancipatory agenda.

Kropotkin argued that the development of the state, which arrogated to itself the role of facilitator to cooperation, and, thus imposed its own methods of cooperation—regardless of the suitability to circumstances. There was another implication of centralizing cooperative tendencies within the state structure, and Kropotkin argues that there grew out of this a dependence on authority. This dependence had the atomizing effect of "the development of an unbridled, narrow-minded individualism".[69] In sum, the state created boundaries, restrictions, regulations and ideologies antithetical to the preconditions to and conditions of sociality. Should recognition be given to the inherent tendency of humans to socialize and define their own destinies, and sociality be allowed to flourish through what anarchy really implies— free associations—then the emancipation project of critical theory would be realized.

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[67] Booth, 'Security in Anarchy: Utopian Realism in Theory and Practice', 317.

[68] Booth *Critical Security Studies and World Politics*, 181.

[69] Kropotkin, *Mutual Aid*, 135.