Cognitive and Ethical Implications of the Drone as an Agential Actor in War

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This paper aims to provide an alternative metaphysical paradigm that emerges from the post-humanist literature. The analysis aims to re-formulate the ontology of the drone and give it its proper due within the constellation of warfare. I argue that traditional metaphysics, which structures our representations of the world including existing international relations scholarship, is insufficient for understanding the drone's formative effects on shaping our ethical reasoning, legal frameworks, and military practices. Using this new metaphysical structure, I aim to showcase the inadequacies of traditional Just War Theory as an ethical concept and the subsequent academic debate that uses it as a framework to investigate the legality and morality of drone warfare. The current interpretation of Just War principles is deeply anthropocentric, hindering our understanding of agency possessed by technological artefacts. The current interpretation fails to understand the role of matter/technology in the co-constitution of the subjectivity of man. Weapons are "agentic" entities with an essence of their own, capable of forming significant relationships with humans. Both the weapon and the individual exist in a mutually effective, mutually constitutive condition where neither component is wholly dominating.[1] Both shape the other, most significantly in the domain of moral and ethical action.

I argue that Just War Theory governs a particular conception of what man is and their relationship to the world and abstracts from there a moral framework that seeks to govern their military conduct. Thus, how moral responsibility, ethical violations, moral judgment, and the relationship between the man and his weapon are determined all stem from this particular anthropocentric metaphysical structure. This paper will show how the drone reshapes the moral, legal, and cognitive frameworks that structure a drone pilots actions, impacting what is deemed ethical. This analysis greatly challenges axiomatic jus in bello principles that judge a soldier's capacity for autonomous rational judgment and their ability to follow such maxims. The current academic literature has paid scant attention to the capacity of the drone to shape moral and ethical frameworks, including its formative roles within the broader assemblage of 5th-generation warfare.[2] However, this is due to their current ontological conceptions of what a drone is and how it relates to other components within the War Assemblage. This results from the metaphysical framework that structures the ontological imagery of the reality they believe to be enveloped within. I argue that this metaphysical structure grossly misleads the academic debate in its aim to understand the ethical and legal implications of drone warfare. This leads to inaccurate analyses, as they take the drone, the pilot and the moral Law governing them as ontologically separate, pre-existing entities within a hierarchical structure. However, they fail to consider or fathom that the pilot, the drone, and the law governing them all interact within an assemblage and produce the actions labelled as ethical violations. Ethical conduct is not the result of one component, it is the product of relations between the components. This paper argues that since the introduction of the drone into the war assemblage, new relationships have formed, creating new ethical norms instilled with new meaning. Hence new actions are produced. This paper investigates the unique relationship between machine and man, matter, and discourse. Only from there can we abstract a more encompassing and better ethical frameworks to govern this new War Assemblage and the new practices that have emerged.

Literature Review

This paper predominantly builds off the post-humanist literature of Karen Barad and Gilles Deleuze. Both Barad's

agential realism and Deleuze's assemblage theory drastically re-writes traditional metaphysics and creates a more immanent conception of reality, one constantly becoming, inter-relational and dynamic.[3] This new metaphysical paradigm radically changes how we perceive and understand the relationship between man and machine. These works fundamentally reshape modern concepts of subjectivity, autonomy, ontology and, most importantly ethics, as now matter is on par with humanity. Hence, any legal or ethical framework that take the belief that matter and things are mere passive tools within the hands of rational, autonomous beings will have disastrous consequences. As it fails to give matter its proper place within the very construction of reality including its mediating effects in regard to ethical action. Hence, any ethical framework that does take non-human entities into account and the effects they induce is one that needs to be drastically re-formulated. As this new conception of metaphysics will provide a new ontological imagery of reality, it will also change the fundamental axioms that underwrite Just War Theory and how we conduct a just war. Hence, the very academic debate that is locked in an endless loop over whether the practice of drone warfare meets the ethical and legal frameworks of Just War Theory is charged by this paper with missing the point. The debate is working with specific ontologies of man and drone that do not exist, which thus leads to an inadequate understanding of the moral and legal implications of drone warfare. This makes the debate somewhat useless for understanding how to make drone warfare more ethical. Hence, the discussion will always lead to dead ends because their diagnosis and prescriptions are incorrect, as they do not understand how the relationship produces the violation in the first place. This paper attempts to provide a new foundation for future theorising about drone ethics by providing an analysis of drone-pilot relations.

The study of the drone frequently emerges as an abstract construct within the current body of literature, which predominantly focuses on the legality and legitimacy surrounding U.S. drone strikes. The drone exists within the context of the discussions but does not serve as the primary analytical focal point. Instead, the emphasis lies on the underlying principles, political frameworks, policies, and practices associated with U.S. targeted killings through the utilization of drones. Studies have investigated the impact of using drones and whether it goes against the traditional ethical and legal framework of International Humanitarian Law. Scholars such as John Brennan and Daniel Byman argue that it allows for a more ethical approach to war due to its more accurate targeting system and ability to reduce causalities on both sides of the conflict.[4] Ronald Arkin argues that given the proper algorithmic coding, autonomous weapons can be more "humane" than humans in war.[5] Kenneth Anderson argues that the drone is "a major step forward… in humanitarian technology".[6] Bradley Jay Strawser, as the principal proponent of drone warfare, extols the precision of drone strikes and their capacity to adhere to the principle of distinction, hence making it "morally obligatory".[7] He articulates his Principle of Unnecessary Risk, which specifies that no greater risk should be taken than what is essential for achieving a military objective.[8] Hence, he argues the drone spares the lives of American soldiers, and that is justification enough. He reasons that "we have a duty to protect an agent engaged in a justified act from harm to the greatest extent possible. So long as that protection does not interfere with the agent's ability to act justly. UAVs precisely afford such protection. Therefore, we are obligated to employ UAV weapons systems if it can be shown that their use does not significantly reduce a war fighters' operational capacity".[9] These scholars hail the drone's ability to meet existing Just War criteria and its "humanitarian capacities".

However, drone warfare has created an unprecedented backlash, most notably from the work of Gregory Chamayou, who directly challenges Strawser in his seminal work 'A Theory of the Drone". Chamayou undertook a comprehensive philosophical examination of the study of drones, arguing that drones persist and advance the practices associated with a form of post-colonial techno-necro ethics.[10] He vehemently contends against such humanitarian framing, stating the entire pro-drone discourse is filled with "confusion and sophisms", which contributes to a necro ethics of killing "that objectify and disembody the existence of the victims".[11] Scholars like Medea Benjamin have produced analyses that critically examine the human cost associated with drone warfare, particularly in the context of its operations in Pakistan.[12] Michael Boyle showcases how drones represent a new challenge to armed conflict's traditional legal and ethical standards.[13] His analysis highlights how the invention of drone technology allows for the lowering of the traditional barriers to the use of force, impacting the traditional IHL and ethical framework allowing new policies to take advantage of this legal loophole. Although this literature is hugely relevant to understanding the recently evolved nature of techno-warfare, they have overlooked other questions that will significantly add to the overall nuances of the debate. The discourse surrounding the legality and ethics of drone warfare frequently focuses on the assessment of whether the United States drone warfare can be deemed 'just' and, consequently, in alignment with international humanitarian Law. The literature merely investigates whether U.S.

targeted killings conducted through drone strikes align with or diverge from the principles of Just War Theory. Although a text may not primarily concentrate on the legality and ethics of drone warfare, it is common for authors to invoke just war theory and the established 'rules of thumb' that regulate contemporary international warfare in their discussions of drones and drone warfare. Thus, Just War Theory has emerged as an essential framework for the examination and contemplation of drones and drone warfare.

As a result, they have failed to focus on the one thing that makes drone warfare, drone warfare: the drone. This is because of the scholars' unquestioned assumption of how reality works. Their metaphysical assumptions take the drone to be inert and passive, a neutral tool within the hands of the very humans that seek to control it. Thus, there is no need to investigate the drone; the only valid line of inquiry is to examine how the drone is used in practice and the discourse surrounding it. Our traditional metaphysical beliefs see the use of the drone as a product of human agency, nothing more. The drone should be in line with the moral structures we create; any ethical violations of the drone are a result of human agency not following the universal laws, abstracted from its own transcendental realm of reason. This metaphysical conception structures how the debate formulates moral responsibility, the actors' agency, and how we rectify and restore ethical practice. Due to our conceptions of causality being inspired by Newtonian physics, we trace the cause along a linear chain, and due to our anthropocentric conceptions of agency and autonomy, we always end the chain at the human. Considering it is a linear chain of cause and effect, all we have to do is rectify the isolated entity that causes the unethical kink within the chain. Thus, the diagnosis and prescription are formulated to remedy the actions of the human and the discourse it utters. Therefore, there has been a proliferation of academic literature attributing moral responsibility for the killings of innocents to the very language that structures how we interpret and use the drone.

Elke Schwarz states that the current techno-scientific rationale coupled with a biopolitical medical discourse creates morally neutral zones in our thinking that allow for the justification of "surgical drone strikes".[14] Turning ethical reasoning into a pseudo-utilitarian, risk-management schematic in which human life is turned into mere datasets, creating a new amoral form of killing.[15] Jamie Allinson has argued that it is the current racialized and colonial culture ingrained within Western discourse that underpins the drone pilots' rationale for killing with impunity, which represents a broader necropolitical regime.[16] Dr Erich Freiberger attributes moral responsibility to the Obama administration policy surrounding the drone. He argues, "the indiscriminate use of language to legitimate our use of force, will only perpetuate the cycle of violence".[17] His solution is to stop "abusing language" and return to traditional principles.[18] He argues that "ethics demands we stick to the meaning of words and treat them consistently".[19] Brian Orends' solution is to make the process more democratic and, hence more legitimate. He places moral blame on the legitimate authority in charge, arguing for changing the legitimate authority of drone strikes from the CIA to Congress.[20] In his survey of drone accident reports, Anthony Tvaryanas detects a bias towards blaming individual actions.[21] Harry Ven der Linden argues for a complete ban on all drones, arguing that man cannot bring the drone to abide by traditional principles of war, such as respect for state sovereignty and proportionality principles.[22]

The main thread that links all these arguments together is they believe in the totality of discourse to shape our reality. This is due to the representationalist substrate that structures their debates. The conviction that words possess the capacity to reflect pre-existing phenomena serves as the metaphysical foundation underpinning academic critiques. Notably, the concept of social constructivism has profoundly influenced the analytical framework within the study of drone warfare. Thus, reality is split between two distinct and independent categories of entities: representations and the entities to be represented. Representationalism delineates the world into distinct ontological domains, categorising the world into words and things.[23] With humans having the power to shape the world around them. Hence, the academic debate charges the discursive practices at fault for the illegal practices of drone warfare but fails to see how discourse is part of a wider assemblage, one where the drone as an agential actor plays a pivotal part. However, I attempt to use a new metaphysical substrate to structure my argument, one that radically challenges and alters our conception of how matter and discourse inter-relate and shape the ontology of the other.[24] This new metaphysical structure sees reality as more performative, one in which matter is integral to the process. Materiality is no longer "either given or a mere effect of human agency" but rather "an active factor in processes of materialization".[25] This shapes how we imagine the drone and its role in creating necropolitical discourse. This conception radically changes how we do ethics within warfare and the diagnoses and prescriptions we offer.

Thus, the debate is rooted in a deeply anthropocentric metaphysics and therefore fails to investigate how the drone reshapes our ethical reasoning. I argue that it is not one entity at fault; it is the assemblage as a whole; the actions produced result from the system. The current debate is about re-centring drone practice under Just War principles. However, the axiomatic principles that structure Just War theory are deeply flawed, and the ontology of the entities it is meant to govern do not exist. This is analogous to the square-into-a-circle fallacy. The debate tries to fit the practice of drone warfare into a specific ethical framework, which emerged from different factors, histories, and contexts with specific actors and weapons. The academic debate to get the square to fit into the circle starts slicing off one of the sides of the square, whether it is the authority in control, the discourse surrounding drone warfare or the pilot itself, Der Linden prefers just to chuck the entire square away. When instead they should reshape the circle to form a square. The ethical metric of Just War is deeply flawed for governing this new form of warfare, with new entities, weapons, and intentionality and logics. Jus in bello principles charges the man with the moral responsibility and assumes they possess the autonomy and agency to follow said principles, while also considering that the same action that the Law prescribes is attainable in all contexts.

The debate is about creating a practice of drone warfare that brings it back into the fold of traditional ethical practice. However, trying to govern these new practices with old ethical frameworks is profoundly unproductive, and judging such practices with old ethical frameworks does not work either. They do not understand that the action produced is from the relations of a new War Assemblage. This new practice needs to be governed, but not by a framework that only governs anthropocentric notions of agency. The solution should not be to bring it under old abstract concepts but rather govern the practice as the practice emerges.

CHAPTER ONE: Decision-Making Within the Context of Specific Environments

Immanuel Kant understood that to make sense of the world, we need both experience and conceptual assumptions. These conceptual assumptions often rely on a specific metaphysical configuration that allows us to abstract and create an ontological imagery of the reality we believe to be within. Metaphysics structures our perception of reality, hence, the essence of things and beings, including the interaction and relationship of such things and beings. In his magnum opus, *In Process and Reality,* Alfred North Whitehead argued that metaphysics "is the endeavour to frame a coherent, logical, necessary system of general ideas in terms of which every element of our experience can be interpreted".[26] He essentially argued contra Aristotle and Descartes, that logic presupposes metaphysics, that metaphysics grounds and delimits what a human can think. Before logic can use a variable, the concept of the variable itself relies on a metaphysical structure. Our assumptions of space, time, causality, the essence of humanity and materiality all shape the ontological imagery of the world and, hence, how we relate to the world. Metaphysics structures our representations and ideas of reality and guides us on how to live and interact with reality.

Metaphysics is the heart of knowledge, and knowledge of the world provides the foundation for an ethical framework in which a "correct" way of doing things emerges. Ethics sets the boundaries of desirable action, thus creating a normative standard of what we should follow. Therefore, what reality is and how to move through said reality "correctly" showcases how metaphysics and ethics are inextricably linked. Thus, this paper argues that a particular conception of metaphysics has structured the way we do ethics, hence, ipso facto, the way we govern and regulate drone warfare. The metaphysical paradigm that emerged from Immanuel Kant and Isaac Newton structured many axiomatic concepts that underwrite Western Philosophy, from notions of autonomy, the individual, agency, epistemology, ethics, ontology, and causality.[27] These axioms also structure the frameworks that govern and regulate warfare, from Just War Theory to International Humanitarian Law, including the academic literature that judges the ethics and legality of such warfare. This paper further asserts that traditional metaphysics fails to grasp the relations between things and the formative role matter and technology play within the construction of reality. As a result, the literature fails to comprehend how the introduction of the drone has changed the very assemblage of warfare, down to the pilot and laws that seek to "govern it".

Traditional metaphysics provides an ontological imagery that places the human at the centre of reality, which is free, autonomous and the source of action, with the existing materiality in which we are encompassed within as merely passive and inert, ready to be shaped by the agency of man. Although rooted in dense philosophical reasoning, this assumption already implicitly indicates a lack of comprehension of the relations that entangle and form reality as we

experience it. The understanding of how discourse and matter inter-mingle to formulate reality is severely lacking. Hence, how we comprehend the relationship between pilot and drone is incomplete, including the ethical framework that seeks to regulate it. It is necessary to restore matter and technology to its rightful place within reality to have more accurate moral and ethical prescriptions that represent reality.

The traditional metaphysical structure, which Whitehead labels the "bifurcation of nature", structures entities within definitively contained and delineated portions of space without any essential reference to the relations that constitute and make up their being. He calls this metaphysical abstraction "simple location":

"To say that a bit of matter has simple location means, that in expressing its spatiotemporal relations, it is adequate to state that it is where it is, in a definite finite region of space, and throughout a definite finite duration of time, apart from any essential reference of the relations of that bit of matter to other regions of space and to other durations of time."[28]

Whitehead argues that this concept of "simple location" splits reality into two parts: reality as it is itself and reality as it appears. Hence, the ontology of things is split into primary qualities, which are quantifiable characteristics of objects that exist outside of any relation with an observer, and secondary sensory qualities, such as sound, colour, and emotions, that exist only within relation to the observer.[29] This duality provided the conceptual framework for a generalised ontology, which strips reality of everything but its quantifiable features, such as its motion and mass and creates a gulf between mind and matter. As a result, matter and non-human entities get sent into the background as mere extras within the grand narrative of man, ontologically separate and irrelevant.[30] This duality conceives of matter and things as lacking any form of interiority or ontological depth. It possesses no inherent qualities such as colour or odour, which are deemed secondary attributes and categorised as unreliable, fluctuating sensations ascribed by cognition rather than essential to the nature of matter itself. Thus, matter is a substance devoid of any inherent vitality, which lacks intrinsic value, qualities, or significance. It is set in motion by human agents (prior, it was the belief God set matter in motion) who use it as a means of survival, modify it as a vehicle of aesthetic expression, and impose subjective meanings upon it.[31] This ontological imagery greatly obscures the formative role matter has within the composition of reality. It is this conception of matter that underwrites Just War Theory and the subsequent academic debate that theorises the drone as an inert and neutral tool used by the agency of the rational, autonomous pilot. Hence, moral autonomy and responsibility can be traced along a linear chain of causality that consists of distinct isolated decisions and actions. However, the literature fails to understand the processes and relations in which the drone as an entity plays an integral part, in which new processes and assemblages form, creating new forms of desire and subjectivity. Thus, action does not start from the rational subject; rather, it is a constellation of forces that generate an assemblage, thereby shaping the manner in which individuals engage with a specific array of possibilities. How the drone fundamentally reshapes our subjectivity is not factored in within Just War Theory, which takes the Kantian transcendental, autonomous agent as its subject. A unitary figure who is able to follow the laws of war abstracted from a transcendental form of reason, one that is universal and applicable in all space and time.[32]

Through her conception of Agential Realism, Karen Barad gives life to matter. Her concept builds off the advances of quantum physics, most notably the work of Niels Bohr. According to Barad, the lesson we should take from quantum physics is that matter does not come in discrete, separate, pre-existing packages that already have concrete properties, which can be discerned objectively by a separate observer.[33] Instead, within particular interactions, specific properties become determinate while others are specifically excluded. Thus, the traditional metaphysical idea of the separability of things, the idea that we can separate entities and understand their ontology without the relations that constitute them, is quite untenable. The entity's ontology is made via the relationship; there is no pre-existing entity, and hence, there is no objective epistemological method to understand such an isolated entity within time and space. Thus, there is no fixed ontology of being, no fixed object; they change with the relations they form and are a product of the relations themselves.

"In agential realism's re-conceptualization of materiality, matter is agentive and intra-active. Matter is a dynamic intra-active becoming that never sits still—an ongoing reconfiguring that exceeds any linear conception of dynamics in which effect follows cause end-on-end, and in which the global is a straightforward emanation outward of the local. Matter's dynamism is generative not merely in the sense of bringing new things into the world but in the sense of

bringing forth new worlds, of engaging in an ongoing reconfiguring of the world."[34]

In her new metaphysical paradigm, the observer, the instruments employed for measurement, and the observed objects constitute an ontologically inseparable unity, which she refers to as a "phenomenon". She posits that phenomenon are fundamental to the construction of reality; they are the units that build reality. A phenomenon represents a particular "intra-action" involving an "object" and the "measuring agencies"; both the object and the measuring agencies arise from, rather than exist prior to, the "intra-action" that generates them.[35] The fundamental concept posits that "the object" of this research is intricately intertwined with "the methodology" employed in its investigation. Thus, practices of knowledge and existence cannot be separated; they are inherently interconnected. Knowledge is not acquired by observing the world from a distance nor separated from the tool doing the analysis; instead, it is attained through our intrinsic connection to the world itself. The concept of intra-action, as opposed to the conventional term "interaction," which assumes the pre-existence of independent entities or relata, signifies a significant transformation in our understanding. To put it differently, "relata do not precede relations".

Thus, that means the subject is produced rather than fixed and separate from the forces that constitute it. Gilles Deleuze conceives of the self as emanating from a "transcendental field".[36] It is a subject devoid of personal attributes and is pre-individual in nature, lacking a definitive "self" at its core. Deleuze sometimes refers to a "transcendental field" instead of a universal subject that imposes form.[37] In this field, the conditions for experience do not belong to a personal "I" but to a plane of immanence where new subjectivities can arise rather than being presupposed. He argues we do not impose on reality; we are made by the world and thus relate to the world. There is no fixed essence; we do not shape the world to our will, we are not separate or above.[38] According to Heidegger, the human person cannot be understood as a static and autonomous entity, as there is no identity prior to engagement with the world; rather, it is the interactions with the world that define human existence.[39] This perspective necessitates the suspension of essentialist categorisations of entities, such as "subjects," "objects," "nature," and "culture". This allows us to concentrate on the dynamics of engagement, connection, and association among entities within various networks. The "human" is a function of an aggregate of forces whose subjectivity is produced by the temporal and spatial placement of the "human".[40] Thus, "thinking" becomes intrinsically linked with the physical spaces we occupy and is shaped by the forces within that space.[41] In other words, matter and technology have a force, a "vitality" within its own right that actively shapes the human within its presence.[42] This represents a transition in focus from the individual actants within a network, particularly a subject that utilises a technological artefact, towards a novel composite entity formed through the interaction between both elements.

Thus, as Latour asserts, the humanist/enlightened image of a human being at the helm, manipulating inert objects to achieve ends is no longer tenable, and there are no masters anymore.[43] Using Deleuzian imagery, everything is a component, part of an assemblage, heterogeneous, constantly changing. The world is comprised of assemblages and relations, non-hierarchal and continually becoming. The subject is produced by the multiplicity of forces acting on that individual, shaping their reality, desires, and perceptions down to their cognitive faculties. Thus, if logic is contingent on representational thought (cognitive constructs that mediate between the perceiving individual and the various objects, processes, or entities encountered in the external environment, they allow us to represent things that have never been experienced as well as things that do not exist, hence allow to deduce conclusions a priori)[44] and representational thought is made up from the aggregate of forces emanating from the assemblage, then that means that our logic is not an internal process within us, it is made and instantiated by the very materiality that we are enveloped within. This radically changes how we conceive of drone-pilot relations. The drones' systems, its algorithmic logic, its haptic feedback, the mere presence of the drone's visual feed all shape the pilot and their logical, hence ethical, reasoning.

Hence, the Kantian transcendental "I", which is a fixed unified body of self-awareness in which the subject is an independent and autonomous entity which is enclosed within "the shell of his head, inside the armature of his limbs, and in the whole structure of his physiology" does not exist.[45] This form of subjectivity structures Just War Theory and the subsequent academic debate. Kant argued that it was our cognition that structured reality, hence man, is the source of ethical action.[46] Kant's transcendental idealism posits a universal framework of subjectivity that underpins all conceivable experience and provides the foundation for the universality of knowledge and morality, exemplified by the categorical imperative.[47] This imperative embodies the notion that moral principles must be

universally and necessarily applicable to all rational beings, akin to how a priori principles uniformly organize experience. Hence, Kant's transcendental unity of apperception constitutes a presupposed identity, a formal self not generated from experience but created to facilitate experience. He contends that there exists a self outside the "self" which organizes our experiences. According to Kant, true moral reasoning occurs when we detach ourselves from nature and employ this transcendental reasoning to formulate universal ethical principles. The jus in bello principles are deeply rooted in this Kantian subjectivity. The individual must ascertain that the anticipated collateral damage of an attack is not disproportionate to the tangible and immediate military benefit envisaged. The decision to fire a round, release a bomb, or fire a drone missile rests with an individual who must differentiate between targets. The inability to make that distinction constitutes a moral failing of the individual. Each trigger pulled and every command issued constitutes a moral action by an individual rational actor.

As Dr Erich Freiberger argues, the whole idea of Just War is a timeless framework, claiming "there is no instance where ethical obligations do not apply, for if ethics to apply, it has to apply to all times".[48] This conception takes Just War Theory to be ontologically separate from the entities that it seeks to govern. A supreme law abstracted from and theorised by a transcendental form of reason, which all rational beings can and must follow. It is this conception of Just War Theory that underwrites the entirety of the debate. Ethical universalism pays little attention to the intra-action that generates such universal maxims. They fail to understand how norms acquire meaning. For Freiberger's concept of Just War Theory to work, the "world has to be imagined as homogenous and casually linear".[49] This is what Laura Zanotti calls Newtonian Substantialism.[50] This metaphysical substrate structures how academics view ethical violations, attribution of moral responsibility and the ontology of the actors under its purview. Conventional Just War Theory perceives weapons as impartial instruments utilised by human agents. The anthropocentric emphasis of Just War Theory results in a significant omission regarding the agency of non-human entities. Focusing on individual responsibility and intentionality obscures wider structural entanglements and diminishes ethical accountability in these contexts. The traditional perspective is overly simplistic, framing the relationship as a dichotomy between human and tool, which fails to adequately address the complexities of a dynamic characterized by distributed agency. Although Just War Theory addresses the principle of proportionality, specifically regarding the avoidance of excessive force, it fails to consider the implications of human psychology in the context of technological mediation. The tradition presupposes a largely uniform human moral agency; it fails to anticipate how the modalities of warfare (such as screens, drones, and algorithms) could alter the conduct of the human agent. This represents a complex interplay of structural and psychological factors that cannot be adequately addressed through conventional just war checklists.

Thus, concepts like human-centric agency wither away, and agency and action re-conceptualized as distributed between man and matter. Thus, ethics itself is a heterogeneous framework, constituted and made from a multiplicity of objects and events, which is formed by all modes of existence. Thus, matter affects the choices we make and the ethical practices we hope to enact. Epistemology and ontology are linked, and this specific intra-action produces a specific mode of practice, hence a specific modality of ethics. To presuppose ethics is transcendent above ontology is to believe that epistemology is separate from ontology. Ethics is fundamentally shaped by the intra-action of entities; changing the entities changes the ethical practice and the meaning behind it. Thus, the supposition that the source of morality and ethics is found in an independent unitary self, separate from the realms of nature that can abstract ethical laws, separated from the ontology of the being, is deeply flawed. The Kantian argument that reality is a product of cognition fails to understand the formative forces that shape such cognition, one in which matter is pivotal. Thus, as Peter-Paul Verbeek argues then, morality does not belong solely to the human subject; it "is an affair of things and therefore morality and ethics have a material dimension".[51] He critiques traditional ethical frameworks that state morality solely emanates and is created from human beings and is dependent and enacted by only the human subject. Technologies transform our experience of the world and, hence, our interpretations of our world and we in turn become transformed in this process. It prompts us to do things, alters our perceptions and modifies our options for acting. Thus, we are not autonomous, as we are part of an ecosystem that actively shapes our morality. Human subjectivity, it can be argued, is constituted within feedback loops between humans and their environment, which mutually inform and construct one another. When technology so fundamentally helps to shape our moral actions and decision-making processes, the subject's autonomy, which is most often taken as a requirement for moral agency, is seriously mitigated. Thus, ethics and morality are the product of a specific topological ecosystem in which the human interacts with, not emanating from a transcendental realm of reason. The

transcendental subject that is autonomous and can abstract from the realms of reason does not exist. It is shaped by matter.

CHAPTER TWO: The Drone Assemblage

I will be using Deleuze's conception of the assemblage to showcase the drone's formative role within warfare. This chapter aims to provide a conceptual framework of the relationship between the drone and the other components within the War Assemblage. Only once a greater understanding of the effects the drone's relationships produce has been established can we begin to theorize ethical norms. As Deleuze states, to understand the effects of things, "you have to analyse the collective apparatus".[52]

An assemblage represents a philosophical framework for examining the ontological diversity of agency within socio-material networks that encompass individuals, objects, and discourse.[53] The central thesis posits that individuals do not primarily operate based on personal agency; instead, human actions necessitate material interdependencies and a network of discursive mechanisms that are disseminated throughout legal, political, economic, technological, and topological infrastructures.[54] Deleuze posits that assemblages represent dynamic configurations of heterogeneous components, which arise through the processes of coding territorialization and are subject to transformation.[55] Their convergence manifests in diverse forms, creating a transient yet functional entity that yields specific effects. Assemblages are not static structures or essential identities; rather, they are in a state of continual becoming, shifting, evolving, and adapting in response to the interactions among their components.[56] Consequently, if the components of an assemblage are determined solely by their external relations, it follows that they may be added, subtracted, and reconfigured with one another indefinitely, creating new meanings and new relations without the creation or destruction of the assemblage itself. Take for example the constellation of Ursa Major, it does not possess an inherent or essential existence in the celestial sphere. It does not facilitate the existence of stars. The term refers specifically to the designated nomenclature for the collection of conditioning relations that systematically organize a constellation of stars.[57] In the absence of stars within the celestial sphere, one cannot establish any relationships among them; conversely, devoid of such relationships, one is left with a state of radical heterogeneity. Thus, the War Assemblage represents a unique dynamic system; it lacks a permanent essence, accompanied by a permanent ethical framework with fixed meaning.

Drone-Legal Assemblage

This sub-section argues that the drone has reterritorialized the War assemblage, which changes our ethical reasoning. It does this by remaking our legal frameworks. The drone creates new modes of practice that are perceived to be breaking international humanitarian Law and in breach of Just War principles. The main controversy is whether drone strikes follow the principle of distinction and current international frameworks. Special Rapporteur Asma Jahangir characterized drone strikes as a "truly disturbing development" and asserted that a drone strike in Yemen constituted a "clear case of extrajudicial killing".[58] However, the Special Rapporteur did not provide a rationale for this assertion.[59] Special Rapporteur Philip Alston has posited that employing drones for targeted killings is extremely illegitimate.[60] In comparison, scholars such as Peter Bergen and Katherine Tiedemann conducted an empirical investigation which revealed a high number of civilian casualties, which ran counter to assertions of surgical accuracy of drone strikes and International Humanitarian Law compliance.[61] Nils Melzer examines how, particularly in non-international armed conflicts, the practice of targeted killing with drones frequently goes beyond the norm of distinction.[62] They argue that the principle of distinction has collapsed, and scholars argue that it is unethical because it does not follow traditional jus in bello principles. However, this chapter argues that such accusations of unethical practice are not entirely correct. The academic debate compares two different practices, emerging from two different assemblages, and argues one is unethical because one doesn't follow the other. The scholarly debate claims of unethical practice, is nothing short of a comparative fallacy and lack of understanding of how laws are formulated or produced by the materiality and practice that underwrites them. Discourse and meaning are not ontologically prior nor separate from the actors and practices that allow them to come into existence. They are made by the very materiality that co-constitutes them. The debate is treating the principles as separate from the actors that interpret them. They presuppose that there is a universal meaning that is set, which prescribes a universal mode of action and interpretation across space and time. However, the word "combatant" and

how it is classified changes with the assemblage in which it emanates from. The principle of distinction they argue for emerges from the 1949 Geneva Conventions, which defined a combatant with the use of a fixed distinctive sign that is "recognizable at a distance".[63] However, this specific meaning of a combatant emerged in lieu of the strategic bombing campaigns of World War 2, which intentionally were designed to undermine civilian morale and disrupt industrial production, thereby blurring the distinction between the battlefield and the home front. That form of distinction and practice was produced by a different war assemblage composed of different relationships, entities and technologies, hence a different meaning as to how the principle of distinction should be followed.

Rather than stating that the drone violates such a principle, I argue it follows it. The drone follows the principle of distinction, but it is one that has new meaning. The new principle of distinction is framed by the new "intentionality" doing the interpreting, hence changing what counts as just and ethical when it comes to killing. A new form of knowledge underwrites the meaning of the principle and how it is conducted within practice, changing the legal frameworks that underpin our ethical rationale. This new form of knowledge is generated from a new form of warfare. This form of warfare is characterised by battlefronts that transpire across extensive and fragmented expanses of space. With a theatre of conflict that is dynamic and adaptable and encompasses a diverse array of entities including a new form of combatant.[64] These components within the assemblage all shape how we interpret the Law and the meaning of the words. Law is generated by the components it governs, not separate, nor does it lead from the front in terms of setting practice. Practice shapes Law, and Law then shapes practice; all the components shape all the other components within the War Assemblage. Meaning is in a constant state of becoming via the interactions of humans, technology and the world. The meaning of words and our ethical frameworks are constantly being negotiated with the technology we use to relate to the world.[65]

The drones scopic regime is an algorithm that meticulously processes, screens, and selects data to form its "pattern of life" analysis, which forms the basis for classifying combatants.[66] This methodology is predicated on the accumulation of substantial volumes of meta-data, predominantly sourced from mobile devices, which are subsequently organized in databases.[67] These databases are then subjected to analysis through algorithms to extract discernible patterns. The identification of these patterns serves to forecast terrorist behaviours, consequently leading to the inclusion of individuals on terrorist kill lists that contribute to the disposition matrix.[68] The technology subsequently functions, in part, as a decision-making entity; the knowledge it provides is integral to such decisions. It shapes the epistemology of how we classify combatants, and how we classify combatants is tied to the space and theatre in which warfare is conducted. What delineates traditional laws of war is the differentiation between civilian and military areas. However, the understanding of space within the framework of drone surveillance is entirely different; there is no distinction between civilian and military areas. The internal logic underpinning drone surveillance has a specific understanding of spatial dynamics.[69] Which thus formulates a new meaning of the principle of distinction. Drone surveillance lacks the capacity to differentiate among various types of locations; it solely provides a pattern analysis regarding the presence of individuals at specific times and places. Within this new form of warfare, if the principle of distinction is to be followed, particularly when combatants are irregularly integrated within the battlespace and intermixed with civilian populations comprehensive monitoring of the entire area becomes essential for the identification of potential targets (the blurring of civilian and military zones).[70] The metadata transforms a compound into what may be characterised as a 'suspicious' compound, a refuge, or a foundational base. Thus, combatant and non-combatant are distinguished by the drone's algorithmic rationale, based on its own logic of space, which is used to interpret the jus in bello principles. This changes how we do ethics as it changes the very legal meanings that structure our ethical values. Combatants are no longer distinguished via perception but rather via a complex system of metadata interpreted by an algorithm. Thus, the ontology of the combatant is linked to the epistemology of how we come to distinguish a combatant.

The drone, as demonstrated, produces classifications, methodologies of perception, and modes of presentation. Consequently, the Law cannot be separated from the modalities of knowledge that actualize it; in this regard, Law is shaped by the very practice that attempts to follow it. The Law is influenced by specific forms of knowledge and rationalities, which in turn constitute and shape legal claims. Consequently, the drone serves as a foundational element in the (re)interpretation and representation of various entities. The advent of drones has fundamentally altered the dynamics between intelligence collection and military operations. The domains of intelligence, surveillance, and reconnaissance have increasingly assumed a pivotal role in the direct support and organization of

ground operations within armed forces. Lawyers are summoned to provide immediate counsel with target prosecutions concluded within a brief timeframe.[71] The Law is transformed into an efficient and calculative apparatus, re-engineered to facilitate assessments of proportionality and distinction that come from the drones own scopic regime. This evolution has fundamentally reconfigured the U.S. military's organisational structure and operational methodologies, thus shaping how the principle of distinction is interpreted. The drone redefines the parameters of legal expertise by facilitating the emergence of technological forms of knowledge that are inherently derived from the drones themselves.[72] Thus, a new form of epistemology now underwrites the principle, changing how we practice and follow such a principle. Consequently, it is not the legal principles that dictate the decision but rather the determination of how to proceed that defines the meaning of the legal principle in question.

The new drone assemblage injected existing jus in bello principles with new meaning, reframing what counts as ethical. Thus, the drone follows such principles of distinction, it is just interpreted differently due to the agency doing the interpreting and the context it is derived from. The academic debate is still conceptualising the War Assemblage in its traditional form, one without the presence of algorithmic autonomous machines and a new form of enemy, International Terrorism. Thus, how non-combatants and combatants are distinguished is down to how the Assemblage functions, one in which the introduction of the drone has been instrumental. Shaping our legal and ethical frameworks in regard to the principle of distinction, hence shaping the military jus in bello practices and ethical reasoning. I posit the drone possesses unique affective potentials that actively shape social life rather than merely serving as passive instruments of violence.

Drone-Pilot Cognitive Assemblage

This sub-section aims to investigate and analyse how the drone reshapes the pilot's subjectivity, integrating them into a machinic cognitive assemblage, where cognitive faculties are influenced, hence changing the relationship to how they experience and perceive reality. Thus, the very idea of rational actors following the jus in bello principles falls apart. The soldier is no longer the source of moral action. The pilot's integration into the cognitive assemblage automatically changes their ethical reasoning. The drone's algorithmic intentionality significantly influences our perceptions of the world and our understanding of our position within it. It also informs the judgements we make and the rationalisations we provide to ourselves and others regarding our actions. The mediation of human intentionality through technological devices significantly influences the formation of new experiences, either by facilitating novel methods of engaging with reality or by establishing new contexts for experiential engagement. The drones visual screen provides a high-resolution image of the world.[73] It technologically constructs images that must be interpreted by the pilot. The technology forces the operator to think in certain ways, which leads them to apply specific logics based on the above-mentioned techno-culturally mediated way of seeing. The drone has its own internal logic that constructs reality, like how we structure our reality via our perception. Rather than a passive medium, the drone has its own "intentionality" that interprets the world, and thus re-directs it back with the human and inter-mingles with human intentionality.[74] The visual feed the drone produces is not just an image it is an epistemological machine. It comes with a certain method of doing things, a specific logic and form of rationality that shapes and influences the components within the cognitive assemblage, most notably the human. It sees the world through a purely mathematical language, and its "cognition" is fundamentally different from ours. Thus, how the two cognitive systems interact in this unique cognitive assemblage will be the primary purpose of this subsection. I will specifically showcase how this new cognitive interaction shapes our killing decision.

The operational framework of the drone's visual capabilities is predicated upon five foundational principles: continuous surveillance, comprehensive or holistic observation of all entities within a spatial context, integration of diverse data sources, and the anticipatory identification of irregularities within algorithmic patterns, and a thorough archival retention of data.[75] The drone regime can develop algorithms and patterns that can abstract, revise, and deviate from established norms. This entails a profound transformation of automated cognition, specifically revealing an alien or denaturalizing process of reasoning that occurs with and through machines.[76] Consequently, a novel variant of abduction is established. Abduction constitutes a method of deducing facts, laws, and hypotheses that may plausibly elucidate certain unknown phenomena.[77] In other terms, it characterises reasoning not merely as a process of evaluation but also as the generation of novel explanatory hypotheses. Through the process of abduction, one can construct semiotic chains derived from non-inferential social practices, thereby extrapolating the meanings

inherent within these practices via an experimental formulation of truths.[78] In this context, overarching concepts or truths are contingent upon, yet not exclusively defined by, the material practices and the discursive statements that underpin them. This particular form of logic represents an entirely original approach to machine intelligence. How this logic then interprets reality is also entirely novel, different to the representational logic and mode of bodily and visual perception that characterises humans grasp of reality. Consequently, the cognitive phase of human-centric thinking has paradoxically transitioned to the abstraction of human-machine levels of affective cognition.

The drone formulates its own rules which emerge from hypothetical and abductive assessments of unknown events. These rules stem from an algorithmic and technological rationality. The rules formulated from this form of machinic logic establishes a novel form of rationality and perception by reconfiguring the conceptual and cognitive framework of the human using them. It integrates deductive and inductive methods of human logic within an expanded reasoning space characterized by a specific mathematical language. Expressing a non-representational approach to inferential reasoning. Consequently, arriving at truths independent of representational deduction alters our ethical perspectives regarding our relationship with killing. It changes the decisions and reasoning processes that would conclude whether an individual is a combatant. The combination of faster processor speeds, increased computer memory, and fibre optic cables facilitating near-light-speed information transfer establishes a domain of autonomy for technological agency. In this new realm of agency and autonomy algorithms infer, analyse contexts, and make decisions in milliseconds. A new form of cognition arises from novel data environments that generate new concepts, altering the rules of data processing, which subsequently influences the decision-making of the pilot and operators and transforms their mode of operations. A new sociality of logic emerges, with its laws and rules abstracted and re-engineered within the realm of machine cognition. A new cognitive assemblage emerges from the “intra-action” between human and drone, both shaping and “intra-acting” with the other.

We can see the change in logic when studying the transcript of the Uruzgan massacre between the drone pilot and operators. We can see how the entire operation is evolving with data by analysing the responses of the crew to the drone’s visual feed:

- “We’re **thinking** early teens.”
- “I don’t **think** they have kids out at his hour, I know they’re shady but come on”
- “They’re gonna do something nefarious”
- “I **thought** I saw him moving earlier, but I don’t know?”
- “I **think** he moved”
- “Is that a rifle?”
- “Yeah, it’s kinda weird how they all have cold spot on their chest.”[79]

The utilisation of algorithms obscures the distinction between perception and cognition. The distinction between seeing adolescents and “thinking” adolescents lies in the contrast between sensory perception and cognitive assessment. The decision to kill is no longer based on seeing an enemy; it is rather about deducing, judging, evaluating, and all cognition and ethical decision-making within this assemblage is shaped by the algorithmic logic of the drone and the visual feed it produces. Bodies and movement are distinctly situated and acknowledged from the viewpoint of the weapon. The drone operators by analysing the visual display, endeavour to assemble a puzzle and seek evidence to ascertain “nefariousness.” This mode of cognition is intrinsically facilitated by the drone’s visual feed; and aesthetic forms inform and shape our cognitive processes.[80] One of the principal technologies employed for target detection in drones is the infrared camera and sensor which captures electromagnetic radiation emitted by various bodies and objects. The concept of radiographic episteme, particularly in relation to drones, encompasses the analysis of the space-time continuum and specific targets through the algorithmic transformation of thermal data into an extensive data repository.[81] Infrared imagery transforms all entities into indistinct schemata that appear spectral. When observed from an aerial perspective via a low-resolution video, the annihilated targets resemble crushed insects, red splats on a blue screen.[82] In the lexicon of military terminology, operators of the drone designate such fatalities as “bug splats.” The machinic gaze transforms innocent human beings, subjected to the radiographic episteme, akin to insects poised to be crushed at will.[83] The drones scopic regime facilitates the dehumanising language, which leads to a form of “moral distancing”. However, this form of “moral adorphorisation” is due to the procedures and calculations enacted by the machines. The very presence of the drone creates language

such as “bug splat”. The integration of metadata systems and digitised identification systems illustrates the transformation of life into an organised information system via the use of algorithmic formulas. Through the bioinformationalisation of life; life in all its forms is transformed into anonymous, trackable digital data.[84] Thus, the pilot’s relationship with their target is changed by the way the drone presents targets to them by forming discourse that changes the view of the deceased.

The pilot is engaged by the cognitive apparatus and sensorium of the drone. They integrate into a remote-killing bureaucracy, as their perception increasingly aligns with that of a drone. The emerging cognitive requirements for drone operators are fundamentally dependent on the logic of the drone, thus a form of “automation” bias emerges.[85] The individual who once held the role of the pilot is no longer in that position; the concept of agency and control has come to an end. The pilot gets lost within the machinic assemblage; one drone pilot perceives this reification from a perspective they articulates as their “God’s seat”:

“At times, I perceived myself as a deity casting thunderbolt from a distance.”[86]

Another pilot described:

“Those about whom we make life-or-death decisions, as they scurry below or carry on as best as they can, have—like any beings faced with gods—no recourse or appeal.”[87]

Another drone pilot explains at carrying out a lethal action via the drone feed:

“I was concentrating entirely on the shot and its technical aspects. Right range, right speed, locked in. The man wasn’t really a human being. He was so far away and only a high-tech image on a computer screen. The moral aspects of it—that I was about to assassinate a fellow human being from ambush—didn’t factor in. Not at the moment. Not yet.”[88]

While another stated:

“You never knew who you were killing because you never actually see a face, you just have silhouettes and it’s easy to have that detachment and lack of empathy for human life as it’s easy to think of them as something else?”[89]

Yet another commented:

“It’s almost like watching an NFL game on TV with its tiny figures on the screen compared to being down there in the field in the mud and the blood in the rain.”[90]

The interaction between human and drone as we can see from the comments, generate new forms emotive experiences that generate new feelings of “desire”, new relationships with the people they kill. In this context, “desire” is contingent upon Deleuze’s conceptualisation of desire as a constellation of forces that generate a social field, subsequently shaping individual responses to specific possibilities.[91] The interconnection between humans and technical systems within a cognitive assemblage implies that the cognitive decisions made by each party influence the other, creating new forms of desire that are thus actualised and materialised onto reality. This interaction spans the entirety of human cognition, encompassing both conscious and unconscious processes, as well as the sensory and perceptual systems that relay signals to the central nervous system. The assemblage comprises of predispositions that govern our behaviours in both unconscious and nonconscious manners, facilitated by routine anticipations, habitual responses, pattern recognition, and other cognitive nonconscious activities. The drone engages with the user’s cognitive processes to guide movements, interpret sensory signals, and determine a course of action. This dynamic facilitates the flow of information, leading to transformations within the interpretive processes of pilots engaged within these flows. A cognitive assemblage functions across various levels and locations, undergoing transformation and mutation in response to changing conditions and contexts. Here we can see how the complex interplay of various forces, that emanate from the drone reshape the pilot’s subjectivity and hence his ethical reasoning, by reframing how the pilot perceives and experiences reality.

Conclusion

This paper has shown the drone's formative effects in reshaping our ethical reasoning. The "human" is not a separate entity but instead produced by the multiplicity of forces that act on it. The human is an aggregate and product of the assemblage it is enveloped within. Thus, new subjectivities and desires are formed relative to the specific spatial dynamics and forces in which the human is situated. The drone's intentionality has powerful formative effects on the pilot's cognition and the legal and moral frameworks in which the pilot is encased. Our ethical reasoning is based on such legal and moral frameworks that structure our decision-making while also being structured on our perception of reality and our cognitive faculties that make sense of reality. The drone radically reshapes both, hence changing our attitudes to killing. The drone provides its own interpretation of reality through its scopic regime. It structures reality via its algorithmic rationale, which informs the human who sees through it, fundamentally presenting a new expression of reality. This paper has reconceptualised the drone as an entity with "agency". One which is not characterised as inert and passive, subject to the agency of the rational autonomous being. I have shown the inadequacies of the debate by failing to understand the ontology of the drone and its agentic effects, which has severely limited its understanding of drone warfare. This paper has provided a detailed analytical framework showcasing the drones' effects in reshaping Just War principles and the pilots' cognitive faculties.

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