

PhD Dissertation

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From Biology to Normativity: Reconciling Evolutionary Ethics and Pragmatism
through Dewey
PhD Dissertation

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Declaration

I hereby declare that this dissertation is the result of my own original work, undertaken under the guidance of my supervisor. All sources of information have been duly acknowledged through citations and references. I further declare that this dissertation has not been submitted, in whole or in part, for the award of any other degree at this university or elsewhere.

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Supervisor's Declaration

I hereby certify that I have supervised the preparation of this dissertation in accordance with the regulations of the University of Szeged.

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List of Publications

Portions of the research presented in this dissertation have been published in peer-reviewed journals, and other related studies are currently under review. These works are listed below.

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Conference Presentations

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1. **“ The Origins of Ethics: Insights from Evolutionary Ethics and Pragmatism”.**
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Abstract

The genesis of morality has remained a subject of perennial debate, and philosophers have yielded variegated and irreconcilable accounts regarding its origins and application. The argument has been between rationalist-transcendental approaches (e.g., Plato, Kant) and naturalist-evolutionary accounts (e.g., Hume, Darwin). The former derive universal, objective and absolute moral principles from articulated rational theories, and de-emphasise the factors of empirical and biological conditions of human life upon ethical discourse. However, evolutionary ethics establishes a descriptive or biological account of our natural moral capacity, and never treats it as an external imposition or as pure rational discovery. Yet such a natural account of morality is challenged (as Hume, Moore and Street noticed) to corroborate how normative authority can be derived from biological and experiential origins. Unless this gap is resolved, we remain caught between the extremes of “ethical absolutism”, which maximises abstract normativity, and a “biological reductionism” that reduces complex moral reasoning to biochemical or genetic facts. Thus, I contend that the fact-value dichotomy, the biological reductionism and the moral absolutism or essentialism can be reconciled through the synthesis of evolutionary ethics and Deweyan pragmatism. Against the two extreme views, Dewey’s ethical inquiry (characterised by its experimental, practical, and context-sensitive nature) can provide normative justification for evolutionary ethics. Accepting the biological origins of morality and treating moral judgment as a problem-solving tool, Dewey proposes pragmatic alternatives that transform natural capacities into normative authority. Methodologically, I follow a critical-analytical approach and combine philosophical exegesis with conceptual reconstruction. Through engaging with key thinkers (Dewey, Darwin, Dawkins, De Waal, and Churchland), comparative analyses, and integrative argumentation, I construct a systematic account of moral origins and growth that is both empirically grounded and normatively strong.

Keywords: *Evolutionary Ethics, John Dewey, Pragmatism, Moral Naturalism, Normativity, Ethology, Veneer Theory, Social Instincts, Fact-Value Dichotomy*

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Chapter One

Introduction

1. Background of the Study

Following the “Socratic turn” (Strauss 1953, 120-122), philosophers began to study the phenomenology of morality, exploring it from metaphysical, epistemological, and anthropological perspectives. This shift marked a significant transition towards a systematic articulation of normative values and human nature. Despite its long history, moral philosophy remains a field in which ethicists, as in other social studies, have not reached consensus on an absolute theory regarding the nature and origins of morality. Classical ethical theories (deontology, teleology, and virtue) are committed to “moral essentialism”, i.e., moral truth or principles are objective and universal, and are corroborated rationally, regardless of context, condition, or culture. They identify a single element or factor (duty, utility, and character) for the appraisal of the moral status of an action or decision. Kant’s categorical imperative, as an instance of deontology, derives ethical principles from “reason” and commands moral agents not to follow utility or desire in their moral judgment. Kant rather wants an autonomous moral agent to act only according to a rule that he/she would be willing to see applied universally (1998, 25).

Against Kantian ethics, ethical naturalists proposed ethics based on human experience or sentiment. David Hume and Adam Smith rejected the mere rational justification or abstraction of moral sentiment. Hume argues that 'Morality is more properly felt than judged,' stressing that moral judgments arise from emotional sentiments rather than rational deduction (Hume, 2000, 415). Smith substantiates Hume’s sentimental ethics through his concept of the

“impartial spectator,” which shows how our experience (specifically, sympathy) enables us to engage in ethical reasoning.

Hume and Smith’s attempt to ground ethics in the emotional capacity (sensibility) of the moral agent became a philosophical point of departure for some biologists (Lamarck and Spencer, for instance) who categorise morality as a natural human behaviour. Lamarck proposed a theory of “acquired characteristics” that views moral quality as traits that can be cultivated through habit and passed on to future generations. Spencer, the main figure of social Darwinism, attributes a biological foundation to moral sentiment. His account of moral development connects the rise of moral sentiments to the evolutionary progress of humanity. “The ethical systems of advanced societies” are complex developments of the basic principles of conduct that existed in rudimentary form in our ancestors (1892, 234). He identifies our capacity for sympathy and our will for “self-preservation and cooperation” as the fundamental ethical principles necessary for the formation of society. Spencer insists that, through an evolutionary process, “instincts and feelings,” which were immediate and unreasoned reactions or behaviours aimed at maintaining the survival of the organism, give rise to moral values at more advanced levels. “Conduct is at once distinguished as moral in proportion as it is adapted to the more complex and involved social relations”(ibid., 212). He relates the development of moral sentiment directly to social evolution; that is, morality evolves as societies and their interactions become more complex.

What was started by early naturalists (Hume and Smith) and later associated with human evolution by pre-Darwinian thinkers was fully systematised by Darwin himself and post-Darwinian biologists. In *The Descent of Man* (1871), Darwin articulates evolutionary ethics and provides a biological foundation for morality based on empirical observations and the logic of natural selection. He contends that the "first foundation or origin of the moral sense lies in

the social instincts or sympathy” that evolved through natural selection (1871, 394). He posits that “social instincts” began within our ancestors and evolved over successive generations. This, in turn, leads individuals to strengthen their social bonds (*ibid.* 171). According to Darwin, the complex moral system exercised by modern society develops through four stages. It begins with (1) social instincts, is facilitated by (2) the capacities for memory and habit formation, is further refined and directed by (3) language and social evaluation, and culminates in (4) the emergence of conscience and moral ideals (Darwin 1871,71-86).

Nevertheless, some Darwinian thinkers discard the biological root of moral behaviour. Thomas Henry Huxley, for instance, put moral sentiment out of the domain of evolution. Though Huxley was a strong advocate of Darwinian evolution and acknowledged his explanation of living beings and their organs, he refused to reduce ethics to biological imperatives. He insists that ethics is not reducible to biology or the rule of evolution. He continues to state that biological instincts cannot influence moral reasoning, for the two have a contradictory mode of expression or operation. He realised that the driving force behind the emergence of moral traits and the force behind evolution are different and have incommensurable goals. While evolution operates on the principle of “survival of the fittest,” which aims at thriving at the expense of others, the goal of the ethical process is to show sympathy and compassion for the less fit. He contends that our sense of duty and perception of moral obligations did not arise through natural selection or the operation of biological laws. Instead, these qualities emerged through intellectual and social evolution. Thus, Huxley concludes that the power of human reasoning or the development of abstract thought enables human beings to act against their self-centred instincts or impulses (1893, 28).

However, Richard Dawkins, the contemporary evolutionary biologist, argues against the idea that evolution and ethics cannot be reconciled, or that the former cannot define the latter. He

would rather make a detailed illustration about the biological origins of morality. Dawkins admits that associating the basis of ethics with Darwinian evolutionary theory that works by "natural selection seems ill-suited to explain feelings of morality, decency, empathy and pity because natural selection consists of selfish and competitive urges that want to prevail at the expense of others (2006a, 215). Nevertheless, Dawkins spells out this common misunderstanding of natural selection to show that Darwinian evolutionary theory can accommodate moral sentiments. What is ignorant and indifferent to moral sentiment in the evolutionary process is the "selfish gene," not the individual organism or animal, because the latter "do not make exact copies of themselves, and do not compete in a pool of such self-replicating entities"(2006a, 216).

Modern moral psychology, particularly the work of Jonathan Haidt, provides empirical defence or scientific support to the Darwinian understanding of morality as socially adaptive traits rather than as a given imperative. Haidt make a balance between the natural(biological) and cultural (normative) factors in the formation of morality. He identifies morality as a set of "innate" predispositions (which he defines as being "organised before birth" yet flexible enough to be refined by culture) that evolved to help human ancestors solve the persistent problems of social life, such as cooperation, hierarchy, and group defence. Although Haidt frames his approach as "Social Intuitionism," his emphasis on the biological and emotional roots of judgment aligns strictly with a Darwinian perspective. He argues that "evolution shaped human brains to have structures that enable us to experience moral emotions, and these emotional reactions provide the basis for intuitions about right and wrong" (2008, 68).

Haidt traces the roots of morality to instinctive, intuitive, and automatic emotions rather than deliberate and rational thought processes. He firmly believes that our "moral judgments" occur as "aesthetic judgments"—through rapid and intuitive processes. In both cases, the appraisal

takes place spontaneously and intuitively, without conscious awareness of engaging in a deliberate process of searching, evaluating evidence, or drawing a conclusion. He highlights that moral theories (such as meta-ethics and deontology) articulate moral sentiments by drawing upon the emotive centres within “their hypothalamic-limbic systems” (Haidt 2008, 70). To put it differently, if an ideal or metaphysical approach to moral reasoning does not consider the emotional, biological, and cultural factors that shape individuals' actions and moral judgments, it will be incomprehensible or merely a theoretical conjecture.

Haidt suggests that moral theories do not serve as guidelines for labelling actions and traits as good/bad or right/wrong; rather, they function as post hoc (retrospective) justifications of moral sentiments. From Haidt's perspective, moral principles are less necessary for identifying or engaging with actions that we find "repulsive or attractive," for the brain (through the "ventromedial prefrontal cortex") has an instant management system (2008, 69). It is important to note that Haidt never asserts that the biological or emotional origins of moral sentiments are sufficient to analyse moral attributes. Instead, he underscores the importance of cultural and social guidance in binding these origins within advanced human communities.

Patricia S. Churchland goes further to defend evolutionary ethics, and she brings forth neuroscientific evidence. In her book, *Braintrust: What Neuroscience Reveals about Morality*, Churchland is convinced that the intricacies of moral and social skills can be better understood through the lens of advanced biology, psychology, neuroscience, and neurochemistry. This approach provides insights into the origins and complexities of human morality. She believes that the studies of brain science make the complexity of moral sentiment understandable and analyzable. This shift in understanding stems from the experimental findings and quantifiable data in the field of brain science. These insights have allowed a more detailed exploration of the chemical, genetic, and hormonal mechanisms underlying moral behaviours (2008, 4).

Churchland does not assert that experimental science has resolved many ethical dilemmas that continually arise in tandem with the ongoing social and biological evolution processes. Rather, a better understanding of what is behind human moral and social capabilities may enable us to systematise and tackle social problems. She breaks down human mental and physical functions, including motivation, reward processing, perception, memory, impulse regulation, and decision-making (necessary steps to develop moral sentiment), down to their underlying neural and hormonal components.

According to her, moral values (ought) are derived from specific neural, chemical, and hormonal (facts) interactions. While Churchland indeed examines moral decision-making, she clearly grounds moral values themselves in biological facts. As she states, “the values rooted in the circuitry for caring... shape social reasoning” and “neural circuitry grounds self-caring and well-being. These are values in the most elemental sense” (Churchland 2011, 9- 13). This implies that moral values themselves are biologically grounded, not merely the decisions that follow from them.

This conclusion puts her at odds with David Hume's firmly established arguments, which assert that a statement of fact (describing what is) cannot logically lead to a value judgment (describing what ought to be). Hume has a point of disagreement and agreement with contemporary neurobiological findings regarding the phenomenon of morality. He sides with the neuro moralist when he argues, "moral distinctions are not the offspring of reason" or unconditional principles (Hume 2006, 117). However, his ought-is dictum (value cannot be derived from facts) receives criticism from neuromoralists and moral evolutionists.

Churchland and Dawkins contend that Hume's *ought-is* dichotomy conflicts with the findings of neuromoralists, who maintain that social and moral values originate from distinct "neural circuits responsible for self-care and well-being"(Churchland 2008, 4), (Dawkins, 2006b). The

underlying question here is why humans and fellow animals exhibit care for others, and how this sense of care contributes to the emergence of value or judgment? Dawkins (2006) and Churchland (2008) propose that genes, present in both humans and animals, drive them toward self-preservation, which in turn motivates them to extend care to others, recognising that such behavior maximizes the fitness of the involved animals. This quality initially emerged among animals sharing similar genes. Spanning numerous evolutionary branches and influenced by cultural and institutional impositions, these genetically guided traits give rise to complex moral systems in human beings. Therefore, Churchland, in contrast to Hume, concludes that moral values (ought) are a result of neural and hormonal facts (is). Experimental studies examining the functioning of the nervous system concerning evaluation and problem-solving demonstrate that "mammalian brains" influence behaviour in specific ways (2008, 4).

The naturalist account of morality (as we have seen with Hume and Smith) and the evolutionary treatments of it encounter two powerful challenges from Moore and Sharon Street, respectively. Moore's critique targets the view that moral value, specifically, "good", cannot be defined in terms of natural properties. Therefore, any attempt to define "good" or reduce it to empirically testable features is to commit what he called the "naturalistic fallacy"; good is a simple, unanalysable (2000, 280). Recently, Street identified the incommensurability between evolution and moral realists' claims that there is a mind-independent, objective moral truth. She calls the tension between evolutionary ethics and moral realism the "Darwinian Dilemma".

She formulates the dilemma as follows: The moral realist must claim either that evolution leads us to objective moral truths or must deny that evolution has any connection to the formation of moral truth (Street 2006, 121). Accepting or denying these options gets us into dilemmas. In light of her appraisal, the claim that evolution gives rise to independent or objective moral truths is so implausible, for evolution blindly drives organisms to develop traits that promote

survival and reproduction, not traits that “track moral truth”(2006, 122). Disregarding the evolutionary influence on the formation of moral truth also leads to “distrust” that moral beliefs are true and real.

Hence, to reconcile the claims of natural ethics, specifically the evolutionary ethics, to the normativity or the non-biological factors, I turn to Dewey’s pragmatic ethics that accommodates both claims. His scientific or “experimental ethics” directs us to treat morality not as fixed or externally imposed, but as the product of both nature and human experience. By challenging the rigid dichotomy between facts and values, Dewey employed a scientific inquiry or experimental approach to ethics. He contends that the same process of inquiry, testing, and reflection that helps us understand physical facts should also help us clarify and assess our ethical principles and value judgments (Dewey 1989, 68).

Thus, I argue that Dewey’s pragmatic ethics, which is neither essentialism nor biological reductionism, can resolve the challenge of the naturalistic fallacy and the Darwinian Dilemma, both of which refuse to regard moral reasoning as a quality with a biological or natural origin. Dewey stands between the two extreme positions he opposes: transcendent moral realism and the reduction of moral qualities to mere biological factors. “Moral is the most humane of all subjects”. It is intimately connected to human nature and is fundamentally empirical—rooted in experience—rather than theological, metaphysical, or mathematical(Dewey 1922,296). This implies that evolution and the claims of ethical naturalism are not rejected but regarded as a foundation, not as a deterministic force.

Against moral absolutism and biological reductionism, Dewey treats morality as an evolving human natural trait shaped by biology, culture, sentiment, and social adaptation. Dewey and some Darwinians prioritise contingency over fixity, experience over ideal principles and adaptation over universality (Dewey 2016, 5; Darwin 1871/2006, 383; and Spencer 1892, 212).

Dewey views morality as a practical and social concern rooted in our close relationships with others. For them, morality is a relational reality shaped by biological factors. However, this does not imply that Dewey replaces ethical absolutism with “biological reductionism. He never argues that ethical judgments and moral behaviours are solely the results of our biological makeup and natural selection; instead, he insists that morality as a social phenomenon has biological preconditions. Dewey stresses that natural processes and instincts are not only the things that prompt moral behaviour but also form the substance of moral conduct. To completely weaken these natural processes and instincts can decrease the effectiveness of moral traits rather than simply redirecting them toward a particular goal (1898, 332).

Dewey and Rorty are clear against any form of reductionism that explains complex socio-biological realities in terms of simpler constituents, for it cannot accommodate evolving transformation, development, and changes, which are the centre of pragmatism. Rorty critiques reductionism for committing a fallacy called "the appeal to self-referential consistency. He identifies two forms of this fallacy that reductionists commit. The first occurs when reductionists infer from "X has the property Y" to "X is nothing but Y," or when they infer from the fact that "X is analogous to Y in respect to Z" that "X and Y are identical. The second fallacy occurs when reductionists take some feature of experience, reality, or language to be paradigmatic and then are unable to account for features that depart from this paradigm (Rorty 2014, 39). While the former assumes that if something has a certain property, then it must be entirely defined by that property, the latter commits the error of equating two things based on a similarity in one aspect, without considering their differences. The central critique of pragmatists against reductionism is that reductionism is basically contradictory because the "very process of reducing presupposes something that is not reduced"(ibid); it strives to arrive at elements or atomistic constituents that are irreducible further.

Any form of biological reductionism, whether it is neuroscience reducing the mind to the brain, neuro-linguistics reducing language to innate capacities, or neurobiology reducing social or normative values to certain neurobiological arrangements, is contrary to Dewey's pragmatic ethics.

Dewey considers morality within the context of complex, dynamic, and diverse associations involving both natural and societal influences and problems. Therefore, his pragmatic ethics can be seen as “stemming from a unique interpretation of Darwin's theory of evolution, diverging from teleological, reductionist, or conventional evolutionary frameworks” (Nungesser 2017, 327). The Deweyan adaptation of evolution emerges from his “cultural naturalism”, which gives biological justification for sociocultural changes and normative progress

Through culture, language, and experience, humans form a web of relationships with others in specific surroundings, enabling them to distinguish between harmful and non-harmful practices. Eventually, this experiential knowledge (which precedes the development of moral faculty) is used for self-awareness (Hauser 2006). Marc Hauser emphasises that self-awareness is the first step to being a moral agent. Developing a sense of self (Self-knowledge) concerning other fellow beings enables us to evaluate our actions and judgments. Self-knowledge concerning others motivates us to feel their pain and pleasure; it enables us to construct an “autobiographical narrative”, retaining and recalling memories to inform future behaviour (Hauser 2006, 183).

1.2. Theoretical Context

1.2.1. Cultural Mediation and Biological Foundations in the Development of Morality

While the trajectory of this study moves 'from biology to normativity,' it rejects a 'straight-line' derivation or a direct jump from biological imperatives to moral sentiments. Rather, I maintain that biological mechanisms or instincts turn into normative authorities through culture and rational reflection. Culture as a mediating force enables the moral agents to transcend mere biological mechanisms. However, some argue for “biological reductionism”, which attempts to reduce complex human social behaviour into biological instincts. Dawkins (2006), Rosenberg (2011), Harris (2010) and Wilson (1975) believe that normative values are simply "hard-wired" instincts or direct translations of genetic self-interest into social rules. Dawkins suggests that human beings are “robot vehicles blindly programmed by genes' (xxi). Rosenberg strengthens this view by saying that “our core morality is a biological adaptation, a set of modules in the brain that we couldn't change even if we wanted to... The biological facts are all the facts there are about us...the concept of objective normativity is an illusion”(2011: 113-115). These understandings not only deny moral agents freedom but follow a direct trajectory from “biology to normativity” that overlooks the mediating role of sociocultural realities. However, this study follows Deweyan explanation of pragmatic naturalism to see the real nature of moral value, i.e., while the biological mechanism “survival machine”(foundation), it is the cultural and social matrix that shapes our biological mechanisms into governing moral codes. Thus, to understand the move “from biology to normativity”, we need to first see the relationship between our evolutionary inheritance and moral capacity.

In this regard, Churchland (2011), Frans de Waal (2006), Philip Kitcher (2011) and Michael Tomasello (2016) show how normativity (to be specific, moral capacity) is related to biology. According to Churchland, morality can be understood from a neurobiological perspective, but

is not reducible to it. "Morality is a natural phenomenon—constrained by the forces of natural selection, rooted in neurobiology, shaped by the local ecology, and modified by cultural developments" (Churchland 2011, 1). She claims that neurobiology alone cannot give us a full account and acknowledges local ecology as a significant factor of moral development. Her metaphor of a physical structure further shows how normativity is not a mere biological truth. The neural architecture supporting sociality provides the platform for morality, but it is upon this foundation that cultural practices (such as rules, laws, stories, and protocols) are constructed, shaping the distinctive moral life of a community" (2011: 8–9). In line with this, Alexander Krémer contends, "Morals and morality are not identical with their biological basis, as the roof and the walls are not identical with the foundation of the house" (2018, 33). In short, the biological base does not determine the final shape of the moral edifice. This approach can be a ground to stand against "ethical essentialism" and "biological reductionism", for it allows to take biology as a "platform" and culture as the "practice," that is a perquisite to establish flexibilit moral principls: a core idea in Deweyan pragmatic naturalism.

Philip Kitcher relates biological traits and normativity by what he calls the "Ethical Project", that morality is not a biological discovery, but a "social technology" emerge to resolve the limitations of our "biological altruism". Against biological reductionism, Kitcher argues that normativity originated in our ancestors when social awareness and communication capacities expanded (2011, 221). For him, it is not our "biological altruism", but social awareness that gives rise to articulated norms and agreed-upon rules intended to guide conduct and reduce social tensions.

To conclude, this project intends to study the origin of moral reasoning from an evolutionary and pragmatic ethics perspective. By examining the arguments from pre-Darwinian naturalism and considering the scientific evidence from contemporary neuroscience and evolutionary biology, it justifies how moral sentiments or qualities are biologically grounded yet socially

and culturally evolved and shaped. Rather than categorising ethics out of evolution (denying its biological origin) or reducing complex moral character and judgment to genetic determinism or biological instincts, I maintain that moral development is the result combination of factors: instincts, emotional capacity, experience and reflection or evaluative ability. To this end, I employ Dewey's pragmatic ethics, which is neither moral essentialism nor biological reductionism, as a reconciling ethical framework that concedes the biological preconditions of morality while challenging any fixed or ideal moral truths. Dewey develops a scientific and experimental understanding of morality. Such an approach is not only corroborated scientifically, but it can also be an effective moral guiding tool in the ever-changing world and social settings.

1.3. Problems and Objectives of the Study

The origin of moral sentiment in human beings is still a contested issue among philosophers, psychologists and biologists. From classical to contemporary thinkers, it has been argued whether morality can be derived from a fixed rational principle, divine command, human experience, sentiment or, lately, from the evolutionary process. The debate can be categorised into two major or general approaches. Thinkers like Plato, Aristotle, Augustine, Aquinas, and Kant locate morality in reason, transcendence or external authorities. In contrast, Hume, Smith, Lamarck, Darwin, De Waal and Spencer associate it with human nature, experience, and biological evolution. While the former approach strives to establish moral principles that can be objective and universal by disregarding the manifold social settings and the ever-changing human reality, the latter evaluation downplays the normative dimension of morality with a tendency towards reductionism. To this end, I turn to evolutionary and pragmatic ethics to undertake a philosophical inquiry into the origin of moral sentiment. Doing so, I believe, enables us to reconcile our natural capacity for morality—its biological origins—with the

normative imperatives—societal, cultural, and rational—that shape the process of moral development.

The first challenge for rationalists and theologians is related to their inability to accommodate or explain the evolutionary and biological foundations of moral traits. Instead, they assume permanent or essential moral truth and put it beyond empirical life. Kant formulates an ethical imperative /command just based on rational justification or theoretical coherence that could be applied universally and entertained by autonomous moral agents. For his categorical imperative, context, end of the action/utility, the character of the agent, etc., for moral judgment are secondaries. He insists that “an action’s moral worth lies not in its goal or outcome, but in the principle of will guiding it, regardless of any 'desire' or purpose (1996,400). Though this formulation is normatively rigorous, it appears to be detached from the natural and social conditions under which it develops and to which it is supposed to work.

However, naturalists (sentimental) like Hume and Smith trace the origin of morality to our feelings and sociability. Hume argues that “morality is more properly felt than judged” (Hume 2000, 415) and that “sympathy is the basis of moral distinctions” (2000, 458). Smith, in his turn, strengthens our emotional capacity to be moral and develop the concepts of the “impartial spectator that is, the imagined inner self or mentally created version of oneself in the process of passing moral judgment (2010, 63). This inner insight (the imagined self), I think, replaces abstract reason or external authorities in our moral appraisal. As a Human self, the “impartial spectator” is emotionally capable and evaluative. Though the naturalist's account explains moral sentiments as part of human natural experience, it is criticised for lacking a convincing justification of how those sentiments develop into morality or normative authority. Even Hume himself noticed the impossibility of deriving moral values (ought) from facts or empirical lives (is). His fact-value dichotomy appears to be contradictory to his commitment to moral

naturalism. However, this apparent contradiction dissolves once we start to see the scope of Hume's claim. The dichotomy does not reject his naturalistic accounts of morality at the "ontological level"; rather, it challenges the rationalist assumption that moral obligations can be derived through purely deductive reasoning. As Rachel Cohon clarifies, Hume's argument is directed against the logical transition from descriptive statements to prescriptive conclusions without the mediation of human sentiment. Hume does not deny that moral "ought" arises from natural facts; instead, he maintains that they cannot be generated by reason alone. The transition from "is" to "ought" occurs through the operation of natural human sentiments, which are themselves part of our psychological constitution and therefore belong to the natural world (Cohon 2008, 94).

Evolutionary ethicists and biologists notice this gap. Pre-Darwinian thinkers like Lamarck and Spencer provide a biological basis for morality. They integrate sentimentalist evaluations with theories of adaptation and progress. Lamarck, through his theory of "acquired characteristics, treats morality as a quality that "can be cultivated through habit and passed on to future generations" (1809/1984, 113). He relates moral progress to environmental pressures and learned behaviour, i.e., moral character, like physiology, can be transformed to posterity. Spencer, in turn, identifies morality as the tool to maintain cooperation and survival. He believes that morality, as a form of cooperation, is one factor in evolution moving "from an indefinite, incoherent homogeneity, to a definite coherent heterogeneity" (Spencer 1874, 234) at the societal level.

Darwin provides a biological justification for what was started by Hume and substantiated by Lamarck and Spencer, and argues that "the first foundation or origin of the moral sense lies in the social instincts or sympathy" (Darwin 1871, 394). His four stages of moral development (social instincts, memory and habit, language and social evaluation, and the emergence of

conscience) demonstrate how morality could evolve from “social instincts” to complex normative systems and norms.

Nevertheless, the Darwinian account of morality encounters a critique for naturalising or biologising morality, or for conflating descriptive and normative guidance. Notably, Moore characterises this as a move that commits a “naturalistic fallacy”, which states that intrinsic moral value or the concept of good is indefinable, simple and intuitive (Moore 2000, 280). Street also charges evolutionary ethics with falling into a contradiction she calls the “Darwinian Dilemma”. The dilemma is whether evolution is concerned merely with survival or with forming moral truth (Street 2006, 122). Choosing one against the other, according to Street, casts doubt on the reliability of our evolved moral judgments. These critiques, in short, need to be addressed so that the claim of evolutionary ethics is taken seriously.

To this end, I contend that pragmatic ethics—specifically Deweyan pragmatic experimental ethics—reconcile facts (natural and evolutionary claims) with values (the normativity of ethics). Dewey claims that morality is not a set of fixed and ideal principles with a single origin, but a dynamic and experimental practice for human flourishing or betterment. He disregards both moral absolutism and biological reductionism, and states that “morals are as much a matter of growth as anything else” (Dewey 1922, 17). He develops a scientific or experimental approach to ethics, which is meant to be tested in the context of lived experience and practical problems. Such insights, I believe, can overcome the fact–value dualism. For Dewey, facts and values are not categorically separated; rather, they are interwoven. He argues that “experimental logic” (proven effective in science) can likewise be applied to ethical issues (Dewey 1989, 68). His pragmatic ethics can accommodate the claims of evolutionary ethics or the biological preconditions of morality, yet it rejects reductionism—whether to essence, idea, form, or mere biological facts.

Thus, as the first objective of the study, I intend to examine the historical and philosophical foundations of evolutionary ethics and assess both its justifications and the critiques proposed against its explanation of the origin of ethics. In doing so, I will analyse works from both pre- and post-Darwinian thinkers such as Lamarck, Spencer, Darwin, Huxley, Dawkins, de Waal, and Churchland. Then, as the second objective of the project, I will engage with pragmatist treatments of the nature of morality and identify their complementary points to naturalist approaches. Through Dewey and William James, I will show how pragmatists' determination on adaptability, experimentation, and meliorism can give normative justification for evolutionary ethics.

Both evolutionary ethics and pragmatism challenge fixed and impracticable “moral essence”, and they emphasise the role of context, experience and growth. Despite this similarity, they differ in emphasis: while evolutionary ethics traces back (biological facts) to assert the origin of moral sentiment, pragmatism prioritises forward-looking to guide moral growth for human betterment.

Thus, as the third objective of the study, I will integrate these different ways of reasoning into a unified account so that I can explore the issue at hand thoroughly. In other words, I aim to synthesise the empirical evidence provided by the evolutionary account of ethics with the adaptive, forward-looking principles of pragmatist ethics. By doing so, I believe we can answer the challenges posed by Moore and Street, showing how biological origins can inform—without determining—normative guidance. As Dewey (1922, 296) insists, “morals are the most humane of all subjects,” and it must take into account both the facts of our nature and the social setting. Making this synthesis (providing a scientific foundation for normative values) is not merely a philosophical concern; it is an urgent necessity in the digital age, where sophisticated technologies are rapidly reshaping our social realities. Thus, we need ethical guidance that is

both scientifically informed and normatively strong. To address all these, I employ conceptual and historical analysis as a method to examine the development of key ideas in evolutionary ethics and pragmatism by using primary texts and major secondary literature. Thinkers in both schools of thought, like Darwin, Spencer, Dewey, and James, De Waal and Dawkins, will be studied to explain the trajectory of pragmatic ethics and its relation with evolution. Besides this, I will use comparative synthesis as another method to compare the two accounts or traditions. This will involve analytical reasoning and constructive philosophical argumentation to produce a coherent and integrated ethical theory.

1.3.1. The Deweyan Framework for Evolutionary Ethics

The central inquiry of this dissertation (reconciling the chasm between the biological and the normative claims on human morality) finds its methodological and conceptual anchor in Dewey's naturalistic pragmatism. Though I save Dewey in chapter five for exegetical attention, his framework is not merely a concluding chapter; rather, the philosophical insights I employed to examine historical and evolutionary narratives in the preceding chapters. Ethical discourse is still struggling to resolve the polarisation between rationalist-transcendentalists (who maintain that morality requires an absolute, non-natural foundation) and biological reductionists (who reduce normative authorities to mere genetic impulses). For this end, I propose a reconstruction of evolutionary ethics through Dewey. His naturalistic pragmatist approach internalises the philosophical and methodological implications of Darwinism without accepting the claims of reductionism.

Thus, Dewey is the bridge, i.e., accepts findings of evolutionary biology that our moral behaviour has natural history and simultaneously upholds the view that morality is a distinct, evolving, and normative human enterprise. For Dewey, the Darwinian revolution was not just about biology; it was a shift in logic itself, moving away from fixed essences toward a logic of

genesis and growth (“experimental logic”. In *The Influence of Darwin on Philosophy*, he argues that Darwinian evolutionary theory has revolutionised how we think. “Doubtless the greatest dissolvent in contemporary thought of old questions”; it dismantled traditional old philosophical debates and replaced them with fresh perspectives and new questions (1910, 19). He continues to say that by prioritising "process" over fixed beginnings or ends, Darwin transformed our understanding of the world. He reframed intellectual, social, and moral life as dynamic and constantly evolving rather than static (ibid. 19). What, then, is the "Darwinian" element in Dewey’s ethics, or how is his naturalistic ethics related to evolutionary thinking?

It is the rejection of essentialism/absolutism, or “fixism,” which holds that moral values are eternal, static forms waiting to be discovered. Against this, Dewey uses the Darwinian insight of variation and adaptation to propose that moral principles are hypotheses—tools developed by human intelligence to resolve conflicts in social experience. For Dewey, moral principles are “methods of inquiry and forecast” which are tested or “verified” by real conditions (1922, 239). This way (as I discussed in chapter 5), Dewey appropriated the scientific method of inquiry in the domain of ethics. He views ethical principles as “hypotheses with which to experiment”, and certain moral situations are taken as problems that require judgment and choice. “The practical meaning of the situation is not self-evident” (ibid); rather, inquiry has to be done because there are “conflicting desires and alternative apparent goods” (ibid, 7). Dewey insists that ethical principles and morality are neither the suppression of our nature nor are detached from our experiences. Rather, it is “an attempt to find for the manifestation of impulse in special situations an office of refreshment and renewal... The problem of morality is the problem of life itself” (Dewey1922, 278). Here, Dewey is saying that when we handle our impulses correctly through thought and action, they shouldn't drain us or make us feel guilty. Instead, they should serve a "function" (office) that makes us feel revitalised and keeps our habits from becoming stale. This kind of appraisal is central to the structure of my argument.

When I examine the history of naturalistic ethics and the findings of modern evolutionary ethicists such as Frans de Waal and Patricia Churchland in the earlier chapters, I do so to establish the “biological facts” that John Dewey requires for “normative valuation.” For instance, when De Waal argues that “we are not born with a moral module... but with a learning agenda” (De Waal 2006, 166), he provides the empirical support for Dewey’s concept of “plasticity” in human habit. Similarly, when Patricia Churchland notes that “moral values (ought) are derived from specific neural, chemical, and hormonal (facts) interactions” (Churchland 2011, 3), she outlines the physiological mechanism. However, without Dewey, these findings remain descriptive. I contend that it is Dewey’s theory of inquiry that transforms or synthesises these biological predispositions into normative authority.

Therefore, the function of Dewey in this thesis is twofold. First, he provides the scientific backup for a non-transcendental ethics. He corroborates that human beings are “continuous” with the rest of nature—a premise clearly derived from Darwin’s observation that “any animal whatever, endowed with well-marked social instincts... would inevitably acquire a moral sense or conscience” (Darwin 1871, 71). Second, Dewey’s ethical inquiry provides the normative insight that evolutionary ethics lacks. He introduces the concept of “creative intelligence” as a force of evolution. He views a moral agent as an active participant who uses reason and experience to reshape his/her environment and character.

I will turn to John Dewey explicitly in Chapter 5. Yet his way of reasoning is central to the entire dissertation. By clarifying that Dewey’s ethics is thoroughly Charles Darwinian in method yet distinctively normative in application, I argue that we can reconcile the facts of our biology with the values of our lives. As he clearly states, the task of future philosophy is “to clarify our ideas as to the social and moral strifes of our own day” (1920, 26)—a task that requires the synthesis of evolutionary science and pragmatic inquiry proposed herein.

Thus, Dewey's appropriation of Darwinian thought (Darwinian elements in Dewey's pragmatic ethics) is best understood not as a strict biological application, but as a profound methodological and philosophical derivation. Dewey follows the Darwinian mode of thinking in his "logic of inquiry", i.e., shifting the general orientation of ethics from a quest for metaphysical certainty toward a naturalistic understanding of life as an evolving process. As Dewey (1910) argues, "Darwin's philosophical significance rests in his successful application of the principle of transition to the phenomena of life. Dewey acknowledges Darwin for displacing the traditional search for static and transcendental moral foundations and instead encourages an understanding of morality as an evolving and processual phenomenon.

1.4. Organisation of the Paper

I organise this dissertation into Six Chapters. In Chapter One, I outline the rationale and background of the inquiry, revisiting the long-standing debate between moral naturalism (specifically, sentimentalism) and transcendental ethics (classical ethical theories). Here, I contend that neither ethical absolutism nor any form of reductionism can provide real insight into the origin and development of morality. Rather, I defend the naturalist's account, which accommodates human biology, psychology, and cultural experience, and rational reflection.

In Chapter Two, I present the historical discourse through a study of pre-Darwinian naturalists, evolutionary biologists, and thinkers. Here, I examine the claims of early modern philosophers and naturalists (including David Hume, Adam Smith, and Herbert Spencer) for explaining moral sentiments and their progress in naturalistic terms. By revisiting their naturalistic arguments as intellectual bases, I moved to Darwin's evolutionary ethics.

Thus, in Chapter Three, I turn to Darwin himself, analysing his corroboration for arguing that morality originated from "social instincts". I outline Darwin's four stages of moral development: social instincts, memory and habit, language and social evaluation, and the

emergence of conscience and ethical ideals. These stages show how moral sentiment arises from social instincts but acquires complexity through human self-consciousness, cultural evolution, and reflection. I also evaluated T.H. Huxley's critiques of evolutionary ethics, claiming that "ethical process" stands against the "cosmic process" that favours selfish traits to maintain survival. Such a critique is addressed by contemporary biologists (such as Dawkins, Churchland, and De Waal). In the last part of this chapter, I draw insights from "evolutionary compatibilists" (e.g., Daniel Dennett) to address the tension between biological determinism and the freedom of rational moral agents. I conclude that although Darwin's evolutionary account gives a biological origin for morality, it requires philosophical or normative support to avoid reductionism. This normative gap, I think, can be filled by pragmatic ethics, particularly by Dewey's scientific ethical inquiry.

In Chapter Four, I examined Dewey's pragmatic and evolutionary ethics. By analysing his response to the philosophical challenges posed by Hume and Moore, I argue that Dewey's experimental approach to ethics provides a flexible and context-sensitive framework for addressing modern moral challenges. His Darwinian interpretation resolves the normativity gaps in evolutionary ethics.

In Chapter Five, I further corroborate the evolutionary account of ethics by analysing ethological research findings that demonstrate the continuity between human morality and social propensity in primates. Against the "Veneer Theory," which views morality as a cultural innovation intended to "mask" inherent selfish human nature, ethology provides compelling evidence that pro-social dispositions (empathy, reciprocity, fairness, and consolation) are rooted in biology. Thus, in light of scientific studies by primatologists (e.g., De Waal), moral qualities emerge not as a cultural invention but as a gradual, biologically grounded

development that justifies evolutionary ethics. Finally, Chapter Six summarises the dissertation's arguments, recapitulates the findings, and discusses the main arguments.

CHAPTER TWO

Pre-Darwinian Naturalism and Moral Thought

2.1. Introduction

In this chapter, I examine the pre-Darwinian philosophical, theological, and biological accounts of the origin and nature of morality. I analyse the historical and conceptual shifts from rationalist and theological treatises of morality to naturalistic and evolutionary justifications of moral sentiments. Following a Socratic turn, philosophers and theologians such as Plato, Aristotle, Augustine, Aquinas, Moore, and Kant describe morality as grounded in rational order, divine will, and reason. These thinkers develop explanations for the universal, ideal, and authoritative character of morality. All agree that a true moral principle cannot be derived from human biology, sentiment, or lived experience. Instead, they emphasise the objectivity and unchanging nature of moral law and place ethical authority beyond the empirical world.

However, naturalist thinkers like Hume and Smith suggest that morality is rooted in human sentiment, social interaction, and lived experience. They downplay the importance of reason and abstract reasoning in moral judgment, emphasising natural sentiments like sympathy and “fellow feeling” as central to ethical behaviour. Yet, this naturalistic approach to ethics gets a challenge from non-naturalists, particularly from Moore, who argues that moral values, specifically the concept of “good,” are “indefinable” and “irreducible” to natural or empirical properties. For him, defining “good” in terms of natural things, or equating “good” with empirical properties of things, is committing the “naturalistic fallacy”. Against Moore's analysis of moral values, R. S. Hartman develops a formal axiology that reconciles the value of things with their conceptual or intension/ character attributed to the things; i.e. goodness can be understood through the fulfilment of conceptual characters.

The philosophical attempt to naturalise ethics by sentimentalists gets biological support from pre-Darwinian thinkers such as Lamarck and Spencer. Lamarck's theory of "acquired characteristics" treats morality as a physiological and behavioural adaptation, i.e., repeated actions and environmental conditions shape not only the organs of the animal but also its habits and character. It implies that our ethical dispositions could be inherited and cultivated/shaped, and become more complex over time. Spencer, in his turn, biologized ethics by linking it to the 'law of life' on which the structured function of life rests. He gives evolutionary function to our moral traits that maintain survival, social cooperation, and the common good.

After a close examination (through a comparative and historical analysis) of the arguments of the aforementioned thinkers on the origin and nature of morality, I contend that pre-Darwinian naturalistic ethics (rooted in sentiment, experience, and early evolutionary thought) enable us to understand morality as a product of human nature, social context, and biological development.

2.2. The Non-Natural Origins of Morality: From Rationalism to Theology

The dominant philosophical accounts of the origin of morality transcend empirical natures, regarding it as an absolute and universal discovery of human reason. Philosophers from Plato to Kant classify morality as rational abilities inherent in reason and will, which seem disconnected from humans' biological nature and experiences. Plato, in particular, derives "moral truth" from the realm of Forms, which is objective and eternal. As we learn from his theory of knowledge, true "knowledge is what exists and does not change; the object of opinion is what exists and changes" (Plato 1991, V, 479e). This view encompasses our moral knowledge, comprising unchanging, eternal truths that are accessible only through reason. For Plato, moral decision or evaluation results from the internal harmony of the soul guided by reason. Our moral sentiment is not rooted in instinct or social conditioning, nor is it tied to

biological survival, but to a rational structure of the soul. “We say that a man is just not because he does something with his hands or takes some action, but because he puts his soul in order, rules himself, and harmonises the three parts [reason, spirit, appetite]” (Plato 1991, 117).

Aristotle also emphasises the role of reason in his moral philosophy, though he adopts a more naturalistic and empirical approach than Plato. According to Aristotle, reason (the mark of human differences) governs both intellectual and moral virtues. Human excellence or virtue involves making balanced judgments in actions and maintaining a balanced stance in feelings. This “mean” is determined by reason, which the person of practical wisdom possesses (Aristotle 2009, 35). Aristotle explicitly states that virtue is not instinctual or biological but results from living according to reason. Nevertheless, it is important to note that Aristotle teaches moral virtue, although strongly linked to reason, can be developed through training and experience.

Following Plato’s and Aristotle’s line of reasoning, Christian theologians such as Augustine and Thomas Aquinas (applying Platonic and Aristotelian secular metaphysical and epistemological arguments to their theological teachings) believe that moral law is a reflection of God’s will. Aquinas, in his attempt to reconcile reason and faith, argues, “Reason in man is like God’s own likeness... for it is through reason that man is made in the image of God” (1947, 461). What is explicit here is that moral reasoning is a God-given aspect of human nature to understand natural law, with the help of faith (God’s grace). Thus, he concludes that exercising rationality and seeking divine light through faith enables us to attain true moral knowledge: “The light of faith, which is infused in us by grace, does not abolish the natural light of reason but brings it to perfection” (Summa Theologiae 1947, 7).

The rationalist account of ethics gets secular support and rigorous systematisation from Kantian moral philosophy. His famous formulation of the categorical imperative rests on pure reason

that is binding not because it brings happiness or fulfils ultimate desire, nor does it pass the test of human experiences, but because it is rationally necessary. What matters the most in Kantian ethics is not the consequence of the action or experience but rational commitment to the duty (1998, 25). He has an explicit opposition against empirically derived moral principles, for they cannot be the basis for moral law. Deriving moral law, according to Kant, from human experience or “specific conditions” is a clear violation of the “universality” of moral principles (ibid. 37). His duty-based ethics discard any moral principles derived from human nature, biology, societal norms, and values, as these are bound to vary among individuals, circumstances, ways of living, and personal desires and preferences. Thus, he insists that ethical principles should be universal and objective, valid for all rational beings regardless of circumstances and experiences.

2.3. The Naturalist Turn: Sentiment, Experience, and the Roots of Morality

Envisaging moral capacity as a quality derived from pure reason or divine will starts to face a challenge from naturalists. Hume and Smith, key figures in naturalistic ethics (ethical naturalism), present a counterargument that traces the origin of moral knowledge to human experiences, sentiments, and social contexts. Hume famously argues that “Morality is more properly felt than judged,” and “reason is, and ought only to be, the slave of the passions” (2000, 415). The central claim here is that moral feelings or sentiments precede rational moral judgments; it is not from reason that our evaluation stems, but from our emotions. Unlike the moral absolutists, Hume downplays the role of reason in guiding and motivating action, for the “impulse arises not from reason, but from some internal sentiment or feeling” (2000, 415). Therefore, what we praise as virtue, good or right, and what we condemn as vice or evil, is simply a matter of our feelings (“disapprobation” and “approbation”) towards that action or behaviour. According to his view, this specific feeling or sentiment is experiential (derived

from experience) rather than from reason, and, as an experience, it cannot be objective or universal, with a distinct existence (2000, 468).

However, his denial of the objective existence of moral character or value should not be confused with his overall naturalistic ethics. When he argues that “ought” cannot be derived from “is, he does not mean that moral values are non-natural; rather, he implies that moral values do not exist in the external world empirically detached from human nature. Nor does his anti-objectivist claim mean that Hume advocates moral relativism or arbitrary ethics. Instead, he articulates a naturalistic ethical theory that traces the origin of morality from our emotional capacity, like sympathy, sociability and compassion. Through these natural dispositions, he believes, we can make moral evaluations. “Sympathy is the chief source of moral distinctions” (2000, 458). Passing moral judgments or taking action based on our feelings is not necessarily contrary to reason.

Thus, it is not from any binding principle or authority that we get moral guidance, but from our innate sociability or sensitivity to the emotional states of fellow beings. His sentimental ethics is connected to reason or rational articulation through *sympathy*; i.e., reason helps us to comprehend the facts and the nature of things, and informs us on how to deal with the issue at hand. Yet the determination or commitment for or against something arises from our sympathy and emotional state. Our “immediate impression we feel for something comes from sentiments, not from logical articulation (1998, 19). Rational justification or analysis, he maintains, becomes useful only when it causes “the sentiment of approbation” (ibid, 78).

The naturalist evaluation of moral sentiment becomes a central point in Adam Smith’s moral thinking. In *The Theory of Moral Sentiments* (1759), Smith explains how moral reasoning is connected and determined by moral sentiments like sympathy, compassion or “fellow feeling”. He puts sentiment as the principle of morality, for he believes that nature made human beings

sentient to the emotional state of others; we are emotionally interconnected. He has a positive evaluation of human beings and argues that “How selfish soever man may be supposed, there are some principles in his nature, which interest him in the fortune of others ”(Smith 2010,1). Our emotional connection among ourselves, as Smith depicted, is inherent or natural, not a result of logical abstraction or the dictates of external authority.

But how does sentiment or the capacity to sympathise help us to pass moral judgments in the absence of a guiding rational principle? Smith formulates a feeling-based moral compass called the “Impartial Spectator,” which serves as a naturalistic substitute for abstract reason or external authority, to justify the validity and workability of the sentimental moral judgments. The impartial spectator is the imagined inner self or mentally created version of oneself in the process of passing moral judgment.

In this scenario, Smith imagines two moral agents: (1) the “examiner” or “spectator” self, and (2) the defendant self, whose moral status, actions, or behaviour are being judged. In other words, the first is the agent who evaluates, while the second is the acting self who is evaluated. The spectator then steps outside of herself and places himself in the position of the second self to evaluate “how it would appear to him or her when seen from that particular point of view” (2010, 63, emphasis added). In doing so, the spectator distances himself or maintains an impartial stance to feel and perceive how another rational moral agent would view her actions and conduct(*ibid*).

It seems paradoxical to assume an impartial spectator who “distances” himself or herself and expects a similar feeling or emotional connection from them. The question is how the impartial spectator can both detach and sympathise at the same time. Smith appears to be aware of this problem, though he does not explicitly state it. We can learn from Smith that the spectator’s detached position or impartial stance does not imply emotional insensitivity or detachment

from the imagined or real self. It means that when the impartial spectator maintains distance, he or she does not ignore the emotion of the other self nor lose emotional capacity; instead, the distance allows him or her to regulate emotion. Smith's logic is that when the impartial spectator observes from a fair distance the suffering of others, "the thought of his/her safety continually pushes into his/her mind (2010, 10) that he/she is not the one experiencing pain or danger; he/she is safe.

Though the spectator is not suffering himself or herself, he or she can still perceive the emotional state of the sufferer. Therefore, the distance does not prevent the spectator from experiencing a "passion somewhat analogous to what the sufferer feels" (ibid.). This analogous emotional state, according to Smith, enables us to make suitable moral judgments. It is clear that "compassion" cannot be identical by its very nature, or "can never be the same as the original" in intensity. Nonetheless, he argues that our sentiments towards each other "correspond well enough for the harmony of society" (2010, 11). By impartial spectator, Smith does not mean exact emotional matching; rather, he seeks "emotional concord," where the spectator, at a fair distance, can respond to the sufferer in a way that fosters social harmony and fairness.

Both Hume and Smith propose an ethical system based on the innate human tendency to be moral. They agree that moral sentiment is an evolved human faculty, a gift of nature that enables us to live in society. Humans possess "an innate desire to please, and an inherent aversion to offend their brethren" (Smith 2010, 65). Smith believes that nature guides us to find pleasure in others' approval and distress in their disapproval. So, the justification for our moral judgment, for Hume and Smith, is not reason or external authority, but the emotion or experience we share about one state of beings. They are in clear contradiction to Kantian categorical imperatives or duty-based ethics. They replace Kantian *goodwill* and the autonomy

of rational justification by “immediate sense and feeling”. Smith concludes, Hume would agree, that nothing is pleasing or displeasing in itself unless it is made so by a direct sense or feeling. Thus, if virtue always pleases us for its own sake, and vice naturally displeases us, then it is not reason that draws us to virtue or repels us from vice—it must be an immediate emotional response or sentiment(2010,167).

Their philosophical attempt to derive the origin of ethics from human psychology and emotional experience later gets a biological or scientific justification from evolutionary ethics, notably from Darwin. Before examining the Darwinian account of ethics as the biological extension of naturalist ethics, let me present the counterarguments from the ethics of non-naturalists, primarily from Moore.

2.4. The Nature of Moral Values, Moore’s Rebuttal to Ethical Sentimentalism: Why

‘Good’ Cannot Be Defined

In what follows, I present the major debate among philosophers on the nature of value and its relation to facts. This, I believe, will shed light on the forthcoming discussion of whether 'good' or intrinsic moral value can make factual claims, as initiated by Moore. Value refers to the worth or quality attributed to or confirmed for something. The evaluation of something or an event based on its utility to the evaluator (extrinsic value) or on its inherent worth in and of itself (intrinsic value) determines how that thing is classified and treated. As Abraham Edel contends, value is a single characteristic, occurrence, sensation, or action that identifies, captures, links, and explains the phenomenon. Understanding the settings and contexts in which values emerge is vital for control, scientific investigations, and value comprehension. Human beings' value experiences cannot be isolated from their overall life experiences and reduced to a single moment disconnected from physiological, psychological, cultural, and historical factors (Edel 1953, 27).

Value lies at the core of the philosophical debate involving ethics, aesthetics, and metaphysics. Unlike other philosophical topics, axiology continues to garner attention. The subject matter of philosophy is becoming neglected, as it cannot keep pace with the rapid progress in science and technology. However, this neglect is not entirely complete when it comes to the question of value. Arnold Berlean observes this and argues that value theory can extend beyond academic circles, unlike other areas of philosophy that are more detached from issues of human choice and action. Instead, it must be relevant to real-life societal situations and be present in public forums and spaces (Berlean 2015).

Discussions on value often begin by questioning whether the concept of value can be clearly and distinctly defined. Putnam argues that the relationship between value and fact poses a significant challenge for many reflective intellectuals across various fields of knowledge. He suggests that any reflective individual seeks to understand the nature of value and facts, and their complex relationships (1981, 127). Putnam's primary concern is that people tend to maintain a rigid separation between fact and value, despite philosophers like Dewey attempting to justify the falsity of this dichotomy. This tendency persists because people have an immediate and passive response that fact or truth precedes any form of value judgment. However, Putnam questions the basis of the fact-value dualism, contending that 'truth' is not a simple notion or a passive copy of what is 'really' 'there'; and the distinction between them is 'hopelessly fuzzy,' as factual statements (which are considered to be the exclusive focus of scientific inquiry) presuppose value judgments (ibid, 128).

However, G. E. Moore, a prominent figure in articulating the indefinability of the concept of 'good' (often associated with value), argues that it cannot be defined. He treats it as adjectival rather than substantive, as a modifier rather than the essence or an essential part of the things in question (2000,280). He famously defended the idea that intrinsic value or good is

indefinable and cannot be equated with natural or empirical qualities. Therefore, any attempt to define “good” or reduce it to empirically testable features is to commit what he called the "naturalistic fallacy"; good is a simple, unanalysable property that cannot be broken down into more basic natural elements. In other words, the term 'good,' when used to describe the quality attributed to something, is "incapable of any definition" in the most crucial sense of the term. The proper meaning of 'definition' involves specifying the constituent elements that make up a particular whole. In this regard, 'good' "has no definition because it is simple and has no parts (Principia Ethica, Chapter 1, Section 8).

His comparison of 'good,' using the examples of the concepts of "yellow" as a simple quality, and "horse" as a complex quality, illustrates his argument about the impossibility of defining the term "good" through a naturalistic analysis of terms. The analogy goes like this. "Yellow" is simple and cannot be defined, or there is no way to "explain it to anyone who does not already know it. On the contrary, the concept of "horse" is complex, composed of certain parts that enable us to comprehend it. We could achieve clarity and accuracy in understanding a horse by considering its parts and arrangement rather than focusing solely on the whole. However, there is no part in the case of "good" or "yellow" that enables us to form a whole and to understand it (Principia Ethica, Chap. 1, sec. 7). Thus, he insists that ‘good’, or intrinsic value, has no empirical properties; attempting to define it in terms of natural qualities is a mistake.

Hume approaches this problem from a different perspective. Although Hume maintains that moral value cannot be directly derived from facts, he does not deny the naturalness of values. Hume highlights the distinction between descriptive statements about the world (“is”) and prescriptive moral judgments (“value”). He bases any ethical appraisal or evaluation of our likes or dislikes on our emotional preferences and aversions. According to him, when we equate something or a state of affairs with goodness, badness, wrongness, or righteousness, we are not

referring to a fact that is inherently good, right, bad, or wrong. Similarly, such facts are unattainable. Anything we value involves certain feelings, impulses, volitions, and thoughts. "There are no additional facts in the case. Value is not a matter of facts; it is a matter of emotion, not logic. It is within ourselves, not in the objects" (Hume 2009, 245). Hume classifies value alongside secondary qualities of objects, such as taste, voice, colour, and similar attributes.

Hume's fact-value dualism and Moore's indefinability of good deny that moral properties have empirical or physical existence. However, their agreement on the non-factual character of moral value does not mean that Moore and Hume share the same understanding of the ontological status of moral values. While the former advocates a realist ethics, the latter promotes emotivism. Hume, as an emotivist, believes that "Morality is more properly felt than judged of" (2000, 302). In contrast, Moore says that "Good", as the highest moral value, "is a simple notion... we know it, when we see it" (1903/1993, 41). For Moore, attempting to equate "good" to any natural properties like pleasure and desire is committing a complex question fallacy, i.e., if we claim that "Good means pleasurable," this provokes us to raise a logical question that is "but is the pleasurable good?"

2.5. Hartman's Axiological Response to Moore: Defining 'Good' through Concept

Fulfilment

R.S. Hartman stands in sharp opposition to G.E. Moore's intuitionist claim that 'good is good, and that is the end of the matter.' Hartman begins his theory of axiology by analysing how we understand 'fact,' and then applies a similar logical structure to the inquiry of 'value,' because he believes that examining facts is much easier than examining value. Thus, I prefer his line of reasoning to construct an argument against the indefinability of the 'good'.

He identifies three levels of fact: the "generic" or "conceptual fact", the "particular" fact, and the "singular" fact. These levels of fact are arranged on a scale that reflects their richness in

terms of the kinds of facts they offer. The singular fact is the richest in qualities among the three, followed by the particular fact and then the generic fact (Hartman 2011/1967, 96). The generic fact is conceptual, which refers to the existence or being of things. For example, the statement “this is the table” expresses general facts. A generic fact is a logical classification of a thing; it is used to see if it is up to the definition of the concept, i.e., it answers the question, does the object fit the conceptual definition of the object? “The generic fact defines formal concepts. The thing corresponding to it is the construction of the human mind...” (2011/1967). It does not refer to any particular quality of the entities or objects. It rather encompasses the concept of facts in its totality; it lacks any distinct characteristics except those that arise when defining the idea of a fact.

A concrete fact, which is richer in properties than a generic fact, refers to a specific class of entities characterised by a “denumerable” (countable) set of shared attributes. Hartman explains, “Concrete facts, as distinguished from formal systems, consist of a denumerable infinity of properties. This is the realm of extrinsic value” (2011, 114). As real, physical, or observable objects like tables, trees, cars, etc., concrete facts are “countably infinite.” The question here is how the countable character of concrete facts is infinite. Or, is it logical to say something is countable and infinite at the same time? By “denumerable infinity,” Hartman means that for a concrete being/fact (a table, for example), we can list some of its properties, though we cannot finish listing them all, i.e., even though the list might be infinitely long. Thus, by doing so (by distinguishing its unique qualities), a concrete (extrinsic) fact is a quantitative and comparative measure of facts like, does the chair have four legs? Is it stable? Is it made of wood or iron... etc.?

The last level of fact is a singular fact that is irreducible; it is “a real thing here and now”, or it has ontological status in space and time (2011, 115). A singular fact is not just an abstract idea

or concept, but a specific individual being that exists empirically. Hartman distinguishes the singular fact from the concrete fact by its “non-denumerable infinity of properties. It is that object as it is, beyond all classifications. This is the realm of intrinsic value”(ibid.). While the concrete fact expresses the extrinsic value, the singular fact refers to intrinsic value. The former can be described by a denumerable set of properties (colour, size, use, etc.), the latter transcends all these countable characters and includes a non-denumerable infinity of properties. For Hartman, the combination of a denumerable set of infinite properties and the non-denumerable infinity of properties reflects the uniqueness and irreducibility of individual existence.

Hartman establishes logical and ontological relations among the three classes of facts. While the concrete fact represents anything that *is*, its general properties stand for the "is-ness or being." Particular facts belong to a class of entities that possess both general characteristics shared by all entities within the class and unique attributes specific to the particular fact. Classifying a fact into a specific entity class is determined by "material determinations abstracted from a specific field of phenomena"(1967, 96). In other words, the classification of facts is based on specific characteristics or attributes that are observed within a particular context or domain. Hartman admits the intelligibility of generic fact, i.e., the impossibility of establishing an exhaustive definition of fact. He continues to argue that if we had a comprehensive definition of "fact" that was detailed enough, it would encompass all existing facts and be capable of being developed into a system that would be equivalent to the entirety of the realm of facts. Such a system would be” isomorphic—that is, it would exhibit a one-to-one correspondence between a conceptual definition and the entire realm of facts, which Hartman argues is logically impossible due to the inexhaustibility of reality” (2011, 97)

Before I move to Hartman’s examination of value, let me summarise the difference among the three levels of facts by using the example of a horse. The generic fact of the horse, “This is a

horse,” refers to the logical or conceptual category. It implies that the animal fits the definition of a horse: mammal, herbivorous, pack animal, etc. At this level, the statement is definitional and does not reference the specific properties of any individual horse; instead, it encompasses all horses that fit the definition. The concrete fact refers to this horse in particular, properties like colour, age, size, behaviour, etc. These properties of the horse are “countably infinite (Hartman 2011, 14). Here, we have a particular physical horse in time and space. The singular fact in this example refers to a concrete horse with both countable and uncountable traits. Thus, the singular fact is the unique horse in its full context, i.e., including cultural, historical, relational, and other aspects of the horse, such as “This is the horse my grandfather raised from birth, rode every morning, named Shanko, and considered part of the family.” At this level, this horse is irreplaceable and incomparable to any other horse.

Hartman applies his reasoning, classification, and attribution of fact to value, then builds the argument against Moore’s claim of the indefinability of good and Hume’s fact-value dualism. Similar to facts, he identifies “three levels of value”: generic value, concrete value, and singular value. Each corresponds to a different level of abstraction and richness in concept fulfilment. Generic/systemic value refers to the “values of something as the members of a class; it is the good of an object in terms of its general concept”(2011,40). For instance, according to Hartman’s axiology, a hammer is generally considered good if it aligns with the general concept of what a hammer should be—that is, if it possesses the distinctive qualities expected of one. In short, a generic value addresses the question: Is this thing what it claims to be? Concrete value is determined by how well a thing embodies or fulfils the features specified by its concept. “A more concretely good object fulfils more of the predicates in its conceptual definition” (ibid. 41). Here, we can compare concrete things, like this apple being better than another, based on how richly it fulfils the concept. The singular value, which Hartman calls the intrinsic value, is “unique, often in moral and personal terms”. It is “irreducible” and consists

of “infinite properties”. For instance, the concept of a human being has infinite qualities; it is “rich and can never be fully realised in any individual self (ibid.).

We follow Hartman’s argument that a generic value, a particular value, and a specific value are distinguished based on their attributes. However, how can we distinguish the attributes of value? To understand and analyse the properties of value, Hartman attempts to set an axiom. He believes that axiologists before him, including Moore, have failed to establish a clear and undisputable definition of value, because they could not set an axiom. Then, what is the axiom of value established by Hartman? "An axiom is a formula that generates a system equivalent to a field of phenomena. The only way to systematically organise this system is through logic.

Therefore, an axiom must always establish a connection between a field of phenomena and a logical structure (2011, 98). The axiom relates concepts of things to the thing itself. According to Hartman, the knowledge of facts is called "factual knowledge," while the knowledge involving evaluation or judgments is known as "valuational knowledge".

Let us examine Hartman's example to understand the difference between these two knowledge modes. It is evident, he argues, that if I ask someone to wait for me outside where my car is parked, and they inquire about which one is mine, and I respond by saying, "It is a good car," they will not be able to locate it as I have not provided any descriptive or specific details such as the color, model, number of doors, etc. However, despite the lack of such information, the person does have some knowledge about my car. They know it has a motor, doors, tyres, an accelerator, and brakes that function correctly, so I refer to it as a "good car." The point in this example is that "the good car" is valual knowledge that does not explain the specific /physical car; it only points to the conceptual (concept of the car). The "good" is the property of the car, not the car itself. When one describes things with a predicate *good*, she has to logically connect the natural and valual knowledge, connecting the concept of the thing

and the thing itself. This connection is the axiom. "A thing is good if it fulfils the intention of its concept. This is the Axiom, or fundamental principle, of formal axiology"(Hartman 2011, 103).

Thus, the goodness of something can be assessed by checking whether it fulfils its intended purpose. For example, a car is regarded as good if it can move quickly and efficiently. If a car is well-designed and functions properly, it is considered a good car. However, if it is poorly designed and does not work as intended, it is not a good car. Hartman emphasises that this principle of formal axiology is vital because it allows for an objective evaluation of the goodness of things based on their intended purpose. Unlike Moore, Hartman believes in the possibility of defining good axiomatically, but not categorically.

2.6. Lamarck's Theory of Acquired Characteristics and Moral Development

After Hume and Smith turned to nature and experience to develop a naturalistic account of morality, Jean-Baptiste Lamarck began to provide evolutionary justifications for human behaviour and moral development, i.e., he introduced a biological dimension to moral capacity and traits. He proposes a theory of "acquired characteristics" that views habits and experiences as inherited dispositions (1809/1984,113). Though his evolutionary thinking does not separately articulate morality independently from his biology, his treatment of ethics as an extension of evolution becomes a significant instance of how evolution can explain ethics or moral traits before Darwin. Lamarck figured out two evolutionary laws that have implications for naturalist ethics. The first one stated that the reaction of organisms to environmental influence leads to a certain change in their organs, i.e., a body part used frequently becomes stronger; on the contrary, the unused organ becomes weaker or disappears over time (ibid, 235). The second evolutionary law, which is interconnected with the first one, is all about "acquired characteristics" that the physiological change occurs because of the "predominant use or

permanent disuse of any organ”, is “conserved through generation in the new individuals”(235, *ibid.*).

The preserved change is not limited only to anatomical or physiological; rather, to behavioural and character formation. In *Philosophie Zoologique*, he states that new needs in animals...lead to new activities, which in turn alter the structure of their bodies"(Lamarck 1914, 113). These two evolutionary laws, according to Lamarck, can be applied to view that moral traits can be cultivated, modified, and inherited. He contends that “Everything that nature has caused individuals to acquire or lose by the influence of the environment... is preserved by reproduction to the new individuals that arise”(1809/1984,113). He treats morality physiologically or biologically, which is a subject for change through habit (use/disuse) and is inherited or transmitted to the offspring. He insisted that physiological and moral patterns are “undoubtedly the same thing; and this can be justified by examining the “organisation” of various known animal species (*ibid.*, 66). His attempt to biologize morality, I think, can be a form of biological determinism, as he reduces complex moral sentiments and intellectual faculties to the physical structure or organisation of the body. Yet he is distinguished from a radical/ deterministic reductionist by incorporating environmental interaction in the equation; he accepts the influence of habit and environment on the development of social and intellectual skills. Habitual use or exercise of any character, like the use/disuse of a certain organ, is the most important factor in his evolutionary ethics.

Thus, in light of Lamarckian ethics, moral reasoning evolves because of intellectual exertion and environmental challenge (Packard 1900, 31). For Lamarck, some unethical behaviours like “prejudice”, even “ ignorance”, are symptoms of moral and intellectual stagnation. He exemplifies this by arguing that “the mass of brutish, ignorant men approach the animal, becoming a prey to the most absurd prejudices” (*ibid.*, 32). In contrast, those who live under

“favourable though special circumstances” can cultivate reason and justice (ibid. 33). This evolutionary view of morality emphasises that external factors (education, social class, physical needs, etc.) stimulate inner growth and facilitate the creation of some characters. Even among animals, he sees intelligence, bound by “the nature of their needs” and “the power of habit” (ibid. 33–34), yet humans evolve morally through complex habits, imitation, and invention.

He imagines progressive or evolving morality and argues that any complex human organisation, including moral systems, has been gradually built “with the aid of circumstances which have proved favourable” (ibid. 35). For instance, he invites us to think about how advanced ethics and the law of societies are realised. He elaborates that evolving societal interaction creates linguistic tools and symbolic thought, and such and similar factors give rise to ethical theories and binding laws (Packard 1900, 11). His evolutionary ethics is not left only to the blind biological drives; rather, he admits the significance of the normative guidance. He argues that human qualities like “controlled self-love” that give rise to “moral force... courage... and love of wisdom” are partly determined by normative principles that we realise from experience and habits (ibid., 48). This controlled self-love leads to the development of “virtues” or what Lamarck calls “true philosophy,” which encompasses justice, courage, temperance, and honesty (ibid., 48). Therefore, morality and other social capacities are the product of a process rather than something that is predetermined by external authority.

Unlike rationalists and non-naturalists, Lamarck’s account of progress was not based on abstract moral laws but on bodily transformations rooted in repeated practice and habit. His theory of “acquired characteristics” that takes morality as an inherited quality corroborates the sentimentalists’ approach that saw morality arising from social sentiment, experience and habits. Yet Lamarck extends the projects of the sentimentalist(Hume and Smith), embedding

moral sentiment in biological inheritance. As the moral sense becomes habitually expressed, it strengthens the “organ” or capacity from which it springs. In Lamarck's words: “The internal sentiment which gives rise to the exercise of a faculty, when often repeated, necessarily increases the development of the organs related to it” (1914, 119). Here, he takes morality not as mere social qualities but as biological traits. This implies that if we exercise justice and compassion, for instance, the faculty of our moral reasoning becomes strong and gives us strong patterns or habits for these qualities.

Though his evolutionary theory in general faces criticism from modern biological discourse, Lamarck’s moral insight deserves our attention. He anticipates a kind of “moral epigenetics” that maintains the habitual, environmental and emotional influences on the given ethical dispositions. His truest human capacity for “moral self formation” out of experience and environmental influence is parallel to post-Darwinian thinkers such as Dewey and Hartman, who also saw value as a product of human experience and conceptual fulfilment, respectively.

2.7. Herbert Spencer: Pre-Darwinian Foundations of Moral Evolution

In the history of evolutionary thought, Herbert Spencer occupies a unique position. His early writings on social and psychological development precede Darwin’s publication of the *Origin of Species*. Yet his understanding of evolution was influenced by the belief in an innate drive toward complexity and perfection—an idea closer to teleology. Thus, while we can associate him with ‘Social Darwinism,’ Spencer should be considered a pre-Darwinian evolutionary thinker, and his ideas were reframed after Darwin’s *natural selection*. He has a unique position in the history of evolution, for we can refer to him as both a pre-Darwinian and post-Darwinian evolutionary thinker, depending on the context, idea and period of his writings and thoughts. As a pre-Darwinian, Spencer, in *Social Statics* (1851), emphasises social progress, adaptability, and self-improvement as ethical development. In this position, he believes that moral faculties

evolve naturally. He entertained this idea before Darwin systematised biological evolution via natural selection. In contrast, as a Post-Darwinian, Spencer synthesises biological evolution (including natural selection) with social and moral philosophy; he integrates some Darwinian principles into his ethical system.

Spencer, as an ethical naturalist, strives to derive moral principles from the laws of life and the conditions of human existence, from which we humans can figure out which actions lead to happiness and which to suffering. He contends that once we identify and test the inherent consequences of actions and modes of living, we should put accepted principles into practice and follow them, regardless of whether they produce pleasure or pain (1879: 29-30). Thus, for Spencer, morality is a systematic science that should understand the outcomes of certain behaviours and see whether the consequences reflect the “nature of reality.” In *the Data of Ethics*, he argues for ethical naturalism: “moral sentiments have to be perceived as parts of the phenomena of life at large” (1879, 103). He goes on to say that we have to consider humans, societies and moral phenomena as the products of evolution. He believes that the progressive nature of ethics enables it to transform from an “indefinite, incoherent homogeneity to a definite, coherent heterogeneity” (1864, 350).

Spencer, contrary to the claim of ethical non-naturalism, categorises ethics as human behaviours that follow certain natural laws, like other phenomena. He believes that the “visible universe” and “life itself” with its intricacy are the results of a “continuous process. Thus, there is no exception in the developments of human conduct, i.e., “morality is not different from nature, but it is an expression of nature” (1879, 119). According to him, morality is not a supernatural or purely abstract system imposed from outside nature; rather, it is deeply embedded in the biological and evolutionary development of human beings. Spencer draws a strong analogy between biological law and ethical principles, and argues that just as the body

adjusts itself to adapt to the given environment, our moral instincts, habits and sentiments evolve to maintain survival, social cooperation, and the common good.

Spencer's account of morality is best understood as a theory that combines utilitarian morality and evolutionary naturalism. He concurs with the classical utilitarian in identifying happiness, goodness, and badness as the measure of the moral status of action and evaluation. Yet, Spencer moves further and justifies the goodness and badness of action and evaluation based on the biological and evolutionary realities of life. "These good and bad results cannot be accidental but must be necessary consequences of the constitution of things (1879, 21). He conceives the capacity of sentience to pain and pleasure as biologically evolved signals that enable organisms to align or adjust their mode of reaction to maintain survival.

While Spencer shares the goal of classical utilitarianism, which is promoting happiness, he disagrees with the method and foundation. As to method, he employs deductive reasoning. He starts with the "laws of life" and biological evolution. He believes that ethical principles can be logically deduced from the conditions required for life and survival or from structural and functional necessities of living systems (1879, 22). For Spencer, morality is not only about what we feel but about what facilitates evolution and ensures survival. Thus, he does not give only experiential explanations for pain and pleasure but also biological foundations. In other words, what is morally good or bad must ultimately relate to the promotion or destruction of life itself. The following statement from Spencer reflects his understanding of the goodness and badness of conduct or action in terms of its role in promoting or hindering survival; he states that,

There is no escape from the admission that in calling good the conduct which subserves life, and bad the conduct which hinders or destroys it... goodness or badness can be ascribed to acts

which subserve life or hinder life, only on this supposition [that life brings a surplus of pleasure over pain]” (1879, 16).

Here, Spencer emphasises that moral value is measured based on its effect on life. Meaning, if an action is called “good,” it somehow supports or enhances life. In contrast, if it is called “bad,” it damages or hinders life. Thus, the moral quality of actions or behaviour comes from their relationship to life processes, from the facts of survival, reproduction, and the experience of pleasure and pain. In short, in light of Spancer’s appraisal, the moral value of actions depends on their evolutionary utility. We can conclude his utilitarian evolutionary ethics by referring to his statements that “Every pleasure raises the tide of life; every pain lowers the tide of life” (The Principles of Ethics, Vol. I, Ch. 6).

2.8. Conclusion

I examined the origins of moral sentiment from non-naturalist to early naturalist perspectives. While thinkers in the non-naturalist school argue that morality arises from reason or divine will and is independent of human experience, naturalists derive morality from social instincts and biological sentiments. In other words, while the former views moral value as objective and universal, the latter sees it as emerging from human nature, emotions, and subjective experience. This chapter explored the trajectory from searching for immutable, universal and unconditional moral principles to a more experiential, relational and human-centred account of ethics. In the pre-Darwinian world, classical moral philosophers like Plato, Aristotle, Augustine, Aquinas, and Kant constructed moral systems that provide rational and theological corroboration and normative clarity. Yet their emphasis on reason, abstract thought and authority, overlooked the natural/biological, social, and psychological dimensions of moral life. Kantian ethics, in particular, rejects any ethical framework grounded in subjective interest, desire and context. Though his categorical imperative is logically justifiable, it is often

criticised for its limitation to accommodate the messy, emotive, and situational aspects of real human life.

The naturalists, particularly Hume and Smith, replaced abstract moral reasoning with experiential and sentimental ethics. Hume's argument that morality is "more felt than judged" and Smith's analysis of the "impartial spectator" convince us that we humans have a natural capacity for empathy, compassion, and socialisation, which are the foundation for our ethical behaviour. Yet Hume and Smith's account faced a challenge from Moore, who contends that grounding ethics in biological feeling contradicts the ontological status of moral values, "good." His determination about the indefinability of "good" assumes a conflict between descriptive facts and normative claims. Yet Moore's conclusion that "good" is a simple, non-natural property again distances moral understanding from the empirical world or our biological nature. Then, I propose a resolution for the problems of the indefinability of the good from Hartman's axiology that differentiates three levels of value: generic, concrete, and singular. His axiology reconciles the gap or rigid duality of fact vs value, and conceptual vs experiential. His perception of the good as the fulfilment of the "intention of the concept" establishes a connection between concepts and reality.

The effort of earlier naturalists establishes the foundation of sentimental ethics, which gets biological corroboration from Lamarck and Spencer, who started to see morality not just as experiential but as biologically rooted and shaped by evolution. Lamarck and Spencer, as pre-Darwinian thinkers, offered different yet complementary insights into how moral sentiments can arise and evolve through natural processes. Lamarck's theory of "acquired characteristics" treats morality as a physiological and behavioural adaptation, i.e., repeated actions and environmental conditions shape not only the organs of the animal but also its habits and

character. In this regard, moral traits are not exceptional; rather, like intellectual faculty, they are developed through habitual exercise and inherited across generations.

Spencer extends Lamarck's naturalism and views morality as a natural quality governed by biological law. Spencer draws moral principles from the "law of life" that is behind the function and structure of life. Thus, moral conduct, according to Spencer, is evolutionarily significant for it "sustains life" by promoting adaptation and facilitating social cooperation. His evolutionary ethics can be seen as a biological version of classical utilitarianism, though he integrates the feeling of pain and pleasure into the goal of evolution. He gives a deep biological explanation for pain and pleasure. For him, these feelings are not arbitrary or immediate but biological indicators of what "supports or undermines survival. His statement that "every pleasure raises the tide of life; every pain lowers the tide of life" captures this evolutionary utilitarianism. Together, Lamarck and Spencer extended and solidified ethical naturalism that was pioneered by Hume and Smith. Without reducing moral sentiments to mere instincts and impulses, Lamarck and Spencer show that ethics evolves as life itself evolves.

I conclude that the biological justification we see with pre-Darwinian evolutionists and the sentimentalists' approaches to ethics not only deepens our understanding of moral development but also becomes an issue for contemporary discussions among evolutionary biologists, primatologists and behavioural scientists. To sum up, the argument I see from theological and logical rationalism to ethical non-naturalism, from ethical sentimentalism to pre-Darwinian evolutionary theory shows that the human attempt to reconcile the universality of ethical ideals with the particularity of lived experience. Hence, I conclude that morality is not a static set of rules but a dynamic interplay between reason, emotion, concept, and context. Understanding ethics through this pragmatic and integrated approach is significant to developing a moral philosophy that works in the ever-changing human reality.

CHAPTER THREE

Defending Evolutionary Ethics: Contemporary Biological Perspectives

3.1. Introduction

In the previous chapter, I traced the gradual development of naturalistic moral theories from pre-Darwinian thought. I showed how rationalist and theological ethics were replaced by sentimentalist or naturalist perspectives (through thinkers like Hume, Smith, Hartman), and by early evolutionary ideas from Lamarck and Spencer. However, these sentimental, natural, or biological approaches are more philosophical or speculative.

Therefore, in this chapter, I aim to support the naturalist or sentimental approaches by drawing on ideas from contemporary advocates of evolutionary ethics, who incorporate biological science into ethical theory or respond to longstanding critiques, revitalising moral philosophy through empirical evidence. Before turning to the contributions of modern defenders of evolutionary ethics, I want to examine Darwin's evolutionary explanation of morality.

Parts of the analysis presented in this chapter build upon my previously published work in *Pragmatism Today* 14, no. 1 (2023): 34-44, where I explored the biological root of morality.

3.2. From Instinct to Conscience: Darwin's Account of Moral Evolution

Darwin systematises evolutionary ethics and substantiates the claims of early naturalists who began to understand moral traits as human natural behaviours. Darwin provided a biological foundation for morality based on empirical observations and the logic of natural selection. He corroborates the capability of his evolutionary theory to explain morality and its progress. He argues that the "first foundation or origin of the moral sense lies in the social instincts, including sympathy," which evolved through natural selection (1871,394).

The social instincts, Darwin believes, developed in early human communities and “each succeeding generation will have become more and more social with the feelings of sympathy and love”(ibid.,172). This gradual enhancement of sympathy and love strengthened social bonds, which in turn fostered cooperative behaviours necessary for group survival. In-group cooperation, sympathy, care, and love eventually extended to out-groups. Then the group and individuals recognised the necessity of extending "social instincts and sympathies" to all the members of fellow beings, though personally unknown to them (Darwin 1871, 83). In Chapter III of *The Descent of Man*, Darwin sets four developmental stages of morality to demonstrate his view that morality is a product of evolution, originating from “social instincts” and is determined by the combination of reflective minds and sociocultural settings.

The four interconnected developmental stages are (1) social instincts, (2) memory and habit, (3) language and social evaluation, and (4) the emergence of conscience and moral ideals. The first stage, social instincts, consists of qualities like cooperation/mutual aid, sympathy and care for the group members. These instincts, according to Darwin, are the basis of our moral traits. As primatologists later testified, social instincts are not limited to human beings; rather, animals with developed “intellectual powers”, notably primates, possess these qualities. These instincts, he contends, gradually evolved for the “good of the community”(Darwin 1871,71-86). At the second stage, Darwin believes, our ancestors start to develop intelligence to memorise and reflect on their past actions and characters.

The capacity of recalling and reflecting is significant in the process of moral development, for it enables one to evaluate various instincts. With these abilities, Darwin argues, we can learn that some instincts (hunger, fear and sexual urge) are short-lived. Yet such feelings are powerful, but fade quickly and don't leave a strong emotional trace; or “after being satisfied, they are not readily or vividly recalled”(ibid., 72). In contrast, social instincts (like sympathy

and loyalty) are “enduring”(long-lasting) and recalled easily. At this stage, Darwin explains, early human beings start to develop feelings of “dissatisfaction”(start to feel regenerate) when they choose short-term instinct over deeper social instinct. Being aware of this, Darwin adds, is an early form of conscience(*ibid.*,86).

But, how is the development of conscience related to instincts? Let us follow Darwin's line of reasoning to understand how we develop conscience. According to Darwin, human beings are naturally driven by strong instincts and often “follow the stronger impulse,” which “leads [humans] to gratify [their] desires at the expense of others” (1871, 91). However, after the immediate instincts are satisfied, the comparison among instincts takes place. Then, we start to judge our actions: prioritising the immediate instinct over “ever-enduring” social instincts at the expense of others is dissatisfying(*ibid.*). Darwin tells us that this internal conflict (dissatisfaction with one’s action and trait) “forces [one] to act differently for the future”(ibid). In other words, this dissatisfaction prompts one to change his/her intention. Here, the individuals pass a resolution to behave in such a way that would not bring dissatisfaction. Darwin calls this self-correction “conscience” that arises from self-reflection and evolution. In this sense, conscience is not a special faculty but a result of reflective judgment.

Darwin relates the creation of language and the development of advanced social interaction (acquired at the third stage of moral development) to the rise of the good, interest and wish of the community. At this phase, the social setting is fulfilled, which is necessary to evaluate action in terms of its contribution to the continuity and strength of the group. Darwin believes that right after our ancestors became linguistic, they moved from instinctive to cultural and social behaviour, which precedes advanced morality. He argues that through language the community express its desire and sets communal goals which, in turn, shape and guide the

action of the individual (1871, 95). Here, Darwin explains how language refines social instincts and advances them into societal rules.

According to his assessment, early human beings, among others, developed a “love of praise and a dread of blame” out of language (ibid. 98). This implies that social emotions such as shame, pride, and honour play a significant role in reinforcing social behaviour. Darwin emphasises the power of social emotions, arguing that a violation of the law of honour—even when such a violation aligns with true morality—has often caused individuals greater anguish than the commission of an actual crime (1871, 99).

At the last stage, Darwin articulates the importance of habits, reason, religious and cultural instruction for the formation of effective moral systems. The fourth stage of moral development results from the combination of instincts (biological) and normative imperatives. Unlike modern biological determinists, Darwin accepts the influence of social values, including religious teachings, in the formation of morality. But it does not mean Darwinian evolutionary ethics regards the divine claims of morality. He insists that our moral sentiment is “fundamentally identical with the social instincts” (1871, 105).

Through his four stages of moral development, Darwin explains how the moral sense in our ancestors emerged through the gradual evolution of social instincts, which were then shaped by intellect, reason, language, habit, and social regulation. This account of morality rejects metaphysical narratives that place ethics beyond human experience and biological nature.

Although Darwin applied his theory of evolution to explain the origin of our moral sense—arguing that social instincts, which we share with other animals, form the basis of morality—not all of his contemporaries agreed with his naturalistic approach. One of the strong counterarguments comes from T.H. Huxley, who is the defender of Darwinian evolutionary biology. In explaining and understanding the biological nature of animals and human beings,

Huxley is a strong advocate of Darwin. He argues that Darwin's theory is beyond criticism and that his conclusions are more convincing than any alternative that has been proposed (Huxley 1887, 229). He openly acknowledges the impact of Darwin's theory of natural selection on the scientific world. However, Huxley boldly discards Darwin's claim that morality could emerge naturally from social instincts. In his famous lecture about evolution and ethics, Huxley argues against the possibility of deriving moral sense from nature and argues that the "ethical process" stands in opposition to the "cosmic process", and works to counteract its influence (Huxley, 1894, 81). The task of ethics, therefore, is not to draw ethical lessons from nature, but to fight against the "ruthless nature", for the latter works against morality (ibid. 82).

To be specific, evolution and ethics, in light of his insight, follow opposite logic. He figures out the inherent conflict between them, that while evolutionary energy is expressed through conflict, aggressive competition, assertion of dominance, and survival urge at the expense of others, moral sentiments require humans to avoid (at least minimise) these self-centred behaviours. Thus, Huxley insists that the pursuit of ethical excellence is, in every way, contrary to the behaviours that lead to success in the cosmic struggle for existence (ibid. 82). His critique of natural ethics in general and evolutionary ethics, in particular, presumes that the moral sense is not inherent in human nature. Such a sharp distinction between human nature and ethics gets criticism from some modern evolutionary biologists like Richard Dawkins, Frans de Waal and Patricia Churchland. Thus, in what follows, I turn to contemporary defenders of Darwinian ethics who give modern, empirical scientific justification for the evolving nature of moral sense.

3.3. Evolving Morality: Current Biological Defences of Ethical Naturalism

Richard Dawkins, in his famous book *The God Delusion*, detaches the roots of morality from divine command and absolute ideal principles. He rather provides a biological justification for

morality. As a Darwinian biologist, Dawkins starts his argument for naturalistic ethics by exposing the implausibility of a religious basis for genuine moral behaviour. He contends that moral sensibilities did not descend from external authority but originated from our biological nature through evolutionary processes, and were shaped by natural selection, social cooperation, and the survival value of altruistic traits in our ancestors.

Dawkins insists that morality should come from within—from empathy, reason, and social instincts—not from fear of divine punishment or hope for a heavenly reward. Real moral behaviour is autonomous and sincere, not coerced by a supernatural overseer (Dawkins 2006a, 226). He also questions the claims of “ethical absolutism”, for it is ineffective to solve practical moral problems. For instance, “it is not always wrong to put a terminally ill patient out of her misery at her request; or it is not always wrong to kill an embryo”(Dawkins 2006a, 232). The justification for the rightness or wrongness of an action should not merely come from its theoretical or theological validity. However, the evaluation must also consider the practical aspect of the action. A Moral theory should not be "more philosophical and less committed than moral deliberation; it needs to consider the people’s customs, traditions, styles of justification, criticism, protest, revolt, conversion, and resolution”(Baier 1985,236). In light of Baier's view, because morality is determined by our mode of being and our reactions to specific actions and behaviour, it is always in a flux of flux. We cannot have a fixed social law that serves indefinitely. Dawkins’ critique of ethical absolutism(Kantian ethics, for instance) finds pragmatic reinforcement in pragmatist philosophers like Dewey and Richard Rorty. Their perspectives will be revisited in a later chapter, where I will draw on their insights to establish a pragmatic foundation for evolutionary ethics.

Once Dawkins disregards ethical absolutism and divine claims in ethical principles, he examines morality in the Darwinian framework. At first glance, especially for some of us who

are professionally far from evolutionary biology, the Darwinian evolutionary theory appears to be devoid of moral sentiment; we immediately believe that his theory only favours selfish and exploitative dispositions, for the strongest is allowed to live and preserve its species at the expense of the unfit. Dawkins presumes our misperception of Darwinian natural selection as though it can only explain hunger, fear, and sexual desire, which directly impact our ability to survive or maintain our genetic makeup. However, where do we get the feeling of pity we have when we see an orphaned child crying or an animal whimpering in agony (Dawkins 2006, 15)?

To address such a question, Dawkins evaluates the theory of natural selection by examining how it operates on organisms and genes during the evolutionary process. The natural selection theory appears amoral at the genetic level, for genes are selfish to survive and intolerant of rival genes. However, if we approach the theory at the level of the organism, it has a seed for moral feelings. Dawkins tells us that Selfishness is typically a trait of the gene that survives and makes it via natural selection in the hierarchy of life. Dawkins continues to argue that,

It is the gene that, in the form of information, either survives for many generations or does not. Unlike the gene, the organism, the group, and the species are not the right kind of entity to serve as a unit in this sense because they do not make exact copies of themselves and do not compete in a pool of such self-replicating entities. That is precisely what genes do, and that is the - essentially logical - justification for singling the gene out as the unit of 'selfishness' in the unique Darwinian sense of selfish (2006a: 215–216).

Here, Dawkins explains that individual organisms (such as human beings, birds, and monkeys) are not considered selfish; rather, it is their genes that are viewed as selfish in the Darwinian sense. But if an organism is made up of genes, why do we describe the genes as selfish but not the organism? And how can the organism behave differently from its genetic constituents? Dawkins directly addresses this apparent paradox in *The Selfish Gene*, and lets us follow him some steps to understand the seeming paradox. He first sets a crucial distinction between genes

and organisms; then identifies their different roles. He argues that Genes function as the true replicators, whereas organisms—and even groups of organisms—are understood not as replicators themselves, but as vehicles that carry and transmit these replicators (Dawkins 2006a, 23). This means that organisms such as human beings, birds, or monkeys do not replicate themselves with high “fidelity” from generation to generation; instead, they are built by genes to preserve and transmit their survival desire.

Thus, this survival urge of the genes, Dawkins tells us, is competitive, and” some genes are favoured over others based on their success in persisting within the 'gene pool”. In this sense, genes are described as ‘selfish’ because they are selected for their ability to endure and replicate. In contrast, individual organisms(although they are composed of selfish genes) can behave in ways that appear cooperative or altruistic(2006a,2). Dawkins adds that the behaviours of the organism are secondary in the long term. What matters is “the selfishness of the genes which build the body” (ibid., 3).

Yet the individual organism or its behaviour is built and dictated by genes to maintain its survival. That is why Dawkins argues that “we, and all other animals, are machines created by our genes... our genes have survived... because they are ruthless, self-serving, and selfish in the way they build survival machines” (ibid.,2). So, the altruistic behaviours of animals (the wildebeest sacrifices her life to rescue her calf from the lion; a monkey takes a risk to warn of the danger, etc.) are not contradictory as far as that behaviour benefits the continuity of the gene in time. As Dawkins writes, the organism is not primarily built for the survival of its own body—or even its offspring—but to the continuation of its genes. This reveals the central paradox at the heart of the selfish gene theory(ibid., 123).

The next question one may ask is, how does evolutionary biology explain the moral origin of animals? Dawkins identifies three biological traits of animals as the foundation of morality.

The first is kin-altruism behaviour, the second is reciprocal altruism, and the third is reputation or advertisement of superiority. Kin altruism refers to a gene's tendency to "reduce its own fitness but boost the fitness of its relatives", who are supposed to have a similar gene. As a result, the behaviour may ultimately increase the number of copies of the altruistic gene present in the next generation and hence the occurrence of the altruistic behaviour itself (Jane & Eberhard, 2011). As Jane and Eberhard tell us, kin altruism works on the likelihood that other organisms are similar in bearing identical genes.

Dawkins also has a similar perception of kin altruism and argues that animals often exhibit altruistic behaviour towards their close relatives, for they share similar genetic traits. This can include caring for one another, defending them, sharing resources, and warning of potential dangers (2006, 217). Kin altruism involves one group of individuals willingly reducing their fitness to benefit another group within the same group. It means kin-altruism considers the ratio of the increase in fitness for the recipient compared to the decrease in fitness for the donor, using the degree of relatedness between the two individuals (Uyenoyama & Feldman, 1980, 381). Meaning, this helping behaviour has evolutionary bases, and the gene that facilitates this behaviour calculates if it gets more fitness and copies of itself than in the altruistic individual.

Richard Joyce gives an example of the calculative tendency of genes. He says that from the gene's perspective, sacrificing one's own life to save several descendants, siblings, or cousins who also have a similar gene is a worthwhile trade-off (2007, 19). Though it is not large enough to accommodate non-kin cooperation, kin altruism can explain the biological origins of moral behaviour.

Broader than kin altruism, reciprocal altruism (a kind of agreement that 'you aid me, and I will reciprocate the favour') incorporates the social behaviour and the moral sentiments of moral agents. It is broader, for it works among non-kin selves; it is applied to mutually beneficial

individuals who are not necessarily related. These individuals, Dawkins contends, are into the trade “because of asymmetries in needs and capacities ”(2006a, 217). It is true in two different species, where these differences are more pronounced.

Asymmetries in physical and brain power, skill, capacity, and natural tendency are a basis for forming both human and non-human communities. Here is a typical biology class example of reciprocal altruism recalled by Dawkins: The hunter and the smith have a mutually beneficial relationship, where the hunter provides the smith with meat in exchange for a spear. Similarly, the bee and the flower are in a deal where the bee obtains nectar from the flower, and the flower gets pollinated. Dawkins (2006) and Joyce (2007) suggest that the norms or social behaviour, responsibility, and accountability we exhibit in the community result from genetic dictation. They explain that natural selection favours genes that promote giving behaviour in situations where there is both a need and an opportunity to give, as well as the ability to solicit help when in need. It also favours individuals who can remember obligations, hold grudges, monitor exchange relationships, and punish those who take without giving in return (Dawkins 2006, 217; Joyce 2007, 30).

However, reciprocal altruism is pure mutualism that counts only the benefits each party gets. How does mutualism develop into morality? Atran (2013) and Baumard et al. (2013) relate mutualism with morality and argue that the mutualistic model of morality proposes that morality stems from an environmental adaptation that promotes equal sharing of costs and benefits of cooperation among individuals. This leads to developing a distinct sense of fairness as a moral principle. This model offers a comprehensive understanding of the evolution of morality, including unselfish behaviour in economic games, cooperation with strangers, and cultural prohibitions against actions that go against short-term utilitarian interests. Thus, in

light of Atran's view, mutualism highlights the role of cooperation and fairness in developing moral principles (Atran 2013, 4; Baumard et al., 2013, 59).

But, the aforementioned biological behaviours (kin-altruism, reciprocal altruism, and mutualism) are materials for morality (Kr mer 2018), which is not powerful enough to define morality considerably. That is why Dawkins, Dewey and Kr mer call for social, cultural, and practical intervention in biological behaviours or “animal promptings” (to use Dewey’s phrase) to direct them towards full-fledged morality. They claim that unless these natural impulses are checked and controlled by rational moral agents who can learn from experience and direct those instincts to genuine morality, we become involved with immoral acts and behaviours, for behaviours at the genetic level (as Dawkins justifies) or impulses and interests at the animal level (as Dewey sort outs) are selfish. Dawkins explains why our biological "nature" needs to be nurtured, and he believes that human beings have the exceptional ability to act against some biological impulses. “We have the power to defy the selfish genes of our birth and, if necessary, the selfish memes of our indoctrination... We, alone on earth, can rebel against the tyranny of the selfish replicators”(2006a, 201). So, though we are built with selfish genes, we have evolved minds capable of reflection, foresight, and moral reasoning. This gives us the capacity to override our biological impulses.

Building a society where individuals work together towards a shared goal through generous and selfless collaboration is less facilitated by biological factors. This is because the prevailing characteristic of a successful gene is typically focused on uncompromising self-interest, which tends to manifest in self-centred behaviour among individuals (Dawkins 2006b, 2). Kr mer captures this fact when he argues that the "biological moral foundation” is not similar to morality at an advanced level, as the house's basis is not similar to its roof and walls. Fortunately, human beings can alter the pattern and behaviours of the gene through reflective

culture. It is inaccurate to assume that genetically inherited traits are always unchangeable and permanent. Although our genes may predispose us to certain behaviours or tendencies, we are not necessarily bound to follow them throughout our lives. While our genes may direct us to act in a self-centred way, we still can choose to behave differently (Dawkins 2006b, 3).

Peter Corning, an evolutionary scientist, strengthens the biological origin of ethics and argues that there is a positive aspect to our moral impulses in that they have a "biological foundation." However, the negative aspect is that these impulses are not well aligned with the "good of the species" and tend to be "highly selective," "inconsistent," and self-interested. Luckily, we have formal and informal reward and punishment systems to uphold and strengthen our ethical standards. While some individuals may act spontaneously per ethical norms, others may require persuasion for the "general welfare" (Corning 1997, 325).

The third rationale that prompts Dawkins to derive the origin of morality from evolutionary biology is the reputation-craving propensity of humans and non-human animals. Reputation is a social reward for bravery, loyalty, generosity, perseverance, success, and other praised social actions. Reputation in human society plays a significant role by motivating members to conform to the community's norms, rules, and beliefs. Both Dawkins and Joyce acknowledge this truth and contend that the drive to be praised and the motivation to achieve glory, as well as the fear of being criticised and facing disgrace, collectively provide a significant impetus for the growth of moral and ethical values in society (Dawkins 2006, 218; Joyce 2007,32).

Amotz Zahavi's bird experiments revealed that animals, like humans, engage in behaviours that help them build a reputation. Zahavi and his team studied babblers and observed that these birds give alarm calls and feed others as a means of gaining social recognition. Two key observations led Zahavi to conclude that what babblers do is not genuine altruism but rather a strategy to gain social prestige: (1) the birds "actively compete for the dangerous role of

sentinel,” and (2) when a subordinate bird offers food to a dominant one, the apparent charity is often aggressively rejected (Zahavi et al 2005, 4). Zahavi’s experiment supports the argument made by Dawkins that moral-like behaviours originate biologically and serve as a strategy for genes to ensure their survival. Zahavi’s analysis of the social qualities shown in the bird demonstrates how and why animals act altruistically. He concludes that “The roots of cooperation and even of morality may lie in the same biological logic that produces the tail of the peacock” (ibid., 125). In other words, just like the peacock’s tail is the result of genetic fitness, moral qualities are the expression of social fitness.

However, one can raise a question about how behaviours like kin altruism, reciprocal altruism, and craving for reputation (which are supposed to be effective in small groups in ancient times, as Dawkins suggests) explain the complex, advanced moral system in modern times. Given the urban nature of modern society, where many of us live in crowded cities, surrounded by strangers rather than family and encountering people we may never see again, why do we maintain our morality towards one another, including those from different social groups?

Dawkins gives a Darwinian answer to this question, and relates the functionality or continuity of our ancient behaviour to the present day to “ ‘Rules of Thumb’ that work practically to promote the gene. The rule of thumb is an instinctive, biologically rooted rule that evolved to guide actions and traits among small groups in ancient times. For instance, Dawkins mentions that the tendency to be good to one’s kin or relative, be reciprocal to the giver, expecting reputation for kindness, etc., are the kind of rules of thumb that emerged in our ancestors (2006, 221). Such instincts do not always follow the dictates of reason; they persist even when reason tells us they no longer apply in a different, so to speak, modern societal setting. To illustrate this, Dawkins uses human sexual desire as an example. An educated couple might be aware of the biological fact that their sexual desire has its roots in evolution as a drive to produce. They

also know that conception isn't possible, for they use a contraceptive. But none of this knowledge ceases their sexual urge. The sexual desire isn't logical, and it doesn't care about outcomes. It is a strong urge which exists independently of its ultimate rationale" (Dawkins 2006, 221). By this example, Dawkins emphasises that the logical understanding of the purpose of some evolutionary fact does not override evolved drives, for these drives were programmed not for reflective accuracy.

This mismatch between instinct (the rule of thumb) and context is called "misfirings", and Dawkins takes it to be significant for modern ethics. He believes that the same is true in our longing to be kind and good. Dawkins claims that even if such impulses are, in some deep evolutionary sense, the by-products of life in "tightly knit ancestral communities", that does not make them any less real today. Just like sexual desire, the urge to be generous doesn't need a rational excuse. It comes from something older and deeper. Dawkins extends this by-product logic to love and religion. Just as sexual desire can persist even when reproduction is impossible, so too can emotions like romantic love arise from evolutionary mechanisms for pair-bonding and parental care. Religion, he suggests, may also be a by-product—"a by-product of the misfiring of several built-in psychological propensities" (223). Our tendency to obey authority or attribute agency may have evolved for survival, but now contributes to belief in gods or moral law. He concludes that evolutionary ethics does not reduce morality to selfish genes; it rather shows how our rigid, inherited rules of thumb—even when they misfire—can be co-opted by culture, reason, and reflection to build the ethical ideals we value today.

3.4. From Genes to Judgment: Churchland's Neurobiological Defence of Evolutionary Ethics

Dawkins, in *The Selfish Gene* and later in *The God Delusion*, confirms how moral qualities (such as altruistic behaviours, cooperation, and compassion) develop from gene strategies.

Likewise, Patricia Churchland suggests a complementary idea to support evolutionary ethics. In *Braintrust: What Neuroscience Tells Us about Morality*, she claims that moral qualities mainly come from the mammalian brain, which is shaped and guided by evolution itself to support social bonds. For Churchland, “the core of the biological approach to human morality” is found within the brain (2011, 2). She starts by recognizing the long-standing intuition, shared by Aristotle, Hume, and Darwin, that “we are social by nature” (ibid. 3). However, she argues that to go beyond instinct, we must base our understanding on empirical science: “Without relevant, real data from evolutionary biology, neuroscience, and genetics, I could not see how to tether ideas about ‘our nature’ to the hard and fast” (ibid).

She aims to develop a scientifically grounded framework for the biological roots of moral qualities. Her main argument is that morality is not based on abstract, ideal, and external rules, but rather on four interconnected capacities. First, “caring”—our instinctive concern for families and relatives. This capacity, according to her, is “shaped by interlocking brain processes” (2011, 9). Caring is the emotional bond that enables us to look after each other. The second quality identified by Churchland as a pillar of morality is the ability to understand “others’ psychological state” (ibid). The ability to understand what others are thinking and feeling helps us anticipate their condition and respond appropriately.

The third precondition of morality is related to our will to solve social problems. It is the capacity to figure out how to fairly share resources, resolve conflicts, or decide what to do when someone breaks the rules. Finally, she identifies the capacity of “learning social practices” as the fourth element of moral qualities. She emphasises that we learn and internalise social norms, not just through instruction, but also through experience—by watching others, by trial and error, and by rewards and punishments.

Though these capacities appear to be simple, human social life and brain processes are incredibly complex (ibid. 9). In light of her appraisal, morality is not a separate, mysterious part of our life; rather, it evolves from evolutionary capacities that help us to survive and thrive. Just as we learn to "navigate" the physical world (avoiding danger, finding shelter, and securing food), we also learn to "navigate" the social world. And that, too, is a kind of adaptation. As Churchland puts it, "social navigation is an instance of causal navigation generally, and shapes itself to the existing ecological conditions" (2011, 8). In other words, our moral quality grows as a practical response to living in groups. It helps us build trust, solve conflicts, and ultimately, flourish together.

Churchland's evolutionary explanation of some of our social dispositions seems to advocate biological reductionism, a view that reduces "complex human behaviours, psychological processes, and social phenomena" to molecular or genetic levels (John 2001, 3). For instance, she associates the capacity of "caring for others" and other propensities to some "neurochemical" phenomenon, specifically, oxytocin (OXT). Stedman's Medical Dictionary (2006) defines oxytocin as "a nonapeptide hormone that plays a key role in social and emotional behaviours, including maternal care, bonding, and interpersonal trust". Churchland explains the "social bonding" as a human natural trait that emerges from oxytocin (OXT). "Oxytocin lies at the heart of the complex biological systems that allow mammals to care for one another (2011, 14). That begins as a mother's instinct to protect her young and gradually expands to include mates and relatives.

This widening circle of attachment marks an important moment in our evolutionary story—the moment we truly became social creatures (2011, 63). This fits Darwin's view that moral sentiment begins with "social instincts," then expands with cognitive development. Churchland confirms, "This widening of other-caring marks the emergence of what eventually flowers into

morality” (2011, 14). But here is the problem: how could neurochemicals, from the very beginning, care about anything at all? She argues that caring, or valuing, is not some mysterious or immaterial capacity, but a biologically grounded process shaped by evolution. The starting point, she says, is self-preservation. “All nervous systems are organised to take care of the basic survival of the body” (2011, 27).

Evolution selects for organisms that are equipped to monitor and respond to threats and needs, and the brain is the control centre for that system. “From an evolutionary perspective, the general point is straightforward: self-caring is selected over self-neglect” (ibid. 27). She links this basic drive—or the survival urges—to the emergence of the capacity for valuing. Thus, to ask how neurons “care” is to ask how they produce a pattern of responses or behaviour that maintains the survival of the organism. “Behavioural decisions that serve well-being are carried out by neurons that generate emotional states tied to survival needs” (ibid. 28). Caring, then, is not something imposed on the brain from the outside; rather, it is intrinsic to what the brain is wired to do.

Reducing certain normative qualities like caring and valuing to the specific nature of the brain should resolve the fact-value dichotomy, or the supposed impossibility of defining value, particularly the good, based on the natural or empirical attributes of things, as argued by Hume and Moore. Churchland, in her attempt to naturalise ought, admits that the “is-ought” duality is a central problem in moral philosophy. Yet she believes that approaching ethics scientifically, to be specific, analysing the fact-value dichotomy based on the evidence acquired from “neuroscience and brain evolution” can solve this problem. She insists that neuroscience and brain evolution show that fact and value are not categorically separated; instead, the core aspect of moral thinking (our ability to reason, make decisions, evaluate situations, and reflect) is all deeply rooted in how the brain works (2011,8). For her, Hume’s argument about the

impossibility of deriving moral 'oughts' from factual 'is' applies only to strict logical deductions, but not to the biological or natural processes of the human brain.

Neuroscience, in particular, reveals how our brains solve problems, navigate social life, and assign value to things. This implies that our normative aspects of life can be studied and explained scientifically. She further argues that by understanding how normativity (the capacity for valuing) emerges in the brain through the integration of motivation, emotion, impulse control, and memory, we can scientifically understand the structure of ethical life. “The point is that a deeper understanding of what makes humans and other animals social may lead to a greater understanding of how to cope with social problems” (2011, 4).

3.5. Reconstructing the Ultimate: Moral Growth as a Proximate Moral Action

In attempting to reconcile evolutionary ethics and pragmatic ethics, as argued in the preceding and subsequent chapters, it is essential to revisit the claims concerning ultimate and proximate mechanisms or explanations. Addressing these concepts, as Ernst Mayr contends, is significant in resolving many of the long-standing controversies in biology"(1961, 1502). Thus, failure to distinguish between these two levels of causation may lead to confusion in the discourse of evolutionary ethics, particularly in analyses of Dewey's pragmatic naturalistic ethics. Doing so, I think, enables us to overcome the problems of biological reductionism, which presumes that giving an evolutionary explanation for moral behaviour is not identical to justifying the “psychological motivation” behind it. Thus, before I analyse Dewey's naturalistic pragmatic ethics in relation to “proximate” and “ultimate”, let me define the concepts. While the former explanations examine the “immediate mechanisms” behind a behaviour, such as hormonal processes, neural activity, or learned responses, the latter, on the other hand, address the evolutionary purpose of the behaviour—“why natural selection favoured it in ancestral environments” (Buss 2015, 39). For instance, proximate and ultimate explanations for the facts

of parental care are different. As we see from Mayr, the ultimate cause of parental care is that it provides a means for parents' genes to be passed on to the next generation. The proximate cause, by contrast, focuses on the immediate triggering biological or hormonal factors that lead animals to care for their offspring in the here and now (Mayr 1961; Tooby & Cosmides 1992).

This distinction can be extended to explain human morality. Francisco Ayala maintains that while the capacity for ethics is a "biological adaptation" (ultimate), the specific moral codes are the product of our cultures or social interaction. Ayala understands the argument about the role of biological mechanisms in the formation of normativity or morality from two perspectives. The first point refers to whether moral agents have a natural "capacity" for ethics (the "proclivity to judge human actions as either right or wrong", to use his own terms). The second approach views whether ethical principles are the direct biological or natural products. However, he disregarded the two claims and argues that normativity or the capacity for ethics "emerges from human rationality from highly developed intellectual powers" (1987, 235).

Ayala distinguishes two approaches to the notion of biological determination. One approach concerns whether we have an innate or natural capacity for moral judgment. The second examines biological determination at the level of the ethical system or moral code, not at the raw or basic hormonal level. Ayala concludes that, although we have a biologically grounded ability for moral judgements, moral judgements arise from human reasoning and advanced intellectual abilities. He makes clear his position that moral judgements arise from human reasoning and advanced intellectual abilities. Yet he does not deny the biological root of morality.

In the context of my dissertation, this distinction is vital for positioning Dewey's pragmatic ethics. The main critiques made against "evolutionary ethics" are the result of the conflation of these levels. As I discussed in chapters 3 and 4, the central claim of the critics of evolutionary

ethics is that if a behaviour has an evolutionary origin (ultimate), then our subjective moral reasons (proximate) are merely illusions or "genetic leash" holding us back (Wilson 1978, 167). However, modern ethology and evolutionary psychology explicitly address these critiques. De Waal employs this distinction to argue against the "Veneer Theory" of morality. De Waal demonstrates that while the *ultimate* cause of cooperation in primates may be reciprocal altruism (genetic benefit), the *proximate* mechanism is genuine "empathy". Many of his case studies on primates, birds and mice (which are discussed in chapter 4) justify that proximate causes are still observed in animal cooperation or moral-like action. Similarly, Robert Wright points out that animals develop certain behaviours that "ultimately" enable them to pass on their genes. However, animals do not need to consciously know that they are helping their own reproduction. "It is the distinction between ultimate and proximate causes... The squirrel is just intent on stashing nuts, and the cat on catching mice... The drive is all that the animal is aware of" (Wright 1994, 28). In other words, De Waal would agree, when a squirrel stores nuts, it is *not* thinking about surviving winter to reproduce. It simply feels like a strong urge to hide nuts. Likewise, a cat chasing a mouse is not thinking about evolutionary fitness; it is just following its predatory instincts. Animals are only aware of their immediate drives (hunger, fear, curiosity), not the deeper evolutionary reasons behind those drives.

These ways of reasoning, entertained by De Waal and Wright, could be seen in the framework of Dewey's understanding of naturalistic ethics. Dewey (though he wrote before these biological terms were coined) maintains the distinction in his argument. Thus, one can say that the proximate level corresponds to Dewey's account of human "impulse" and "habits" (basic or raw materials for complex behaviours developed later). On the other hand, the ultimate cause aligns with his view of "adaptation" and "growth" within an environment. Dewey, as a philosopher who does not accept any form of fixation or essentialism, rejects the claim of reductionists that because our "impulse" has a biological origin, the resulting evolved

behaviour, like morality, is defined only in terms of biological facts. Rather, he sees the biological factors as a raw impulse for the starting point of intelligence. “Impulses are the pivots”, the turning points that allow us to change how we act; they disrupt established routines and allow old habits to evolve into something new. “Therefore, to comprehend how societies transform and fluctuate, we must specifically analyse the role of innate human nature; ‘we must take separate account of the element of native character’ (1922, 93). Here, we can see Dewey’s conception of ‘native character’ (proximate biological impulses) and that they are not determinative factors but a ‘pivot’ for the process. This is where the importance of synthesising evolutionary psychology and Deweyan pragmatism becomes clear. Evolutionary psychology provides the map of our proximate mechanisms—the “modules” of social intuition, fear, or kin selection (Cosmides & Tooby, 1987). However, Pragmatism provides a normative method for regulating these mechanisms in real interaction within the given context. “Impulse is a source, an indispensable source, of liberation; but only as it is employed in giving habits pertinence and freshness does it liberate power” (1922, 105). Here, Dewey’s pragmatic natural ethics contains elements of Darwinian claims about our impulses being evolved adaptations (their ultimate origin). Yet, contrary to biological determinists, Dewey contends that the justification of the validity of ethical decisions is not found in or reduced to biological factors; rather, their validity is determined by their capacity to resolve the specific problematic situation. Thus, I want to emphasise that the “Darwinian” element in this dissertation (how Darwin's views are used in Dewey’s natural pragmatic ethics) should be understood as acknowledging the continuity between ultimate evolutionary pressure and proximate social intelligence in our social environment. When I argue that Dewey’s ethics are Darwinian, I mean that Dewey views morality not as a set of fixed rules, but as a biological process of adaptation. For him, being ethical is functionally similar to natural selection occurring in real time. “The good is the meaning that is experienced to belong to an activity when conflict and entanglement of various

incompatible impulses and habits terminate in a unified orderly release in action” (1922, 210). Thus, ethics is the ongoing evolution of human conduct. I conclude that in the ultimate/proximate scheme, Dewey is found in the middle ground. He accepts the ultimate explanation of Darwinism (we are evolved with a survival and growing urge), yet he regards the proximate flexibility of human intelligence to develop normative rules. In short, according to Dewey, our morals have biological origins, but their justification lies in their pragmatic efficacy in our lived experience.

3.5. Evolutionary Compatibilism: Rethinking Moral Agency in a Determined World

From Lamarck to Spencer, and from Dawkins to Churchland, many evolutionary thinkers argue for the biological origin of moral qualities. However, this biological treatment of ethics leads us to a major tension: between biological determinism and the idea of free will, which is central for one to be a moral agent and be evaluated accordingly. On the other hand, if we accept the claims of biological determinism that our behaviour is shaped and influenced by genetic and molecular patterns, can we still say that we are truly free to make moral judgments? To this end, I explore the “compatibilist” approach that reconciles evolved biological mechanisms with the possibility of moral agency.

While advocates of free will contend that humans are the free agents of their actions with the capacity to make self-initiated choices, determinists believe that our actions, decisions, and choices are determined by preceding causes. The implications of these contradicting principles for morality are that while the former admits that human beings are morally responsible for their actions, the latter denies this moral position. To maintain the claims of free will, two things or conditions have to be fulfilled. First, there must be a “possible alternative” (agent “could have done otherwise”); second, the agent should pass the decision from his internal will, not from external authority (Willmott 2016, 3). The contention between the irreconcilable

principles of determinism and free will gives rise to a third approach called "compatibilism"—the view that free will is compatible with determinism, and that a moral agent can be responsible even in a causally determined world (McKenna & Coates 2024, 4). There are variegated versions of compatibilism as well as counterarguments for it. Addressing all the classical and modern arguments of compatibilism and presenting the criticisms given to them is not within the scope of this chapter.

Therefore, I am presenting only the efforts made by modern biological experiments to substantiate the claims of compatibilism. The evidence from the field of genetics and neuroscience shows that our behaviours, including our moral decisions and choices, are influenced by certain genetic factors and brain structures within a given environment. At the same time, it entertains the idea that moral agents possess the capacity to make self-initiated decisions and evaluations; they are not devoid of free will (Pazhoohi 2018; Willmott 2016; Herrick 1926). These scientists agree that the evidence corroborating the truth of biological determinism is much stronger than the evidence proving that human beings are entirely free in their moral choices. On the side of hard biological determinism, Nobel laureate Francis Crick challenges the idea that humans are free to form and control their behaviour. Here is his reductive argument.

You, your joys and your sorrows, your memories and your ambitions, your sense of personal identity and free will, are no more than the behaviour of a vast assembly of nerve cells and their associated molecules...A person's mental activities are entirely due to the behaviour of nerve cells, glial cells, and the atoms, ions, and molecules that make them up and influence them (1996, 3).

This frequently quoted passage underscores the perspective known as "neurobiological reductionism," which reduces all human complex experiences, pleasures, pains, and thoughts to the simplistic, atomistic, or molecular interactions in the brain. As Martin Heisenberg (2013,

97) and Willmott (2016, 32) tell us, “neurobiological reductionism maintains a mechanistic view of the mind”, which takes mental activities as the result of physical processes occurring within the brain. From such a mechanistic view of the mind, one can derive the idea that there is no need to invoke non-physical entities or forces to explain human consciousness or behaviour. In other words, attributing mental activities just to the behaviour of nerve cells and molecules raises questions about the existence of free will and personal agency.

Though Willmott is not an incompatibilist, he argues that modern laboratory experiments examining brain activity related to voluntary or physically uncaused decisions and evaluation “have been widely reported to undermine the notion of free will” (2016, 30). Among these experiments, let us examine two case studies carried out on the gene called MAOA, which provides instructions for making an enzyme called “monoamine oxidase”, responsible for breaking down “serotonin”. “Serotonin is a molecule with a variety of functions, including a role as both a hormone in the peripheral blood system and as a neurotransmitter within the central nervous system” (2016, 27).

Willmott reports that variations for “serotonin” in the blood can cause humans or mammalian animals to display different traits. Low concentrations of this molecule can lead to depression, whereas a higher amount of it is associated with "manic behavior" Thus, monoamine oxidase is in charge of controlling or balancing serotonin and eliminating it through urine. “Mutations which lead to low activity or non-functional versions of MAOA will therefore cause neuroactive compounds to be present for an extended period” (ibid). Then the two case studies that I am going to present are conducted according to these biological facts.

The first study was carried out by Brunner et al in 1993 on a Dutch family who exhibited impulsive aggressive behaviour. The urine and DNA test of this aggressive male in the family resulted in a “point mutation” (alteration or change). This DNA alteration results in the

production of a “shortened and non-functional version of monoamine oxidase. The men with this mutation were found to have high levels of neurochemicals in their urine and brains as well (2016, 29). To substantiate the idea that genes affect behaviours, Willmott provides another case study on "transgenic mice." Here, researchers deliberately deactivated the MAOA gene. The final result was similar to what was seen with the aggressive human subjects. The serotonin level in the mice, in which the MAOA gene is deactivated, was higher. Consequently, the mice subject display “more aggressive behaviour than the control mice with the MAOA gene intact”(ibid). From these two cases, the researchers conclude that “at least some of our conduct is hard-wired; it appears to support a deterministic view of behaviour” (Willmott 2016, P.29).

So how do compatibilist scientists preserve room for human freedom in a highly biological and causally determined world? How do they make sense of morality and responsibility in human subjects whose conduct is hard-wired? To answer this question or to bring together biological determinism and freedom, some scientists and philosophers regard freedom as a human quality that comes in the course of evolution. In *Freedom Evolves* (2003: 305-8), Daniel Dennett, Martin Heisenberg in *The Origin of Freedom in Animal Behaviour* (2013: 95-106), and Flavio Keller and Jana M. Iverson in *The Role of Inhibitory Control of Reflex Mechanisms in Voluntary Behavior* (2013:108-9) assert that freedom as human behaviour, moral agency, and responsibility have emerged from evolved cognitive capacities, which is consistent with the scientific understanding of evolution and compatibilism.

Dennett, as a modern compatibilist, insists that 'freedom is real—as real as language, music, and money—so it can be studied objectively from a no-nonsense, scientific point of view' (2003, 305). For him, moral agency, free will, and a sense of responsibility are recent phenomena resulting from the long evolutionary process. Freedom, as a unique feature of human beings, was a result of an evolved brain that has been designed by natural selection.

Nevertheless, the next question is, how did freedom evolve, and what was its evolutionary function or contribution to survival?

To answer such a question, Dennett moves back in time when there were no agents with the capacity for freedom or reason. However, “there were reasons long before there were reason-representers (human beings)” (2017,64). Then, according to Dennett, as early human evolution unfolded, reason transforms into what he terms “free-floating rationales.” To avoid the anticipated ambiguity associated with free-floating rationales, Dennett advises us to perceive them similarly to the realities of “numbers and gravity”: devoid of intention and purpose, yet possessing independent patterns and laws that exist autonomously, preceding their discovery by human beings. According to Dennett, free-floating rationales underlie the evolutionary process. “The moves and countermoves in evolution have rationales even if no one explicitly considered them, and they preceded our articulated, considered rationales by billions of years” (2003,154). In other words, the evolutionary process can be understood as a series of “trial and error” iterations.

Through these iterations, genes gradually develop a predictive capacity derived from the challenges, opportunities, computations, and risks inherent within the intricate web of life. Dennett considers this gene capacity, along with similar mechanisms, as the foundation for complex, multi-layered behaviours at both societal and psychological levels. “The very cells that compose us are the direct descendants of cells that once had to solve a huge problem of cooperation, and succeeded” (2003, 156). Thus, Dennett maintains that the predictive capacity of genes, aided by language and culture (Dawkins would agree), forms the basis for human freedom and conscious choices. Unlike hard determinists and advocates of libertarian free will, Dennett insists that although some complex human behaviour may be influenced by genetic patterns, culture and education have the potential to modify many—if not all—of our

genetically inherited traits. Thus, free will, moral sentiment, moral agency, and other social dispositions, according to both Dawkins and Dennett, are products of the evolutionary process.

The approaches of evolutionary compatibilism can, I think, resolve the philosophical tension between genetic determinism or biological reductionism and moral freedom or autonomous moral agents. The evolutionary compatibilist account of morality allows us to see the evolutionary and normative dimensions of morality and moral agency. In doing so, it maintains the freedoms of moral agents in his/ her judgment and action. The evolutionary compatibilist's main claim is that morality is “an evolved capacity for normative evaluation and motivation, which mediates between biological impulses and social living” (Joyce 2006, 3). Moral sentiments or qualities (sense of fairness, sympathy, guilt, etc.) are the results of evolution, or they are prosocial qualities of our ancestors. Michael Ruse similarly notes that morality, developed through evolution, serves as a social mechanism for coordinating behaviour and promoting harmonious group living (1986, 95).

However, claiming that morality has a biological origin does not entail that we can derive moral principles from the laws of evolution; or “the fact that a trait is biologically evolved does not make it morally right or wrong” (Joyce 2001, 77). As Joyce argues, Dennett, Dawkins, and Ruse would agree, evolution can inform us how we develop moral qualities, but it cannot give us binding moral principles. Evolutionary ethics recognise the difference between the descriptive and normative aspects of morality. Descriptively, it explains the biological origins of our moral sentiments or prosocial propensity; and normatively, it recognises the role of experience, culture, and philosophical reasoning in shaping and advancing ethical norms. Not maintaining this balance leads to hard biological/genetic determinism that reduces morality to mere instinct and denies the freedom of moral agents.

Dennett and Dawkins try to integrate the biological and social factors in moral development. In their view, we have some cultural or social forces over biological ones; we humans are not rigidly controlled by our genes. As Dennett puts it, “You are not a helpless victim of your genes or your upbringing. You are a product of them, yes, but you are also the current editor of yourself” (2003, 235). Similarly, Dawkins argues that though we are shaped by the genes we inherit and the ideas we absorb, we are not bound by them. Rather, we possess the rare capacity to question our instincts, to challenge our traditions, and to redefine ourselves. We are not merely products of biology or culture—we are agents capable of transcending both, capable of choosing the kind of lives and societies we wish to create (2006, 201). Such a view of human beings as moral agents, who are rooted in biology but not completely determined by evolutionary forces, captures the central claim of evolutionary compatibilism.

3.6. Conclusion

By integrating insight from classical and contemporary biologists and analysing their justification for the validity of evolutionary ethics, I defend the idea that though moral sentiment has a biological origin, it cannot be reduced to a mere genetic or biological level. I emphasise that evolutionary ethics takes into account the biological (instinctual), cultural, rational (reflection) and normative factors in the process of moral development. Darwin, through his four stages of moral evolution (social instincts - memory and habit formation - language and reason application - conscience), shows the evolution of moral sentiment. His determinations to evolutionary ethics give biological justification for ethical naturalists, though faced critique from his contemporaries, specifically, Huxley, who viewed the ethical domain as standing in opposition to evolutionary processes. Huxley (though he is a bold Darwinian as to explaining and understanding the nature of living beings) categorizes moral qualities out of human biological nature, for the two have contradictory goals: while the former sets biological

fitness as a goal that favours strength, competition, self-interest, and the elimination of the weak, the latter is supposed to work for moral restraint, altruism, compassion, and justice...etc.

Against this direct rebuttal to evolutionary ethics, Dawkins argues that we can derive moral materials from nature—i.e., behaviour arises from gene-level strategies such as kin selection, reciprocal altruism, and reputation building. Yet he also acknowledges the power of culture, experience, reflection, and normativity in general to shape morality. Dawkins corrects the common caricatures of evolutionary ethics, specifically, the mistaken belief that evolution by natural selection necessarily promotes selfish traits. He clarifies that selfishness is not an inherent quality of the organism itself, but a “metaphorical description” of how genes behave in evolutionary terms.

Thus, being selfish is the characteristic of a gene, not an individual’s organism. He claims that this genetic “selfishness” can give rise to complex, cooperative, and even altruistic behaviours in organisms; for such behaviour increases the survival chances of shared genes. Dawkins concludes that while we are shaped by evolution, we have the unique ability to rise above the “tyranny of the selfish replicators” of our genes, and can choose to act with empathy, reason, and moral purpose.

Churchland’s neurobiological approach to moral quality also justifies the claims of evolutionary ethics. She contends that the basis of morality (caring, fairness, and social learning...etc) is rooted in neurochemical processes shaped by evolution, particularly in the mammalian brain. But she insists that these biological bases of morality are advanced through experience and cultural influences. Her argument that the capacity of “caring” arises first from self-preserving neural structures corroborates how neuroscience can explain the normative realm. Her attempt to resolve the fact–value dichotomy by grounding normativity in brain evolution supports the naturalistic (but not simplistic or genetic determinist) account of modern

evolutionary ethics. Arguing for evolutionary ethics leads to the philosophical conflict between “biological determinism” and “moral freedom”. Thinkers like Dennett and Heisenberg argued that free will and moral responsibility are evolved traits that emerge from complex cognitive and environmental influences.

Dennett’s proposal of evolutionary compatibilism reconciles evolutionary ethics and freedom of moral agents. It not only explains the biological origin of morality but also preserves the autonomy and responsibility necessary for moral life. Therefore, I concluded that evolutionary ethics can maintain both a scientific understanding of moral origins and a philosophically meaningful account of moral agency.

Chapter 4

Moral Growth as Adaptation: Deweyan Pragmatism and the Evolutionary Ethics

4.1. Introduction

Dewey, against classical ethical theories, provides biological and pragmatic justification for the origin of ethics. He applies evolutionary thinking to his pragmatic definition of ethics; he treats it as a dynamic, adaptive, and experimental process (1898,179). By challenging the rigid dichotomy between facts and values, Dewey employed a scientific inquiry or experimental approach to ethics. To entertain his scientific inquiry of ethics, I first explore his response to the “indefinability of the good” and the “fact–value dualism” raised by Moore and Hume, respectively. Through this analysis, I argue that Dewey’s ethics provides a flexible and context-sensitive framework capable of addressing the complex and evolving challenges of modern moral life.

4.2. Dewey’s Response to the Indefinability of the Good and the Fact–Value Dichotomy

Before I examine Dewey’s reason for making ethical issues the subject of scientific inquiry, which entertains ethical naturalism and shares common ground with evolutionary ethics, I believe it is important to look first at how he responds to the indefinability of the good and the fact–value dichotomy raised by Moore and Hume, respectively.

In *The Quest for Certainty*, Dewey needs to resolve the fact-value duality, for it has been a problem in our practical lives. He argues that reconnecting our understanding of nature(fact) with the values that shape how we live is one of the biggest challenges we face today. The way we think about the world—through science and reason—often feels disconnected from the beliefs and moral principles that guide our choices and actions. So, bridging this gap is essential if we want to live in a more integrated, meaningful, and sustainable way (1930,16). To

reconcile this gap, Dewey drives a solution from the "experimental method" or scientific procedures, for he believes that the experimental method (where thinking and doing or “theory and practice” are interwoven) is an effective way to deal with any given situation and to transform it (1989, 68). The application of the experimental method, according to him, should not be limited to scientific facts, but it can be applied to our normative realm. In other words, the same process of inquiry, testing, and reflection that helps us understand physical facts should also help us clarify and assess our ethical principles and value judgments (1989, 68).

In his attempt to discard the rigid fact-value dichotomy, Dewey redefines "logic" and "thinking." He challenges the claims of the classical or traditional logics, specifically Aristotelian, empirical, and transcendental logic. He contends that because thinking is an ongoing "doubt-inquiry process," we should reject the claims of all these logics. For him, all three doctrines share a common flaw: they posit something fixed outside of the inquiry process. He first criticises Aristotelian logic for placing the first principle and empirical matters of fact outside the thinking process (1930, 17). He develops the same criticisms against empirical logic and states that empirical logic starts with fixed particulars or given facts that are externally imposed on the thought process. These facts and fixed principles limit inquiry rather than emerging as distinctions in seeking truth.

Finally, Dewey challenges the claims of transcendental logic. He continues to say that transcendental thought, viewing itself as the eternal and fixed structure of the universe, does not engage in an actual inquiry process. Instead, transcendentalism takes practical human thinking (involving doubt and investigation) as a "finite, imperfect character, which condemns us to the task of merely imitating and reinstating 'thought' in itself, once and forever complete, ready-made, fixed(ibid.,21).

In contrast to the above logic, Dewey defines logic as a directive instrument in the inquiry process, in which an 'indeterminate situation' is transformed into a temporally determined one. He incorporates his theory of logic as an integral part of the dynamic and ongoing nature of human thought and inquiry. For him, an object of knowledge is not a pre-existing and ready-made; instead, it is something reached and ordered after inquiry. In challenging classical assumptions, Dewey argues that logical propositions or judgments are not merely an ideal or mechanical process that determines the truth or falsity of a proposition based on their formal (detached) relation. Instead, he posits that they are integral parts of the dynamic nature of inquiry and inseparable from the process of inquiry and knowledge formation. Let us see his treatments of factual judgment and value judgments for clarity. "While the former is intended to answer questions like 'What is the case of something,' 'What can we do,' and 'What will be the consequence of this or that action,' the latter pertains to questions like 'what ought to be the case?' or 'What should we do?'" (1988, 213).

We must establish a logical (existential logic) connection among Dewey's perception of the concepts of knowledge, inquiry, and judgments to understand his rejection of fact-value dualism. Knowledge is the outcome of an inquiry that transforms an "indeterminate situation" into a temporarily determined one. Dewey refers to this process as "judgments on the resolution of a problematic situation" (1938, 321). In the process, value judgments and factual judgments are interdependent. He disregards any form of rigid dualism, as exhibited in matter vs. spirit, fact vs. ideal, and is vs. ought. He reconciles this antithesis by emphasising the 'unity of human experience.' His theory of judgment, encompassing both factual and value judgments, is an attempt to show that, contrary to the classical view, descriptive statements can explain ethical statements. He believes that the study of value judgments can borrow and apply methods from natural or biological science, for the latter is more effective in addressing specific problems in a given situation (1998,12).

However, how is it possible to treat ethical judgments scientifically or factually, i.e., how can one avoid fact vs. value dualism? To answer this question, we have to first see his account of judgments. For Dewey, judgment is not an arbitrary assertion nor a simple, personal evaluation; rather, it is a provisional solution or contemporary settlement of problems. It is arrived at through a multifaceted process of inquiry, encompassing various mental activities. This process involves “evaluating, estimating, assembling, testing, developing, analysing, and critiquing facts and hypotheses” in light of their contributions to the solution (Ratner1930, 255). It involves changing a previously uncertain or unresolved situation into one that is specific and determined; it represents the objective resolution of a problematic situation (Dewey1938, 133). He overcomes the dualism by finding a common ground between moral and scientific judgments. Both emerge as the provisional resolution for the problematic situation; the undetermined situation is “a shared link between scientific and moral inquiry” (ibid., 126). His reconstruction of classical logic as a theory that explains the relation of ideas in terms of fixed particulars and universals, and experimental logic as a theory of inquiry into indeterminate situations.

Thus, instrumental logic is not limited only to a specific domain as such; rather, it is employed in the process of moral inquiry, too. Since moral inquiry arises in response to a problematic situation, its aim must be to provide a resolution. At the same time, it has a scientific dimension, insofar as it involves the formulation and testing of hypotheses that can effectively address the moral issue at hand (Koch1998.20).

Dewey's instrumental logic, as a method for scientific and moral inquiry, redefines the notion of ‘subject’, ‘copula’, and ‘predicates’ in judgments(for instance, *in the proposition all animals are mammals*, the subject is ‘animals’, the copula is ‘are’, and the predicate is ‘mammals’. He contends that the classical view of these components of the propositions is

the root of dualism. Dewey discards classical logic, for it treats the subject and predicate as fixed entities external to the judgment, operating independently. In this context, the judgment merely includes or excludes a class of things from the subject, rather than actively participating in constructing the subject matter. Simultaneously, Dewey notes that the copula in classical logic simply connects the subject and predicate as categorically fixed entities; it serves only as a reference point between predicates and subjects.

In contrast, in instrumental logic, a copula transcends its role as a linguistic tool and becomes an integral component of the proposition or judgment that articulates reality, beings, or existences. Dewey argues that all these elements of the proposition should be treated as instruments of inquiry, and their validity is evaluated based on the effects they generate.

The relationships between copula, subject, and predicate are dynamic and mutually interdependent. The content of both subject and predicate is determined in mutual correspondence through the dynamic process of thought—that is, through the unfolding of inquiry itself (Dewey 1938, 126). Dewey concludes that through instrumental logic (experimental methods), rigid dualism can be overcome. However, how exactly is the ought statement logically derived from the is statement, or how does his instrumental logic maintain unity between facts and values? His line of reasoning proceeds as follows: the very definition of judgment presupposes a problematic situation, making evaluative decision a form of practical judgment. Here, the crucial starting point is the “living context” where normative and descriptive statements are functionally united to address the problematic situations, or indeterminate ones. Value is not something added to facts. Rather, “a judgment of value is not a separate kind of judgment from a judgment of fact”. Every time we make a judgment about a fact, we're also making a value judgment, for we are trying to make sense of a confusing or uncertain situation and turn it into something clear and settled (1988, 426-27). He does not see

"ought" or value as categorically separate imperative imposed on reality or fact, but rather as a new response to reorganise existing, yet conflicting, "elements into a new order and harmony" (1986, 186).

Sidney Hook in "The Quest for Being" simplifies Dewey's unification of fact and value as follows: If there is no value claim in the premises, then no conclusion bearing an "ought" or should can validly follow (Hook 1961, 59). It implies that normative force cannot come out of nothing, but it must already be rooted in the premises to appear in the conclusion. Hook adds that in situations where action is necessary or where the problem is, the question of what ought to be done arises logically. The problem or the indeterminate situation is the combination of fact and value convincing three points. First, it means that the ought or value claim does not come from abstract logic; instead, it (2nd) arises from the practical needs of the situation or the urgency of determining the situation. Thirdly, it implies that 'factual information' is an integral part of deciding what ought to be done. In short, the fact-value is not a matter of argument but the "situation itself" (1961, 59).

Let us consider, as an example, an ethical statement in the context of refugees displaced by war, facing a scarcity of food, medicine, and humanitarian aid.

The factual situation: The situation involves a population of war-displaced refugees dealing with a shortage of essential resources such as food, medicine, and humanitarian aid, necessitating decisions on their distribution.

Ethical/Ought Statement: In a community of war-displaced refugees with limited access to necessities like food, medicine, and humanitarian aid, it is ethically imperative to distribute these resources in a manner that addresses the urgent needs of individuals, taking into account the humanitarian demands and expectations of the community.

Therefore, resources should be distributed in a way that effectively addresses the immediate needs and requirements of individuals among the war-displaced refugees, considering the demands and expectations of the community for humanitarian aid. The ethical "ought" statement is derived from the practical judgment of the situation, incorporating both the factual aspects of resource scarcity and the normative considerations. Dewey insists that ethical conclusions are rooted in the specific living context and are derived from an understanding of the situation itself.

He concludes that what is considered a "relevant fact" is determined by the ideas/values one already has, and the appropriateness of an idea/value is influenced by the facts that have been accepted (ibid). He calls this interdependent relation a "correlative operation", which means fact and value operate together, each affecting and being affected by the other.

Dewey explicitly rejects the indefinability of intrinsic value/good. He argues that "value is definable in that one can identify and distinguish things possessing it, and the property serving as the basis for their demarcation can be indicated" (1925,314). It implies that "value" is not inherently vague or undefinable; instead, it can be defined because one can recognise and differentiate things based on their specific property or characteristic that forms the basis for distinguishing, experiencing and evaluating the things in question. Dewey defines value as "good" and "right." Value as "good" refers to something, events, or a state of condition that promotes or furthers activities. "Value in the sense of right is inherently connected with that which is needed, required, in the maintenance of a course of activity" (1988, 242). For Dewey, Good is present in the ongoing development and increasing significance within an activity. He believes that value is closely tied to the directions of change in the quality of experience; it is not an abstract or detached concept but is intricately connected to what is perceived to "have rightful authority in guiding conduct" (1988, 245).

Dewey is not alone in challenging the indefinability of intrinsic value and the impossibility of deriving moral values from factual judgments. Hilary Putnam (2004), R.S. Hartman (as I have examined before in chapter two), Barton Perry (2016), and Kenneth Walden (2022) make points against Moore and Hume. Walden presents a counterargument regarding the ontological status of value in opposition to non-naturalists. He claims that "fact and value, or explanation of action and practical reasoning, cannot be studied separately; the webs of normative and factual judgments are joined in the same manner that mathematics and natural science are integrated" (2022, 12). It is worth following Walden's argument to justify the entanglement between facts and value judgments.

Here is his argument:

(P1) In our efforts to explain facts, we should employ "some methodological precepts" to avoid "underdetermination" of our explanations

(P2) If our goal is to explain actions or facts, then these principles should aim to make an event comprehensible as an action.

(P 3) What we find comprehensible as action depends on our own theory.

(P 4) This theory will include value judgments.

Therefore, our methodological principles in explaining action will refer to our value judgments.

Such arguments appear to commit circular reasoning or the fallacy of begging the question. However, a closer look at this argument reveals that the flow of the idea that appears to be circular reasoning arises from the intertwined nature of facts and value claims. Walden calls this entanglement "the holism of fact and value." Specific value judgments formed during our practical discussions are relevant to action explanation because they affect our understanding

of what is understandable in the method of action (ibid.). Walden not only maintains the existence of value but also claims that it is impossible to understand reality without human value judgments. He argues that since those who explain actions are also performers of actions, it can be assumed that these two undertakings, performing actions and explaining them, relate to precisely the same entities. Therefore, our initial assumption should be that these two projects are intertwined (2022, 13).

Barton Perry provides another powerful defence against the indefinability of intrinsic value or good. His analysis of value is consistent with a holistic view of the relationship between value and facts. He agrees with Moore to the extent that value as the predicate is contingent on the thing it is predicated of. He maintains that defining a predicate solely in terms of its subject is impossible because this would obliterate the distinction between subject and predicate. Nevertheless, this does not mean that a predicate is inherently indescribable. For example, in the statement "the room is quiet," the term "quiet" cannot be defined exclusively in terms of the room, but that does not imply that it is indefinable. "It would be impossible to define if it were unanalysable, but this is not the case" (2016, 21). Perry has other reasons to disagree with the doctrine of indefinability of the good. For example, if the value or goodness is indefinable, it must also present "indefinable evil." However, this results in the relationship of polarity between good and evil becoming both indefinable and incomprehensible. Thus, the doctrine of indefinability is methodologically wrong.

Berlean approaches the fact-value (is-ought) relationship on different bases to settle the old value-claim debates. First, he differentiates value experiences (valuations) from value judgments (evaluations). He stresses that the controversy "in dealing with value" emerges from "the failure to distinguish clearly and effectively between value experience and value judgment" (2015, 43). The former represents the specific experience (likings, dislikings,

aversions, and appreciations) we feel, or receive from particular objects or states of affairs. The latter refers to our normative statement or appraisal of those experiences or feelings. Therefore, valuation, or the sense of value, is the value we have directly experienced in its "uniqueness and particularity." Berleant concludes that the problem in value-fact separation is not from empirical fact or experience but from our "conceptual decision." When we regard the value features we attribute to objects as nonempirical properties, we make a conceptual decision rather than an empirical one. It is a decision that raises the question of whether values are, in fact, factual (ibid).

Hilary Putnam regards the rigid category and the fact-value dichotomy as reasons for confusion in the process of defining value. In *The Collapse of the Fact/Value Dichotomy*, Putnam contends that the descriptive and normative statements are not entirely exclusive; rather, they are interwoven. The very structure of language (the concepts and terms it employs) reveals the "entanglement" of facts with values (including ethical and aesthetic, and other dimensions of human significance). It indicates that evaluative meaning is entrenched in the way we understand and articulate the world. Putnam's treatment of 'thick ethical concepts' reveals that the prevailing dichotomy between fact/value or is/ought is problematic, as certain concepts are both descriptive and normative. For example, some 'thick ethical concepts' like 'cruel' and 'crime' defy the supposed fact/value dichotomy, sometimes used for "normative purposes and at other times as descriptive terms" (ibid. 35). Value or goodness is not indefinable, and there is no absolute dichotomy between factual and evaluative statements; instead, the two realms are interdependent. Factual statements cannot be logically analysed by themselves; evaluative expressions are meaningless without the former. Instead, "verification in science is a holistic matter" (2004, 133).

4.3 Ethics as the Subject of Scientific Inquiry: Dewey's Vision for Ethical Inquiry

Dewey's holistic perspective on value and fact, as I previously discussed, becomes clearer and more precise in his attempts to reconcile scientific judgment (scientific knowledge) with ethical judgment. As an extension of his pragmatic philosophy intended to solve practical problems, Dewey's treatment of ethical issues is scientifically oriented. Experimental inquiry (the only trusted and authentic approach) can and should be applied to ethical problems as well.

Thus, he reconceptualises ethics not as the application of theoretically perfect and absolute principles, but rather as a form of experimental, scientific inquiry—a process of intelligent, reflective adaptation to evolving social conditions in a given context with its specificity. According to Dewey, prioritising a scientific attitude or being experimental in our problems can mean “nothing less than a revolutionary change in morals, religion, politics and industry... The scientific attitude is experimental as well as intrinsically communicative” (LW 5: 115). This justifies his belief that ethics should follow the methods and culture of natural science, which commits itself to hypothesis, testing, critique, and revision until the given situations or problems are resolved and justified. Therefore, in this regard, ethics is no different. New ways of scientific life, economic realities, and new societal interactions continually generate novel ethical problems that necessitate new approaches and methods.

Ethical issues are not about how to rationalize a “rigid code” but how to navigate the novelties of life; and this demands observation and hypothesis experimentation” (Dewey 1932, 390). He believes, as someone known for challenging any forms of duality, that the categorical separation between scientific judgment and moral judgment is incorrect; rather, “it is a product of a rigid and fixed conception of knowledge” (1932, 175). He regards both scientific and moral knowledge as means or methods to address the demands of certain conditions. The two are unified “phases of the same continuous process”.

In light of this, we can argue that Dewey's vision for ethical inquiry rejects the rigid dichotomy between "morality" and "regulation." This distinction often assumes that true morality requires fixed, antecedent principles independent of practical application. From a Deweyan perspective, however, ethical principles are intellectual tools designed to resolve real-world conflicts. Their validity is derived from their capacity to address specific social problems (indeterministic social issues) rather than from theoretical perfection. What may appear to be mere pragmatic negotiation or social regulation is, in fact, the active exercise of "social intelligence." By framing ethics as a subject of scientific inquiry, Dewey redefines public morality as the intelligent, democratic management of shared problems. Thus, the "democratic regulation of complex social issues" is not "something else" or a substitute for ethics; it is the very manifestation of moral inquiry. By treating ethics as a dynamic process of experimental adjustment rather than a static code, the distinction between the "moral" and the "regulatory" vanishes into the ongoing, scientific project of communal living (1922).

Dewey's scientific approach to ethics stems from his belief that moral problems resemble scientific problems. Just as scientific issues are specific, concrete, and situational, so too are ethical problems. This implies that we ought to adopt similar patterns and methods. He states, "only the method of reflective inquiry, experimentally applied to problematic situations, can resolve moral uncertainty" (MW 14:179). Dewey observes that classical ethical theories fail to apply a scientifically oriented method in their ethical deliberations. Deontological (duty-based), teleological or utilitarian (end-based), and virtue (character-based) ethics construct their frameworks upon "isolated factors, like intention or consequence or rule" (MW 14:179).

Dewey identifies a limitation in Deontology (Kantian ethics), which equates morality with adhering to "fixed and immutable rules," where the moral agent plays no role in the formation of the ends and possesses no authority to participate in their justification. Although Kant's

categorical imperative explicitly states that moral agents are autonomous and the means for none, Dewey argues that “the doctrine of fixed duties” requires moral agents to be mere passive conformists. Driving ethical principles from the “will of God or the intrinsic nature of Reason makes moral growth and progress unintelligible" (MW1922, 206).

Dewey follows the same line of reasoning in his critiques of teleology (ends/consequences-based ethics). He treats the *greatest good* (the realisation of which is the central claim of utilitarianism) as the way he conceives *duty*. Justifying the moral states of the action based on their coherence with the greatest good, in Dewey’s view, is overstepping the “concrete conditions”. His point of departure from teleological ethics is its categorical separation of means and ends. For Dewey, “Ends are not marked out in advance of action; they are formed and reformed in the course of action” (MW1922, 177).

Thus, to treat the end as categorically isolated from the means and to take it as the measure of evaluation is to disconnect ethics from real moral life. The greatest good as an isolated end, he continues to argue, is “a kind of empty abstraction” which disregards specific circumstances and experiences. As deontology ethics requires moral agents to be passive conformists of rigid principles, teleological ethics also assumes a moral agent who is not experiencing his/her actions. In short, utilitarianism denies, for Dewey, the active role of intelligence in moral life, for it idealises the abstract and isolated good or end.

The defect he observes in deontological and teleological ethics is also present in virtue ethics, albeit in a different form. His disagreement with virtue ethics begins by rejecting the common understanding of virtue as a stable character trait. Instead, he views virtues as 'functions of intelligence' that respond to new situations. Dewey argues that to take virtue as a fixed or unconditional disposition of a moral agent is to presume that moral situations or conditions are

similar in time and place (MW 14:202). For Dewey, virtue must be understood dynamically, not as a possession but as a mode of intelligent adaptation to moral problems.

These three classical ethical theories, in light of Dewey's appraisal, single out one moral element against manifold and diversified conditions. One theory may emphasise intention, while another focuses on the end, the act, or character as the foundation of morality. Thus, "each theory, in treating one factor as final, has had to distort the other factors" (1992, 179). Isolating one factor against all other interconnected situations leads to tension, fragmentation, and distortion, as it deemphasises the complex interplay of all moral dimensions in real experience. In other words, classical ethical theories fail to address the complexity of moral problems.

Like other kinds of human problems, ethical problems, Dewey suggests, arise from diverse sources and contexts that demand active, critical, and practical analysis. Therefore, our ethical theory—as an action-guiding principle—should "not begin with universal principles or a ready-made moral code inherited from reason or revelation, but rather with the analysis of concrete situations" (1932, 248). His total detachment from abstract ideals presumes that moral problems are not ideal but rather concrete and empirical and cannot be resolved by applying abstract rules but by engaging in a dynamic process of problem-solving.

Our moral life, according to his teaching, should be guided by "reflective intelligence rather than allegiance to abstract ideals (ibid.), for ethical issues are not dogmatic but contingent and open for revision and reevaluation. To put it another way, we should view our ethical principles as tools that empower us to address current issues. As for the methods, the worth of ethical principles is in their consequence, not in their adherence to the command of any kind of authority. Such an approach and justification presume that scientific or experimental methods can be applied to ethical issues.

When Dewey commits himself to scientific ethics and applies experiments in his inquiry, he does not turn ethics into laboratory science; instead, he follows scientific ways of reasoning in the process of ethical evaluation. Neither did he advocate the idea entertained by some biologists that “the time has come for ethics to be removed temporarily from the hands of the philosophers and biologized” (Wilson 1975, 562). He is well aware of the force of sociocultural influence on moral reality and does not accept such reductionist views that understand ethics from genetic and hormonal perspectives. Thus, his experimental method and scientific approach to ethics should not be confused with biological reductionism and laboratory experiments. His usage of scientific terms like “hypothesis,” “observation,” “experimentation,” “evaluation,” and “revision” on normative issues implies that moral problems arise from conflicting situations.” To address this conflict, we have to first identify the moral tensions and values at stake, as science does.

His appropriation of the scientific method to his pragmatic ethics does not change “science” or systematic inquiry into a “metaphorical” concept, nor does he discard the validity of laboratory experiments. Rather, Dewey maintains a “continuum of inquiry”: the logical structure used to solve physical problems in natural science is identical, and should be used for moral issues. Dewey’s appraisal of the “experimental method” is not restricted to empirical measurement or the use of instruments, but instead refers to the process of the “controlled transformation of an indeterminate situation into one that is so determinate... as to convert the elements of the original situation into a unified whole” (1938/1991, 12:108). In this sense, we can say that his account of experimentation is broad but not different from the one used to resolve empirical problems. He insists that moral judgments are “hypotheses” to be tested by their consequences. In his view, “the logic of inquiry is the same in the field of values as in that of facts” (ibid. 220). When a moral agent acts on a value judgment, they are performing a social experiment. This is not biological reductionism; it is the recognition that “judgments about values are

judgments about the conditions and the results of experienced objects" (*ibid.* 212). However, it does not mean that Dewey suggests that laboratory experiments are unscientific. He views the laboratory as a specialised environment or process where variables are isolated to arrive at high precision or justification. He contends that science is an "attitude and a method" rather than a specific location, and "the experimental method is not a particular method of doing things... it is a way of thinking about the things we do" (1929, 218). Thus, extermination (laboratory science) is one application of scientific inquiry that must be extended to normative issues to avoid "dogmatic assertions" (*ibid.*, 320).

Then, we should move to the formation of hypotheses or propose moral responses. The given responses are tested against their practicalities in practical life, which resembles experimentation in the strict sense of the term. This leads to the next step, which is to evaluate the moral responses to see whether they are capable of resolving the issue for the present. Finally, Dewey suggests that moral agents, as active experiencing beings, are free to revise or adjust guiding moral principles. In this way, "Only intelligence—observation and experimentation directed by purpose—can inform conduct in ways that lead to enduring satisfaction and shared goods" (1922, 201).

4.4. The Ethics of Adaptation and Dewey's Evolutionary Reinterpretation

Dewey, in his examination of Professor Huxley's lecture on "evolution and ethics," elaborates on the doctrine of "survival of the fittest" at the cosmic (biological) and ethical (social) levels. The cosmic process involves "struggle and conflict," whereas the ethical process is centred on empathy and collaboration. While the cosmic process leads to the survival of the strongest, the ethical process aims to ensure that as many individuals as possible can survive and thrive. Dewey ethnicizes or socialises the term "fit" and argues that if we consider fit to mean the ability to conform to the current social structure, including all of its customs, requirements, and

values, then we can argue that the "most fitting" individual under these circumstances is also the most excellent one (1898, 323).

Dewey cautions against strictly adhering to the principle of survival of the fittest, as it would lead to the annihilation of individuals who are weak, sickly, defective, or insane. Dewey's analysis of the concept of fitness is a manifestation of his pragmatic approach to ethics. He appraises fitness based on an individual's ability to adapt to changes, including anticipated variations. Because our world is constantly evolving, it is important to assess one's suitability for the future rather than just based on current circumstances, which may not last. If someone is only suited to the present situation, they may not be able to adapt and thrive in the future. An essential aspect of one's fitness lies in the very adaptability that allows for effective adjustment to sudden and unforeseen changes in the environment. Hence, there is no justified opposition between ethical development and natural evolutionary processes—they are, in fact, mutually reinforcing (1898,327). The essence of such an argument is that in an ever-changing environment, modifying and adjusting the existing potential, skill, value, knowledge, and perspective is the rule of reality, with biological justification at the rudimentary level.

That is why Dewey applies the Darwinian selection theory to explain the progressive nature of ethics. He sees no difference between social selection and natural selection. He contends that it is impossible to discern any fundamental difference between how society regulates individual actions through public opinion and education and how natural selection operates. Both processes involve the promotion of certain characters and the suppression of others. Though the "struggle for existence" has been resolved in advanced human society, a form of selection is still moving. In other words, public opinion and education significantly promote and encourage certain traits while discouraging and punishing others consistently (Dewey 1898, 336). Updating the evaluation matrix and adjusting the manner of living in response to current

and future demand is still working at both natural and social progress. Dewey assumes that the latter is in charge of checking and regulating the former (which tends to protect its existence and species solely at the expense of the other) in such a way that it contributes to the overall good.

The following statement from Dewey shows the necessity of ethical or social correction of the biological force that sets animals in a struggle for existence. Like the gardener's activity, the ethical process is a constant struggle. We can never allow things to go on of themselves. If we do, the result is retrogression. Therefore, oversight, vigilance, and constant interference with conditions, as they are, are necessary to maintain the moral order, as they are to keep up the garden (1898, 324).

Dewey's perspective on ethics and moral development is based on an evolutionary view that rejects the traditional claims of moral philosophy that aim for moral absolutism and "immunity to change." Traditional ethics was characterised by its rigidity and lack of self-reflection, making it unable to adapt to new challenges. It relied on dogmatic methods to uncover and justify fixed moral goals and principles, which limited its ability to respond to changing circumstances. It prioritised the pursuit of certainty, stability, and simplicity over practical service to ordinary people by attempting to reduce the multitude of moral insights to a single, inflexible principle (Anderson, 2023). Instead, Dewey prefers to adopt a Darwinian way of thinking on ethics, morality, and philosophy. In his analysis of "the influence of Darwin on philosophy," he confirms that "Darwinian logic" enables traditional philosophy to shift its methods and motives from abstract concepts to concrete, practical concerns.

Rather than simply creating something for its own sake, it focuses on how that creation serves a specific purpose. This shift also recognises that things are constantly changing and evolving, shaped by the circumstances and intelligence involved. Rather than striving for some ultimate

goal of perfection or good, the focus is on the incremental improvements that can be made in the present to promote justice and happiness. Neglecting these practical concerns will lead to destruction and missed opportunities (Dewey 2016, 5). He saw philosophy as a means of solving actual issues and improving people's lives rather than an academic endeavour apart from everyday concerns. He stated that philosophy should be concerned with assisting people in adapting to their surroundings and making the most of their experiences, similar to how creatures adapt to their surroundings through natural selection.

In general, Dewey's Darwinian approach to philosophy emphasised the need to understand human cognition and behaviour within a practical, adaptable, and evolutionary context. The new paradigm opened by Darwin in human inquiries makes philosophy "responsible" and forces it to acknowledge its limitedness and fallibility. Dewey claims that, against the intellectual tendency before Darwin (which strives for perfection and infallibility), when we attempt to create an idealised and logical understanding of the vast universe, it is an admission of our limitations in comprehending the specific issues that pertain to us.

Throughout history, humanity has struggled with this limitation and has consequently shifted the weight of responsibility to a higher power they deemed more capable than they are. Dewey suggests that adopting a Darwinian approach to philosophy can revitalise it and make it a valuable tool for identifying and understanding the significant conflicts that arise in life. Doing so can provide insight into effectively addressing these conflicts and serve as a method for ethical and political analysis and prediction. He concludes that the scientific revolution that culminated in the publication of "Origin of Species" has been the most influential force in contemporary thought, dismantling old questions and paving the way for new methods, goals, and challenges. It has been a powerful agent of change that has catalysed the emergence of new problems and sparked new intellectual pursuits (1910, 19). Dewey's rejection of meta-ethics

shows his commitment to situational, specific, practical, and context-dependent ethics. The latter embraces the "natural selection" principles that adjust its appraisal and objectives according to the new environmental and situational challenge.

Ethics deals with real-life situations, and moral character is influenced by various factors, such as the actions taken, the intended outcomes, the motives of the individuals involved, their environment, and cultural and religious beliefs. As a result, more than simply establishing logical validity is required to address ethical issues. Thus, it is more reasonable to establish a biological basis for moral sentiment as ethical ideas and principles are not static but rather undergo continuous transformation and adaptation under changing societal circumstances and experiences.

Dewey's challenge of moral absolutism extends his critiques of the traditional metaphysics that strive to answer multiple practical questions with a single and fixed ideal. According to William James, the idea that reality is permanent is inaccurate, and it is not necessary or possible to completely understand it. "The reality is unfinished, still in the making, and therefore possibly it may be made better"(1909, 61). James and Dewey emphasise that our understanding of the world is limited and can be expanded upon as it evolves and changes. At some point in the future, it may be more plausible that there is a single source of knowledge and understanding. However, for now, we must also consider the possibility that this is not the case (2020). Rorty accepts all of this and applies it to his relational ethics. He finds a similar pattern between scientific progress and moral progress. He says that scientific advancement is integrating more and more data into a cohesive web of belief: data from microscopes and telescopes, with data gathered by the naked eye, data-driven into the open by experiments with data that has always been sitting about.

Similarly, moral growth is a function of increasing sympathy. It is not a matter of progressing from the emotive to the rational (1999, 77). Moral progress, according to Rorty, is measured not by its compatibility with meta-ethical principles but by its tendency to broaden moral standings. As Darwinian biologists suggest, morality evolved when our ancestors were still in a relatively small clan or tribal circle.

For Rorty, morality begins to emerge when one develops feelings of sympathy and compassion for the out-group. He identifies morality as a “new and controversial custom.” The notion that “prudence” is unheroic and morality is heroic is simply the realisation that trying something new and untested is riskier than doing what feels natural. That means applying the word "moral" to family members (children, wife, and siblings) appears to be meaningless, for "responding to the needs of family members is the most natural thing in the world" (Rorty, 1999, 77).

Rorty has slightly different accounts of our natural prudence, goodness, and responsibility for our family members. He believes that prudence emerges from our relational self-awareness. It is common for individuals to identify themselves based on their connections with family members. Our needs and those of our family are often interconnected, and our happiness is often tied to their happiness.

Therefore, Rorty concludes, we naturally respond in a manner that reflects this interdependence. “The moral evolution of both individuals and humanity at large depends on reshaping the individuals to hold an ever-widening range of relationships that define and enrich their identity (1999, 79). Dawkins, as I discussed before, approaches this relational self-awareness from an evolutionary perspective or genetic influences. Both writers believe that our kin-relational sense of self and genetically engineered prudence transcend the tribal circle and expand its borders by integrating all other creatures as moral patients. However, it is worth

noticing that though Rorty accepts morality's progressive or evolving nature, he treats it at the societal or community level.

Concisely, the evolution of human behaviour begins with altruistic acts towards family members in small groups, which influence their interactions with other groups. As understood by Dawkins and Rorty, this progression extends to encompass socio-cultural and racial boundaries. When such behaviours as care, love, responsibility, and collaboration are directed towards individuals outside of one's group, then only the notion of morality rises. If this progress were to be fully realised, the term 'morality' would cease to exist in our language, as there would be no requirement or means to differentiate between actions that align with our instincts and those deemed moral (1999, 81).

4.5. James's Melioristic Morality in Evolutionary Context

Meliorism is an important term in James's pragmatic philosophy. The *Oxford English Dictionary* describes meliorism as "the belief that the world tends to improve and that humans can help its betterment" (OED, 2025). In *Pragmatism*, James developed his use of the term meliorism and presented it as the third (the middle path) option besides "pessimism" and "optimism". "The issue between optimism and pessimism is a real one, and I venture to think that meliorism is a third alternative..."(1907, 137). Thus, meliorism, as a philosophical concept, treats "salvation"(betterment or improvement) of the world not as something guaranteed or secured(optimism), nor as something out of reach or impossible to achieve (pessimism). But he views that "salvation" is contingent: not inevitable, not hopeless, but dependent on human effort (1907, 137).

Succinctly, James's meliorism, which views human realities not as inherently good or evil but as capable of improvement through human effort, aligns with the central claims of evolutionary ethics and with Dewey's scientific approach to ethics: that moral progress is gradual,

contextual, experimental, and contingent. James accepts the biological roots of morality, yet he does not, like other evolutionary ethicists, regard the claims of biological reductionism. In his view, moral development is not left to the rule of biology, but it requires the efforts of active moral agents. “Ethical progress is a ferment, a mutation; it is born of strife and effort and becomes real only through acts”(James 1897,89). This short yet powerful proposition captures his pragmatic, melioristic, evolutionary ethics. Pragmatically, it implies that ethical ideals mean little unless they are embodied in action; and evolutionarily, it suggests that morality is not fixed or revealed once and for all, but instead, it evolves in complex, sometimes turbulent ways. He draws a similar pattern between evolution and ethics; as the former involves mutation and variation “ferment” (inner tension, conflict for survival), the latter arises from challenges or from what Dewey calls “indeterminate situations”.

James’s melioristic and pragmatic evolutionary ethics is an extension or derivative of his understanding of the world. He claims that the 'universe' as a whole, and human reality in particular, is 'still in the making or unfolding,' and that every realised partial ideal contributes its share to the greater 'whole' (1907, 137). Thus, he continues to argue that we human beings(as active agents in the given social and natural environment) have to shape, adjust, and grow ourselves through our deliberate acts. James has a thrust in the power of human beings to transfer the bad condition to a good one. Even though life is flawed and imperfect (“the trail of the serpent is over everything”), we should not give up. We must keep believing in the good and working for it, for the more people we inspire to support what is better, the more likely it is that good will win out in the real world (1897, 201).

Though he accepts the biological origins of our moral sentiments, he insists that ethics must go beyond natural inheritance or beyond biological determinism. He agrees with Dewey, Dawkins and Darwin that our moral instincts may arise from nature, but they do not by themselves

determine what is right or ideal. James explains that moral qualities are facts of natural order; they are the results of “the forces of the environment and the reactions of men” (1897, 192). This naturalistic view relates ethics to human biology and their environments, yet it does not justify that we have to be passive, obedient subjects of the rule. He warns that the ethical philosopher... must become the ally of the evolutionary movement, working in it and for it, but not blindly accepting it as already ethically ideal” (James 1897, 201). In other words, contrary to biological reductionists, we have a natural or biological capacity for moral sentiments; it does not endow us with ethical completion.

Perfection or absolute completion, for James, is not the qualities or capabilities of human beings. His pragmatism justifies this idea by rejecting fixed moral absolutes. Instead, morality must be judged by its consequences in experience. “The true is the name of whatever proves itself to be good in the way of belief” (1907, 98). So, the given moral ideals are practical tools, and they are evaluated based on their ability to resolve conflict and improve life. James's account of ethics favours pluralism and practicality over absolutism. He contends against single moral principles, for “there is no single point of view from which the totality of truth is to be had” (1897, 117).

To apply it to morality, this implies that no single value or element, like utility, universality, virtue, means, end, or logical perfection, can necessarily justify the moral status of action or evaluation. Instead, for Pragmatists, specifically for James and Dewey, all these elements should be taken together as a directive method to overcome problems. Thus, morality is not derived or deduced from single or absolute ideals; instead, it evolves to enlarge its scope guided by nature, culture and experience, shaped by the consequences it generates.

4.6. Conclusion

In this chapter, I have argued that Dewey's pragmatism provides a dynamic and scientifically grounded model of ethics that overcomes the fact–value dichotomy, accommodates the complexities of moral life, and aligns coherently with evolutionary insights. For Dewey, ethical judgment, like the factual one, emerges from the “indeterminate situation” that is the point of departure for moral inquiry. Such an inquiry rejects the rigid fact-value dualisms. Rather, it derives moral judgment from the integration of living context and experiences. This integrative view of ethics requires scientific inquiry or experimental method: observation, hypothesis, testing, reflection and revision. His critique of classical ethical theories—deontological, teleological, and virtue ethics—is based on their abstraction and rigidity, which prevent them from addressing the actual, complex, and contingent aspects of moral life. Moral agents, in this sense, must not be passive followers of abstract ideals but active participants in intelligent moral growth.

I further examined Dewey's evolutionary reinterpretation of ethics. His analysis of Huxley's dualism between cosmic and ethical evolution shows his determinations of natural ethics. Dewey discards biological reductionism without denying the biological root of moral sentiment. Thus, ethical development, like biological adaptation, involves intelligent adjustment, progressive modification, and reflection. A similar view is found in James's melioristic ethics, which requires effort from moral agents for the betterment of the human condition. I conclude that Deweyan pragmatic ethics can provide an effective framework for moral inquiry: that is, experimental, context-sensitive, and responsive to change. This scientific inquiry of ethics is appropriate to address the ethical challenges of the ever-changing world and social setting.

Chapter Five

From Animal Behaviour to Human Morality: Ethological Perspectives on the Origins of Moral Sentiment

5.1. Introduction

Moral quality, identified as a unique human disposition, has often been studied as the result of either rational deliberation or cultural construction. In Chapter 2, I examined the philosophical foundations of this view through the works of philosophers like Plato, Kant, and Thomas Huxley, who treated ethics as something that transcends the natural world or is independent of human biological nature. In contrast, in Chapter 3, I presented a counterargument from the views of Darwinian and post-Darwinian biologists and philosophers. There, I examined how thinkers such as Darwin, Dawkins, Churchland, and Spencer justified the biological origins of moral qualities. In this chapter, I continue that line of reasoning by substantiating evolutionary ethics in empirical data gathered from the study of primatologists. Thus, this chapter is intended to reconcile the ideas raised in Chapter 2 (philosophical tension between nature and morality) and Chapter 3 (theoretical integration of biology and ethics). Here, my focus shifts to the traits of nonhuman animals (primates that exhibit the basic elements of morality: empathy, reciprocity, conflict resolution, fairness, and consolation).

5.2. From Social Instincts to Ethical Sentiments — Ethological Justification of Evolutionary Ethics

Evolutionary biologists and ethologists corroborate the biological origin of morality. They unfold the genetic traits and behaviour of primates to prove that morality is evolutionarily explicable (Dawkins 2006; De Waal 2006; Hadith 2008). Frans de Waal, primatologist and ethologist, provides a scientific account of how humans become moral agents and can set

normative imperatives. His line of reasoning begins by scrutinising and discarding “Veneer Theory,” which views morality as a cultural overlay and asserts that “humans are by nature bestial and therefore bad and selfish—and thus should be expected to act badly” (Ober and Macedo 2006, xi). De Waal boldly rejects the claim of the Veneer Theory that denies the natural tendency of human beings to be moral and good toward others by nature; he instead argues that humans are by nature good, and this quality “is inherited from our nonhuman ancestors through the ordinary Darwinian process of natural selection”(De Waal 2006, 11).

Before presenting his empirical evidence (case studies on the moral traits of primates such as chimpanzees, apes, and monkeys) to validate the evolutionary basis of moral instincts, De Waal identifies the main proponents of the Veneer Theory, which contradicts his initial claims—morality is evolutionarily explicable, human beings have biological instincts for moral sentiments, and such dispositions are common among both humans and primates.

Thomas H. Huxley and Thomas Hobbes are the first to receive his criticism, for he believes that they create the illusion of human society as a voluntary arrangement with self-imposed rules assented to by free and equal agents”(ibid.,4). For De Waal, presuming that society is the result of a contract or of the will of the individuals to live in a group, as stated by Hobbes, is a caricatured account of *Homo sapiens*. Because there was never a time when we moved from solitary to social life; rather, he argues, as descended from “highly social ancestors—a lineage of monkeys and apes—we have always lived in groups”. The notion of free and equal individuals existing independently is a myth (ibid). Those who study the biology and psychology of primates agree that living in a group is not optional but rather an evolutionary necessity to ensure survival and cooperation (Bekoff 2000; de Waal 2006). “If any decision to establish societies was made, therefore, credit should go to Mother Nature rather than to ourselves” (Waal 2006, 4). It implies that we did not come into society from a convent, but

rather from nature itself. De Waal reminds us to imagine the severity of 'solitary confinement' as a form of punishment in prison. It is among the harshest because humans are not born to be loners. Our bodies and minds are inherently designed for life in the presence of others. Michael Tomasello, a contemporary psychologist and linguist, discards the contractual account of sociality and contends that human sociality is an intrinsic and natural disposition, evident even in the early interactions of infants. The capacity for sociability emerges early and forms the foundation for cooperation with others. "We are biologically adapted for social life and at the heart of this adaptation is our capacity for shared intentionality - psychological states," which is, in turn, a foundation for morality, language, norms, and institutions" (2009, 22).

However, the view that human society is an organic one and its normative value can be derived from biology or nature draws serious criticism from Huxley, the devoted Darwinist. For Huxley, "moral progress depends, not on imitating the cosmic process, still less on running away from it, but in combating it"(1893, 81). He insists that ethics is not reducible to biology or the rule of evolution. According to Huxley, though biological instincts may influence human behaviour, moral reasoning emerges only from complex and interwoven social structures and relationships. But one could ask why biological instincts are not found in moral reasoning or why evolution cannot define ethics. Huxley deals with this question by categorising evolution as a process that directly contradicts the real developments of feelings like altruism, sympathy, and sacrifices at any level. He realised that the driving force behind the emergence of moral traits and the force behind evolution are different and have contradictory goals. While evolution operates on the principle of "survival of the fittest," which aims at thriving at the loss of others, the ethical process aims to show sympathy and compassion for the less fit. He contends that our sense of duty and perception of moral obligations did not arise through natural selection or the operation of biological laws. Instead, these qualities emerged through intellectual and social evolution. The power of human reasoning or the development of abstract thought enables

human beings to “elevate social instincts into moral principles, and it is this process that constitutes the true nature of ethics”(1894, 28).

It is worth considering Huxley’s ‘garden metaphor’ to comprehend his exclusion of ethics from evolution. He wants us to envisage a vast wilderness or natural environment, which he calls the “state of nature,” that is untouched by human hands, and the “garden” that results from human intervention in the natural course of the wilderness. The state of nature gets its temporal shape and existence out of the "cosmic process" which operates through the mechanisms of evolution, such as natural selection, where only the fittest survive."The state of nature, at any time, is a temporary phase of a process of incessant change, which has been going on for innumerable ages" (1894, 4). There is no permanent condition or order, and all living beings must endure relentless competition; they have to struggle for their existence. But this chaotic state gets orders and patterns when human beings intervene in the natural state to create a garden. "The garden is as much a work of art," he writes, "as anything that can be mentioned" (1894, 10). Contrary to the wilderness, the gardeners here select and nurture plants and animals based on their ideal beauty and utility; they never allow the indifferent forces of nature to control the course. If the gardeners fail to maintain the garden, Huxley reminds us, the "antagonistic influences of the general cosmic process" threaten to reclaim it, just as weeds and pests attempt to invade and destroy the cultivated space. Without the efforts of the gardeners, the garden would quickly regress to the wild state of nature. "The influences of [nature] are constantly tending to break it down and destroy it" (1894, 12).

Now, let us see the analogy of wilderness versus garden to evolution and ethics to unpack his account of the issue. His ‘garden metaphor’ sets the progress of ethics against the course of evolution or cosmic process. In this metaphor, the evolutionary process is represented by the state of nature, the garden by morality and the moral agents by gardeners. The application of

the garden metaphor to ethics is that humans must act as gardeners, cultivating moral values that prioritise cooperation and compassion over the blind and indifferent forces of evolution. Controlling or regulating the evolutionary process requires the creation of normative values, institutions, or laws that suppress destructive instincts and promote the well-being of all members of society.

Through his metaphor, Huxley shows the conflict between the cosmic process (nature's indifference) and human ethics. The two processes (evolution and ethics) have conflicting motives and different purposes. While the former ensures survival through competition, the latter arises from human efforts to mitigate this struggle. The gardeners' efforts (selecting and cultivating plants and animals) parallel humanity's responsibility to foster ethical progress. Huxley concludes that humans are inherently part of the cosmic process or the result of evolution, as the garden is a part of the wilderness. But morality is not reduced to this natural process; it enables human beings to rise above their evolutionary origins and act in ways that counteract instincts (1894,14).

It is contradictory to argue that human beings, as part of the evolutionary process, act against their nature through morality. Huxley himself acknowledges this contradiction, yet he offers no resolution to the dilemma, except by stating, "If the conclusion that the two are antagonistic is logically absurd, I am sorry for logic, because, as we have seen, the fact is so" (1894, 3). This contradiction forces De Waal to identify Huxley as the defender of the veneer theory that treats ethics culturally rather than genetically or biologically. De Waal challenges the idea that human beings become moral only by opposing their natural inclinations and accuses Huxley of failing to justify how "humanity might have unearthed the will and strength to defeat the forces of its nature"(2006,11). In other words, Huxley's analysis couldn't answer how human beings, if they are inherently amoral, selfish, cruel, and competitive by their very nature,

managed to transform themselves into "model citizens. Excluding ethics from Darwinian evolution, De Waal argues—and Dawkins would agree—is the result of either a poor understanding of or a caricature of the theory. "It is unfortunate, considering how confused Huxley was, his account of ethics is often referred to even today as if it were authoritative" (ibid., 13).

In *The Descent of Man*, Darwin corroborates his theory's capability to accommodate ethical progress. He argues that the "first foundation or origin of the moral sense lies in the social instincts, including sympathy," which evolved through natural selection (1871, 394). Sociability is not just a human instinct; it is also found in primates. Thus, animals with well-developed social instincts "inevitably acquire a moral sense or conscience" (1871, 394). The social instincts, Darwin believes, developed in early human communities and "each succeeding generation will have become more and more social with the feelings of sympathy and love". This gradual enhancement of sympathy and love strengthened social bonds that fostered cooperative behaviours necessary for group survival.

The in-group cooperation and the sympathy, care and love towards kins crossed the group; individuals recognised the necessity of extending "social instincts and sympathies to all the members of the same nation, though personally unknown to him" (Darwin 1871, 83). This expansion of moral concern beyond immediate acquaintances facilitated the development of complex societies, and this can give meaning to modern world ethics. "We can see that the degree of restraint which each man at various times imposes on himself when under the influence of social instincts and an abhorrence of wrongdoing, is one of the best measures of his value"(ibid).

One could say that Darwin's appraisal of ethics as the result of "social instincts" disregards Huxley's association of ethics with culture. Dewey detects the mistake Huxley committed

when he argues that "cosmic process has no sort of relation to moral ends" and that ethical progress demands active opposition to principles of evolution (1898, 323). Dewey's pragmatic approach dismantles this dualism or the notion that ethics opposes evolution. Rather, he reframes the dichotomy and argues that ethics is not external to evolution but an advanced articulation of it. "Human intelligence and effort intervene, not as opposing forces but as making this connection" (ibid, 325). For Dewey, the ethical process is an extension of the cosmic process, not its contradiction. He discloses his full acceptance of evolutionary theory by contending that ethical principles, such as cooperation and foresight, are evolutionary strategies developed to address the social complexities of humanity. It entails that evolution brings forth moral sentiments, for they enhance group survival by creating social cohesion in the group.

Dewey further asserts, "The fittest concerning the whole of the conditions is the best," implying that ethical conduct ensures the preservation of social integrity (ibid., 326). His reply to the analogy Huxley draws between the garden and ethics exposed that the given metaphor works the other way around. The analogy seems to inadvertently support Dewey's claim that the gardener does not oppose nature (cosmic process) entirely but reorganises its elements (parts of nature) to achieve broader goals. "Man does not set himself against the state of nature. He utilises one part of this state to control another part" (ibid, 325). Here, Dewey gives us a hint that ethics or moral judgment is an instrument that directs biological impulses toward maintaining the good of the group. He also rejects Huxley's framing of "fitness", for it is a narrower understanding of the term. What is "fit" evolves alongside the environment, and in the current social context, "the unfit is practically the antisocial" (ibid, 327).

Dewey offers compelling support for Darwin's view that evolution can serve as the foundation of ethics. He believes that moral conduct is not separate from natural processes but arises from

them. “The natural process, the so-called inherited animal instincts and promptings, are not only the stimuli but also the materials of moral conduct” (1898, 332). He consents to Darwin’s idea that moral behaviour evolves from preexisting social instincts that are redirected rather than weakened, ensuring their efficiency in guiding social bonds and eventually causing ethical traits in humans. Dewey also identifies the biological origins of morality in the prolonged dependency of human offspring. He explains that “civilisation is a product of the prolongation of the period of infancy,” as the extended need for care stimulated “the affection and care, the moral germs of social life” (1898, 327). This dependency (we can take it as cooperation) strengthens social bonds that are essential preconditions for the progress of normative value.

However, Dewey’s interest is not in justifying the biological root of morality but in reconciling the tension between inherited traits—biological impulses or social instincts—and the present conditions or demands, which is central to his pragmatic philosophy. He adds his pragmatic perspective and argues that evolutionary processes continually shape moral conduct, adapting it to the needs of changing environments.

Dewey’s naturalistic appraisal of ethics, which boldly discards Veneer Theory, and his philosophical engagement with Darwinian evolution enable him to reimagine ethics, not as a fixed and immutable framework but as an evolving and instrumental science. The classical ethical theories, Dewey believes, are striving to achieve or establish all explanatory ideals. But the advent of Darwin introduced new intellectual courage that “revolutionized” philosophy, i.e., Darwin’s logic “displaces inquiry after absolute origins and absolute finalities” and shifts the focus to “specific values and the specific conditions that generate them” (Dewey 2016. 3). This shift is also applied, Dewey insists, into ethical inquiries that reorient from seeking ideal, fundamental and transcendent truths to addressing practical and experiential realities or conditions. It is possible to draw a parallel between Dewey’s vision of ethics and Darwin’s

principle of adaptation and evolution. That is why Dewey argues that ethics should be “a method of locating and interpreting the more serious of the conflicts that occur in life, and a method of projecting ways for dealing with them” (2016, 4).

Thus, I argue that with scientific support from Darwinian biology, Dewey's pragmatic ethics can be relevant and effective in addressing contemporary challenges in the digital age. Approaching ethics from a Darwinian perspective enables humans to be active moral agents. Dewey credited the rise of a sense of responsibility and moral agency to Darwinian evolution. It is our responsibility to shape moral and social conditions by advancing our methods and orientations. Mere reliance on “fancy theory” is an implicit tactic to avoid being grappled with specific challenges. Rather, ethics should focus on “the direct increments of justice and happiness that intelligent administration of existent conditions may beget” (Dewey 2016, 2). To maintain its efficacy and utility in the ever-changing natural and social realities, ethical inquiry should evolve with life itself.

5.3. Behavioural Foundations of Ethical Norms in Primates

So far, I have attempted to examine the biological basis of ethics as rooted in Darwinian evolutionary theory, which was later philosophically justified by Dewey and scientifically supported by De Waal. In what follows, I will examine case studies conducted by De Waal on the ethical behaviours of primates to corroborate the assumption that ethics is not a culturally developed phenomenon but rather a genetically or biologically evolved aspect of animal behaviour. Among other primatologists and ethologists, I prefer De Waal because of his recent and detailed challenges to the Veneer Theory, which denies the biological foundation of ethics. Investigating his scientific experiments on selected primates' traits also allows me to consider the responses and critiques provided by P. Singer and C. M. Korsgaard.

The first case study or scientific experiment was conducted on rhesus monkeys, chimpanzees, and rats to determine whether primates and other animals can empathise with conspecifics, or to ascertain if they are capable of an “affective response” and feelings of sorrow for a “distressed or needy other”. Some rhesus monkeys were placed in conditions where they had to pull a cable to obtain food. However, they could see that pulling the cable caused their companions to receive electric shocks. De Waal reports that one monkey chose to starve for five days by refusing to pull the cable, while others did the same for up to twelve days after seeing that their actions (pulling the cable) caused pain to their companions. Starving themselves for some hours or even more than a week is a risky decision. The following case demonstrates that primates evaluate the situations of others and take risky actions to save their conspecifics. There are recorded instances of chimpanzees risking drowning to rescue others in zoos with artificial islands surrounded by water-filled moats. Chimpanzees cannot swim, and they are aware of this limitation. However, some have been filmed attempting to save conspecifics from drowning. In one case, an adult male lost his life while trying to rescue an infant that had fallen into the water (2006, 27). But what motivates this adult male to engage in non-reciprocal actions or assist others without direct personal gain? This altruistic tendency in the chimpanzee community leads us to examine other prosocial qualities, such as susceptibility to consolation and the capacity to feel the death of conspecifics. Consolation, which Preston and de Waal call “cognitive empathy,” cannot be evoked or felt without being aware of oneself (the subject) and the other as the one who is personally suffering or unfortunate.

To take action against a specific condition or feel pity for another requires the existence of emotional bonds. Preston and de Waal provide a biological explanation to clarify how sympathy, emotion, and consolation are triggered both in human and nonhuman animals. When the subject observes the emotional state or the specific situation of his/her fellows, similar

neural representations in the subject are automatically activated. Greater similarity or closeness between the subject and object (the other) enhances the activation of motor and physiological responses. Through this neural activation, the subject can feel the pain or the emotional state of the “object” (2006, 36).

The study on the chimpanzees’ community in Yerkes National Primate Research Centre in Lawrenceville recorded and analysed interactions, like conflict, consolation, aggression, and reconciliation. From 1992 to 2000, the researchers (Romeroa, Castellanos, and de Waal) documented 3,003 aggressive conflicts and their aftermath to prove that chimpanzees can console each other. For this research, they define “Consolation “as affiliative behaviour initiated by bystanders (a third party) toward victims of aggression. By assessing factors like social closeness, sex, rank, and reciprocity in the given community, the researchers argue that chimpanzees exhibit capacities for consolation and prosocial behaviours that can be compelling evidence of their socio-emotional complexity.

Unambiguously, it was observed that "chimpanzee consolation reduces the victim’s stress and is given mainly by individuals socially close to the victim, such as kin and affiliation partners" (Romero et al., 2010, 12110). The researchers could see that consolation occurs more often when reconciliation between the original aggressor and the victim has not happened. It suggests that consolation is more effective and needed by victims; it also shows the sensitivity of the consoler to the emotional state of the victim in the absence of reconciliation (Romero et al., 2010, 12111). The researchers also figured out that female chimpanzees scored a higher number of consolations than males, except the alpha male, who also frequently elicited consolation. The frequent offering of consolation to victims by females and the alpha male enables researchers to conclude the biological predispositions and social roles in the behaviours of primates. Romero et al give evolutionary justification for why female chimpanzees engaged

with a higher number of consolations, and they figured out that sympathy, compassion and consolation might have evolved in the context of “maternal care”, where immediate or instinctive responses to the “distress of offspring” were crucial for survival. The study draws a similar account of the origin of empathy in human beings. Women and girls, Romero et al believe, are “more sensitive to emotional signals. Human studies have consistently found females to score higher on empathy than males” (2010, 12113).

Similar studies associate consolation with altruistic behaviour (Batson & Shaw, 1991). In humans and nonhuman animals, “consolation provides benefits to another.” The chimpanzee may risk itself (potentially facing confrontation from the original aggressor) while consoling the victim. This assumption, I believe, aligns with the “empathy-altruism hypothesis,” which proposes that empathic concern for others is nothing but altruistic behaviour. In *Altruism in Humans*, Daniel Batson argues, “Empathic concern produces altruistic motivation” (2011, 20). He defines the phrases “empathic concern” and “altruistic motivation”. The former refers to “other-oriented emotional” responses triggered by and aligned with the perceived well-being of an individual in need, and the latter conveys the “motivational state” driven by the ultimate aim of enhancing the welfare of another individual. These definitions underline that empathy-induced altruism aims to reduce others’ suffering without seeking self-benefit. Thus, the consolation observed by Romero et al. in the chimpanzee community fulfils the definition of the empathy-altruism hypothesis, which states that empathy-induced altruism is distinct from egoistic motivations, such as reducing personal discomfort or seeking rewards.

5.4. Sense of Fairness and Reciprocity in Primates

A sense of fairness and reciprocity is central to the social behaviour of primates. Such prosocial traits in primates can shed light on the evolutionary origin of human morality. Trivers (1971), Brosnan and de Waal (2003), and Tomasello (2007) studied the social disposition of primates

and rodents, birds, and they justify that traits like fairness, justice, and reciprocity are not confined only to human beings. Rather, nonhuman animals also exhibit an innate sense of these qualities. In what follows, I examine the argument and explore the experiment done on primates to evaluate if there is convincing corroboration for the assumption that equality, fairness and reciprocity are not exclusive human dispositions, but shared instinctive with nonhuman animals.

Among many other case studies, let us look into the experiments conducted at Yerkes National Primate Research Centre, Emory University, by Sarah F. Brosnan and Frans B. M. de Waal. The experiment aimed to investigate inequity aversion in nonhuman primates, specifically brown capuchin monkeys (*Cebus apella*). The experiment selects five adult female and five male monkeys from capuchin monkey groups to examine how they react to “unequal reward distribution” during cooperative exchanges with the researchers. The monkeys were placed in separate compartments that allowed both vocal and visual contact between the two subjects. The researchers established exchange processes: first, a monkey was given a *token* (a medium of exchange that, anthropomorphically speaking, could be likened to currency). Then, the monkey was required to trade or return the token in exchange for either cucumber slices, which were less desired, or grapes, which were their preferred reward. The exchange was designed to measure the subject's aversion to inequality in four conditions. (1) Equality Test: Both subjects traded tokens and received the cucumber. (2) Inequality Test: One subject was given a cucumber, while its partner received a more desirable grape. (3) Effort Control: One subject received a grape without exchanging a token, while the other traded a token for a cucumber. (4) Food Control: The test subject was alone and observed a grape placed in the location of its partner. In the first condition, high levels of exchange were observed, with minimal refusals. Cucumber was an acceptable reward when both subjects received the same. However, in the second case, the subject that received a cucumber showed a higher number of refusals to

exchange, which, according to the researchers' interpretation, indicates an aversion to unequal treatment or payment for similar efforts. Refusal to exchange intensified in the third case, where one subject received a grape without any effort (no exchange required), while the other monkey had to exchange a token for a cucumber. One received the grapes free, while the other had to exchange the token for a cucumber, which is unfair. In the fourth condition (one subject was alone but saw the grape in his partner's place), refusal rates to the exchange were the lowest compared to the inequality and "effort control tests". From this, the experimenter concludes that the presence of an unfair benefit significantly influences the reaction (2003, 297-299).

The researchers noted that primates, specifically capuchin monkeys, "seem to evaluate rewards by comparing their rewards with those available and their efforts with those of others" (2003, 298). Passing judgments after evaluating the available resources and the effort resembles human tendencies to judge fairness based on distribution and alternatives. This study reports that if one monkey receives a higher-value reward without exerting effort (getting grapes without paying its token), the other often refuses to exchange the token, for it believes that the trade is unfair and does not treat equals equally. This enables the researchers to conclude that the observed behaviours of capuchin monkeys reveal that primates have an inherent sense of fairness and justice that falsifies the assumption that such traits are uniquely or exclusively of humans. Michael Tomasello, in *Why We Cooperate*, solidifies the view that primates can work for "shared goals" and "social responsibility. They are observed working and cooperating not just for immediate benefits but also for the good of the group. These reciprocal and prosocial qualities are necessary for upholding group harmony"(2009, 84). According to Tomasello, great apes exhibit the willingness to "share resources in ways that suggest their ability to understand fairness.

Primates' sense of fairness and aversion to inequality, as seen in the aforementioned case study, lead us to examine other qualities of primates, like reciprocity and gratitude, which are principal resources for developing complex moral systems. Kristin Bonnie and De Waal (2004) identify two compelling conditions for the occurrence of gratitude and reciprocity: (1) an evolved cognitive capacity that enables one to record favours and reciprocate later, or “memory of past events”, and (2) a social setting in which cooperation is, for the most part, preferred for survival. These qualities are rare in solitary and self-independent hunters like eagles and tigers. But gratitude and reciprocity are essential among animals, such as chimpanzees and other nonhuman primates that live in highly complex and cooperative societies (Bonnie and De Waal 2004, 216).

The memory ability of primates forms the basis of their cooperative behaviours, as past social interactions shape future exchanges. Many research findings assert that chimpanzees reciprocate grooming in various ways, such as sharing food and taking sides with their previous groomer in fights. De Waal's case study asserts this fact. The research team recorded hundreds of morning grooming sessions in chimpanzee groups, and they could see that if “one chimpanzee had groomed the other in the morning, this groomed one was more likely than usual to share food with the groomer later in the day”(2004,42). The groomed one also shows unusually less aggressive behaviour towards the individuals who had offered grooming. It also measured that a chimpanzee who received grooming showed a willingness to support his groomers in conflicts (2006, 43). This finding enables Bonnie and De Waal to state, “Reciprocal relationships govern many aspects of primate social life, with gratitude functioning as a reinforcing mechanism” (2004, 215). This suggests that primates do not merely act on instinct but possess the cognitive ability to recognise past interactions and adjust their behaviour- identifying who can reciprocate and who failed to do so and acting accordingly.

Bonnie and De Waal relate the capacity of primates for gratitude and reciprocity to the evolution of morality.

Gratitude is a central concept for moral philosophers. Adam Smith (1790/1976), in *The Theory of Moral Sentiments*, takes gratitude as a principal moral sentiment. He argues that “gratitude is what directly drives us to reward, while resentment is the sentiment that most directly drives us to punish” (Sec. I). According to Adam Smith, we human beings instinctively support or approve of acts of kindness being reciprocated, and we understand and justify punishing wrongdoing. It is natural for the benefactors to expect gratitude or recognition from the recipients of the favours. Edward Westermarck also noticed that gratitude is a fundamental element of morality, and contends that “gratitude is a moral emotion closely connected with the feeling of reciprocal obligation; it lays the foundation for the duty of returning benefits received”. Gratitude is not always seen only as an instinctive response to the benefactor through deed or word, but a “failure to return a benefit was often regarded as a serious moral transgression” (1908, 200).

Modern research, as we have seen in Bonnie and De Waal (2004), substantiates the idea that failing to show gratitude as reciprocation is a “serious moral transgression” even in the lives of primates. For instance, chimpanzees at the Arnhem Zoo in the Netherlands exhibited what de Waal and Luttrell (1988) described as a “revenge system”. In this zoo, Chimpanzees could identify the individual members who failed to reciprocate the past favour they had received, and the freeloader chimpanzees were rejected and considered untrustworthy. As proved true in the human moral system, rewarding cooperation and penalising the freeloader can reinforce and encourage fairness in non-human animals too.

To add one more example, let us see one case study done on capuchin monkeys by James R. Anderson et al. (2013) at Kyoto University, Japan. The research team intended to prove if

capuchin monkeys “can judge third-party reciprocity.” Unlike the above-mentioned studies that examine the behaviours of the subject (primates) based on one-to-one relations, this case study is one step more complex, for the subjects are not directly involved in the exchange but are instead observing the interaction between two others. The capuchin monkeys were made to see two human individuals exchanging goods with each other. These humans display to capuchin monkeys both reciprocated exchanges and failed or non-reciprocated exchanges. In the first experiment, the human actors exchange balls: The first actor (A) would request three balls from the second actor (B). Then actor B would transfer the ball one by one. After this completion, actor B, for his turn, would make the same request from actor A. Then, Actor A also reciprocated by transferring three balls back to Actor B. Here, the exchange is completed fairly. However, in other sessions, actor A failed to reciprocate and instead kept all six balls. Both actors gave the observing monkeys food after each exchange. The monkeys' preference to accept food whether from reciprocating or non-reciprocating actors was taken as the measure of their social preference. The researchers report that the result was striking: Capuchin monkeys exhibited a clear preference for accepting food from reciprocators. "In non-reciprocity sessions, they strongly preferred actor B to the non-reciprocating A" (Anderson et al.2013, 142).

The bias of all observing monkeys against the non-reciprocator suggests that their evaluation of fairness and understanding of reciprocity is not limited to the exchange they would be part of. A second experiment was carried out to see if the monkeys could consider “intent or context” in their evaluation or preferences. Here, the researchers tested and compared the reaction of the monkeys to an “incomplete reciprocating actor” (Actor A returned only one ball instead of three after receiving all of Actor B’s balls) to an “impoverished actor” (Actor A started the exchange with fewer resources, only one ball). The finding conveys that the monkeys take context and intent into consideration to express their preferences or judgments.

The incomplete reciprocator gets higher rejection than the impoverished, i.e., the monkey showed less interest in receiving food from “incompletely reciprocating A” than from the impoverished actor A (2013, 143). This suggests that capuchins may consider intent or context in their evaluations of fairness. The research team concluded that monkeys possess cognitive or emotional capabilities that are necessary to evaluate fairness in third-party exchanges because effective social exchange requires “cognitive adaptations”. Without this cognitive capability, the team underlines that the monkeys could not judge the third-party reciprocity, which needs other-oriented and critical observance and analysis.

All this enables us to argue that moral reasoning has deep evolutionary roots. The research team insists, “The behaviours observed in chimpanzees—reciprocal food sharing, social reinforcement of cooperation, and punishment of cheaters—strongly indicate that the basic principles of morality emerged long before humans” (2013, 228). Though primates cannot be considered full-fledged moral agents in the human sense, their capacity for gratitude and reciprocity suggests the evolution of moral sentiment.

Non-primates, too, according to some recent experiments and theories, exhibit cooperation, morality, support, and reciprocity. For instance, Vampire bats regurgitate blood meals to unrelated group members who have previously helped them (Wilkinson and Carter 2013); rats free trapped cage mates, even when no immediate reward is present (Bartal, et al 2011); dogs refuse to perform tasks when they see another dog getting a better reward for the same action (Range, et al 2012); and cleaner fish refrain from cheating their clients (larger fish) when observed, showing strategic cooperation and punishment avoidance (Bshary et al 2002).

Let us see some empirical research conducted on ravens against the long-held assumption that “advanced social intelligence” and cooperation are unique to humans and primates. The Department of Cognitive Biology, University of Vienna, conducted long-term field research

on wild ravens in the Almtal Valley in the Northern Austrian Alps. Since 2007, Massen et al. (the research team) have administered ravens at the Cumberland Wild park Grünau, where an average of 300 ravens gather daily to “scrounge food from captive animals, such as wild boars, bears, and wolves (2019, 12). By following different technical procedures like using GPS tracking and collecting “blood samples for the genetic analysis of the ravens, the research team examined their social interactions, cognitive abilities, and relationship dynamics. Among other interesting qualities, ravens avoid inequality, have third-party understanding, and have “Machiavellian intelligence” (strategic social knowledge), which are common traits in humans and primates. Ravens were found to readily participate in exchange or trade with fair human experimenters. But they stop their cooperation after watching another raven being given good food for the same action, or "being rewarded for doing nothing." This indicates that ravens are “sensitive to inequity in reward distribution and working effort,” and they differentiated the fair reciprocator from the unfair and kept avoiding the cheater for at least one month (2019, 13). The finding also confirmed that ravens’ social interaction skills include third-party understanding. By using playback experiments (playing pre-recorded vocal interactions of ravens), the experimenters observed how ravens reacted to different types of interactions. The interactions were two in kind: “congruent interactions,” which refer to existing norms of class order (a dominant raven displacing the subordinates), and “incongruent interactions,” which contradict the established orders in the groups (the lower-class raven displacing the dominant one). Then the raven displays distinct behavioural responses when they are exposed to incongruent interactions because “their expectations were violated when they heard a subordinate bird dominating a dominant one. The researchers report that the ravens have the same behavioural response when they witness abnormal interactions (incongruent) among the neighbouring groups. This could justify the view that Ravens have the mental representation of third-party relationships. It is their abilities of mental representation that enable them to keep

track of social relationships based on established ranks, and they react differently if they believe that the norm or the social order is violated either in their group or in their neighbour (2019,13-15). After monitoring, testing and examining the interactions of ravens for more than ten years, the team concludes that the social behaviour observed in ravens is so complex and advanced that it resembles political manoeuvring (in line with “Machiavellian intelligence hypothesis”), which can be exemplified by manipulative traits seen in their attempt of allying and prevent others from forming bonds. Massen et al observed that ravens closely check the relationship of the other ravens and act according to the strength of the bond; they intervene or cause others to stop their interaction. “Observations at the field site prove that the intervention is not random”; rather, it prevents lower-ranking ravens from gaining status within the group (ibid).

The other non-primate animals that exhibit moral-like qualities, pro-social behaviour, empathic reactions, and altruism are rodents. Among many modern studies, the experiment conducted at the University of Chicago on mice by Bartal, Inbal Ben-Ami, Jean Decety, and Peggy Mason (2011) provides convincing evidence that moral instinct or other-oriented emotional reaction or awareness is not limited to humans and primates. Bartal et al put more than 30 rats in pairs, one in a rat restrainer and the other moving free near the “trapped cagemate”. The experimenters aimed to determine whether rats exhibit “empathically motivated pro-social behaviour” or if they are driven by the distress of their peers to perform altruistic actions. Each pair of rats was tested under four conditions: (1) Empty trap condition – The mouse trap was empty. (2)The toy rat condition – The mice trapping contained a toy rat. (3) Priority condition: Two mouse traps were used: one trapping a rat and the other containing chocolate chips. (4)Exclusion condition – After the trapped rat was freed, it was kept in a separate area. The experimenters determined the results for each condition using a top-mounted camera and an ultrasonic vocalisation recording system. The first condition was set to see if the free rat would open the empty mouse trap. The result was that "rats opened the door of a cagemate-containing

restrainer but not of an empty restrainer” (Bartal et al 2011, 1429). In the priority condition, where mice have to choose between freeing a trapped cagemate and opening the chocolate containing one, they scored a higher number of times freeing their cagemate than accessing the chocolate. The experimenters could observe that the mice did not open the “restrainers” out of curiosity or accident, “the presence of a trapped rat caused increased movement speed and exploratory behaviour”. Bartal et al insisted that the reactions of the rats seen in the experiment were not random and accidental. The free rat opens its cagemate “to end distress, either their own or that of the trapped rat” (ibid, 1428). Their reactions against the four testing conditions are the result of their capacity to feel pity for the victim. The experimenter concluded that rats (as one example of non-primate animals) can understand and actively react to rescue the conspecifics, which is necessary for their successful navigation in the “social arena and ultimately benefits group survival” (ibid,1429). This research suggests that the roots of moral behaviour extend beyond humans and may be deeply ingrained in the social structures of mammals, which in turn challenge the idea that moral feelings or empathy are exclusively cultural and human behaviour.

Thus, I argue that the findings we have already seen from the experiments done on capuchin monkeys by De Waal (2003), on chimpanzees by Bonnie and De Waal (2004), on ravens by Massen et al (2019) and on rats by Bartal et al (2011) offer scientific support for the evolutionary aspects of morality. These studies provide empirical support for the idea that morality did not emerge suddenly in human societies but evolved gradually.

5.5. Human Ethology and the Mediating Role of Cultural Evolution in the Development of Morality

What we have seen in the primatologists’ case study about the biological natures of social traits is substantiated by human ethology, which provides empirical support for evolutionary

accounts of morality. Vilmos Csányi and Ádám Miklósi note that human social and moral capacities emerge from biological and behavioural evolution. They justify how cooperation, communication, and social cognition develop across species and culminate in uniquely human moral systems. I, therefore, think that Csányi's and Miklósi's views underline Darwinian and pragmatist claims that morality is rooted in natural processes and shaped by cultural and cognitive development. Csányi sees the evolutionary continuity between humans and other animals. Yet he identifies specific capacities in human beings that enable moral life. He argues that humans must be understood as part of the evolutionary continuum. "From a biological point of view, humans are just one of the great apes" (Csányi 2004, 299, translated by author). This continuity supports the evolutionary claim that moral behaviour evolved from adaptive social instincts (Darwin and Dewey would agree) rather than transcendental moral laws or external authorities. He introduces the concept of the "human behavioural complex" and argues that "human behaviour differs in many ways from that of our relatives... the individual's new characteristics influence each other and manifest themselves in a complex way" (Csányi 2004, 301). For him, these behavioral characteristics include group loyalty, cooperative food sharing, and symbolic communication. This, in turn, provides the evolutionary basis for moral norms and social responsibility. He insists that we humans are uniquely capable of "cooperative resource distribution" (Csányi 2004, 303).

Miklósi, in *Dog Behaviour, Evolution, and Cognition*, substantiates the role of "social cognition" in moral development by carrying out empirical analysis of social cognition across species. Similar to Dewey's understanding of "experience", Miklósi argues that the complex and adaptive interactions between organisms and their environments give rise to certain social rules or character. "Social behaviour represents a set of adaptations that facilitate interaction between individuals living in social groups" (2007, 3).

To understand human social cognition, Miklósi derives comparative models from dogs. He states, “dogs show a remarkable ability to communicate and cooperate with humans. It entails that social skills can evolve under specific ecological and social conditions” (Miklósi 2007, 75). Social skills, according to him, are facilitated through learning and cultural transmission, for they enable the human self or primates to perceive behavioural patterns and act accordingly (ibid, 158). From Csányi and Miklósi, we understand that morality, as one element of social traits, is not just predetermined by biological mechanisms, but it has the marks of cultural experience. Some ethologists, for instance, Frans de Waal insists that cultural influences can only operate because humans already possess an innate biological foundation that enables social interaction. “[M]orality is an outgrowth of primate sociality. It is not some cultural 'add-on' that arrived with the Greeks or the Enlightenment; it is a biological legacy” (De Waal 2006, 161). As I explored his findings somewhere in this paper, De Waal points out two "pillars" of morality: empathy and reciprocity. He relates complex moral systems to these ethological traits. But ethological preconditions alone cannot fully capture the normativity of morality.

Thus, we must consider the “cognitive shifts” to see the unique formulations of sociality in human beings. Michael Tomasello presents a balanced treatment of the cultural and natural matrices for the rise of normativity. He argues that while ethology explains the instinctual biological forces that propel traits, social cognition provides the "pulled" intentionality of human moral life. The unique feature of human morality, according to Tomasello, is the capacity to maintain "shared intentionality. "Human beings are not just social, as are all primates, but they are also 'ultra-social' or 'hyper-social' in the sense that they live within a web of shared intentionality that makes possible the creation of cultural institutions" (Tomasello 2016, 2). In light of his reasoning, the collective sense of “we” that emerges through “shared intentionality” is more than a mere aggregation of individual “I” perspectives; it constitutes a distinct social reality that develops certain norms and responsibilities (ibid, 53).

Robert Boyd and Peter Richerson go further than consenting on the mediator role of culture between biological and normative dimensions of human life; rather, argues that culture is a separate evolutionary system that can predominate biological imperatives. “Its evolutionary behaviour is distinctly different from that of genes... Culture would never have evolved unless it could do things that genes can’t!”(2005, 7). Thus, culture is not just mediating, but has some detecting power. Dawkins consents with such an evaluation of culture and contends that;

humans have the power to defy the selfish genes of our birth and, if necessary, the selfish memes of our indoctrination... We are built as gene machines and cultured as meme machines, but we have the power to turn against our creators. We, alone on earth, can rebel against the tyranny of the selfish replicators (1976, 60).

Though Dawkins does not refer to our power to turn against our creators as culture, it is normative evolution that enables us to disobey the rules of our genes. It is from this capacity that our freedom emerges, and then our moral agency. Evolution, as Dennett explains, not only produces organisms; it also produces minds that can reflect on the process itself (2003, 64).

Returning to Dewey, we can find the philosophical justification for the synthesis of culture and nature for the emergence of normativity. As I stated earlier, Dewey does not locate morality exclusively either in reason or nature, but refers to it as evolving systems against practical problems faced in the environment. He insists that our normativity is found in the "habit" of the community, which is a product of both nature and culture. He goes on to say, “Morality is as much a matter of interaction of person and environment as is walking. The latter is an affair of legs and physical substances and forces... The former is an affair of habits and social pressures" (1922, 318). Here, Dewey argues that the “rebellion” happens in the "interaction." We are not just at the mercy of our genes (the legs) because we live in a complex social world (the environment) that provides new "pressures" and "habits" that allow us to walk in a different direction than our biology might dictate. In this sense, Dewey’s pragmatic ethics give us a

balanced insight about our normativity, i.e., morality is a social "skill" we practice within a community, not a biological "destiny" we are born with, not abstract principles we apply everywhere.

5.5. Role of Reason in Morality

So far, I have presented some empirical modern research against the Veneer Theory or the view that moral sentiment is cultural rather than biological or natural. This theory underemphasizes humans' natural, instinctual tendency for morality. In what follows, I will examine the role of reason in morality, focusing mainly on the views of thinkers who approach morality neither from a cultural nor a biological perspective but from a purely rational and developed cognitive ability that enables humans to construct normative ideals. Thus, thinkers in this school of thought discard both veneer theory and evolutionary ethics. From Kant to Derek Parfit (1987/2022 and Christine Korsgaard (2006), rationalists challenge the naturalistic discourse of morality. Basing her account of morality on Kantian "categorical imperative", Korsgaard developed a critique of the idea that moral sentiment is a trait we humans share with primates and some other non-primate animals. However, Korsgaard agrees with De Waal in his rejection of the utilitarian approach to ethics and identifies two major problems with the veneer theory. First, it has a simplistic view of human nature, envisioning humans as beings that live in "deep internal solitude" and as purely self-serving individuals. According to her, pursuing isolated "self-interest" is not the real nature of human beings. Though each one of us has "some irreducibly private interests (satisfaction of our appetites)..., our interests are not limited to having things, but also in doing things and being things" (2006, 101-102). Thus, our interest and satisfaction are inherently isolated, nor can they be maintained by contract. Her second issue with the utilitarian appraisal of morality is that it overemphasises restraint. For her, morality is not a superficial layer covering our fundamentally selfish and amoral nature; rather,

it is an integral part of how we naturally relate to others. Here she applies the Kantian categorical imperative that humans, as rational and autonomous beings, are ends in themselves, not just as means to other goals. Applying Kantian ethics perfectly to every situation, she admits, seems difficult. However, the idea that humans are inherently selfish and only constrained by morality is unrealistic (2006, 102). She insisted that the Veneer Theory is absurd in suggesting that humans are fundamentally a bundle of self-interests that require artificial contracts to mediate them.

For her, as a Kantian philosopher, both naturalistic approaches (evolutionary ethics) and utilitarian ethics fail to provide a full account of morality because they place it outside the realm of reason. She identified three points of disagreement with evolutionary ethicists, particularly with ethologists. Her objection to De Waal begins by showing the distinction between morality and animal behaviour. Korsgaard contends that a real moral agent (1) needs to be autonomous and self-governing, which is not found in non-human animals. Her evaluation of animal actions asserts that they act out of instincts, but genuine morality involves the capacity to reflect on one's actions and decisions and test following moral principles. But "Nonhuman animals cannot evaluate their actions in light of standards, norms, or rules, nor can they reflect on what kinds of creatures they ought to be" (2006, 99). (2) In light of her view, primates lack "cognitive self-consciousness and the capacity to reason normatively about their actions and their effects. For Korsgaard, moral principles are grounded in rational reflection and normativity, not just evolved biological traits. Thus, she continues to argue that naturalists' treatment of morality is wrong, for it "overlooks the fact that morality is a normative concept: it requires not just emotional motivation but also the ability to think about what we ought to do" (2006, 100). The third inability of primates, according to her, is that they lack impartiality and cannot universalise their actions and evaluations. She employs this Kantian insight to discard ethologists' research findings that primates exhibit traits like fairness and empathy, and

she argues that morality requires that the agent should universalize his/her judgments and “treat others as ends in themselves”. The moral-like traits seen in primates “are too tied to “immediate emotional responses and lack the impartiality that defines moral thinking” (2006, 102).

However, Peter Singer does not agree with Korsgaard’ s treatment of the origin of morality, which exclusively bases it on reason. At the same time, he challenges de Waal’s justification of the biological foundation of morality. As a utilitarian thinker, Singer does not believe that reason alone can be a genuine source of moral sentiment, nor can "desires or emotions” be. He rather contends that both our rational facility and sentiment play different roles in complex human moral systems. His point is that the building block of morality is “imprinted in our biological nature, which goes millions of years back”. These instincts have been developed or evolved through the cognitive capacity that enables us to reason, abstract, will and choose. According to Singer, reason has only the role of guiding or shaping pure biological desire, emotion and response that may be partial, group or self-centred (2006, 141). Singer stands in the middle by avoiding both the two antagonistic extremists: (1) Veneer theorists who overlook the role of natural feelings in favour of cultural forces; and (2) biological reductionists who reject the guiding role of reason in moral judgment and evaluation. Thus, his critique of the aforementioned case study (especially of De Waal’s assertion) is that ethnologists “fail to give sufficient weight to differences between primate social behaviour and human morality” (2006, 150).

However, we have to be cautious not to confuse Singer’s evaluation of the origin or agent of morality with the *object of morality*. When he argues that primate social traits are different to human morality, he does not mean that primates or animals in general are not moral patients. For him, the human capacity for reasoning, abstracting and passing judgments should not be

the standard for extending moral consideration. He insists that all beings with the capacity to feel pain and pleasure should be given equal moral consideration.

5.6. Conclusion

The evolutionary account of morality, as testified by various modern experiments, justifies that moral disposition is not an abruptly emerging quality but a gradual behavioural modification. Moral reasoning in humans does not occur in sudden leaps; rather, it evolves or builds incrementally upon existing traits to cope with changes in societal environments over time. Albeit morality in its advanced form appears to be a sophisticated cognitive discovery, like abstract mathematical truth, it is deeply rooted in the biological nature we share with animals, specifically, with primates. However, as ethnologists remind us, such an approach never overlooks the role of complex cognitive capacity in establishing and elaborating moral reasoning in human society. At the same time, they insist that qualities like empathy, reciprocity, conflict resolution, and fairness, which are the building blocks of moral sentiment, have biological origins and have evolved into more accommodating systems. The fact that primates, as the above case studies proved, exhibit the capacity for empathy, reciprocity, conflict resolution, and fairness can enable us to argue that morality is neither uniquely human nor exclusively rational. As social behaviour, morality evolved primarily (De Waal 2006, Bonnie and De Waal 2004) to enhance group cohesion and cooperation. Evolutionary biologists like Dawkins and ethnologists inform us that pro-social behaviour, which eventually gave rise to advanced ethical systems, was one mechanism for survival in tightly knit social groups. Arguing that moral sentiments are evolving qualities does not rule out the normative and cultural influences on their development.

Against the veneer theory, the ethological and evolutionary studies and scientific experiments discussed here give more integrated biological counterarguments. From Darwin's early

insights to De Waal's experimental findings, the advanced and complex human moral system originated from our nature and reaction to the changing societal settings.

Philosophical engagement by thinkers like Dewey further substantiates the view that an evolving moral system ("moral judgments") is a product of inquiry into the given problems, i.e., ethics is not an abstract or mere cultural phenomenon against our nature but a refined extension or outcome of it. Dewey's pragmatic approach discards the rigid dualism between evolution and ethics; rather, he believes that morality evolves alongside changing environments, shaped by both inherited social instincts and reflective intelligence. Such accommodative and practical approaches of Dewey stand against Huxley's dichotomy, which posits ethics as a human rebellion against nature.

Ethologists contend that moral capacity is not exclusively human character, but rather it is shared with primates. However, this does imply that human beings and primates are at the same level in the "spectrum" of morality. Their research findings corroborate that we human beings are engaged in sophisticated moral reasoning. Humans exercise and develop abstract normative principles at a higher level, not because we are disconnected from nature but because of our enhanced ability to reflect, systematise, and extend basic moral sentiments. Recognising this fact (admitting the evolutionary roots of ethics and working on it) not only deepens our understanding of the origin of morality but also paves the way for more inclusive moral insights—ones that do not emphasise a discontinuity between humans and other animals based on some quantitative difference. I argue that evolutionary ethics never rule out humanity and the uniqueness of human normativity; rather, it situates ethics within a broader natural history. This inclusive approach admits the fact that humans' quantitative ethical differences, or the ethical tower we occupy at the top of the moral pyramid, rest on foundations built by nature, emotion, and social interdependence. In other words, our capacity for reasoning, evaluation,

articulation and reflection of moral principle does not stand by itself; rather, it depends fundamentally on the lower layers that we share with primates. Just as the home requires a strong foundation to stand, our moral reasoning depends on “innate emotional and social capacities” that enable us to adapt to various changes.

Chapter Six

6. Summary and Conclusions

In this dissertation, I set out to explore one of the most debatable, if not controversial, questions in moral philosophy: the origin of moral sentiment in human beings and its relation to our nature, biology, and culture. The central claim of the project has been the conviction that morality cannot be adequately comprehended if we treat it as a set of fixed, immutable, and transcendent principles beyond experience or as a mere by-product of biological processes devoid of normative authority, i.e., neither ethical absolutism/essentialism nor biological reductionism can give a convincing explanation. What is required, therefore, is an account that recognises the biological root of moral sentiment, and at the same time maintains the social, cultural, and experiential dimensions or factors that shape and guide its development over time. Thus, by deriving insight from evolutionary ethics and pragmatic philosophy, I sought to provide the integrated or third path between normative rigidity and biological reductionism. The integration could accommodate the normative and the descriptive nature of ethics. The conclusions that follow are drawn from the scientific, philosophical and ethical arguments examined across the six chapters of the dissertation.

I began this investigation, as I have done in Chapter One, by revisiting the historical background of ethical thought and analysing the tension between rationalist accounts of morality and naturalist (sentimentalist, to be specific) approaches. The rationalist argument is represented by figures such as Plato, Aristotle, Augustine, Aquinas and Kant, who categorised morality out of empirical life: in eternal forms, divine commands, or the dictates of pure reason. This school of thought strives to justify that ethical principles should have universal, objective, and essential qualities. Doing so obviously detached moral principles from the biological and social conditions of human life. Against this moral appraisal or tradition stood the naturalist(

sentimentalist) treatments of Hume and Smith, who identify the origin of moral reasoning in sentiment, sympathy, and social experience. Hume and Smith's insights introduced the possibility of understanding morality in terms of our experience and social relations rather than transcendent realities or external authorities. Though Hume is first in noticing the fact-value dichotomy, he insists on arguing that our emotional capacity precedes moral norms and replaces rational reasoning with sentiment. Pre-Darwinian evolutionary thinkers, notably Lamarck and Spencer, substantiated the sentimentalists' claim by relating morality to adaptation, habit, and progress. Then, Darwin gave a systematic biological corroboration for moral sentiments as qualities that originated from social instincts and refined evolutionary pressures or survival.

However, Darwin's biological account and the sentimentalists' psychological justification of morality remained contested. Huxley, a bold defender of Darwinism, rejected the idea that ethics could be reduced to biology, disbelieving that evolution can explain morality, for both have contradictory logic and goals. For him, evolution is the system that enables the survival of the fittest. In contrast, ethics, or being moral, is acting against these mere survival urges. Thus, he concludes that moral principles are products of human reasoning that elevate social instincts above biology. Similar to this, but in a different context, Moore's naturalistic fallacy and Street's Darwinian dilemma reject the attempt to define moral capacity in terms of natural properties. Though the sentimentalists and Darwinian biologists laid the foundation for the naturalisation of morality (succeeding in grounding morality in human experience and social life), their accounts were not without limitations. They did not resolve the question of how sentiments (biological facts or instincts) turn into, or develop, normative authority. For this end, I introduced Dewey's pragmatic ethics as a guiding tool that neither denies biological origins nor reduces morality to it. This is the main problem of the dissertation: how to reconcile

biological explanation (the descriptive, is or fact) with normative imperatives (value or ought) in a way that remains scientifically informed and practically relevant.

In Chapter Three, I advanced the analysis by presenting Darwin's own evolutionary account and examining how contemporary biology and neuroscience have reinforced, refined, or challenged his position. According to Darwin, moral reasoning develops in four stages: it originates in social instincts, is refined through memory and habit formation, and is further guided and strengthened by language and social evaluation, and finally becomes an integrated part of conscience. Then, contemporary thinkers such as Dawkins, De Waal, and Churchland substantiated Darwin's model by providing scientific or experimental evidence from genetics, primatology, psychology, and neuroscience to show how altruism, cooperation, and moral judgment are rooted in biological and cognitive capacities. Their defences of evolutionary ethics gave empirical weight to the claim that morality is not an external or abstract imposition or discovery of reason but part of our nature. Thus, the origin of ethics, or our tendency to embrace normative rules for our practice and evaluation, is the result of evolved social dispositions, neurobiological capacities to reflect on practice and previous behaviours.

Dawkins spells out the confusion about how evolution explains morality. As we have seen in Huxley's critiques, evolution is a "selfish" natural urge for survival. However, Dawkins corrects this caricature by attributing "selfish" as a quality of genes rather than organisms. He shifts the argument from an organism-centred view of evolution to a gene-centred view of evolution. In the case of the latter, the prosocial or moral traits (altruistic, cooperative tendencies) can be explained as mechanisms by which the gene maintains its survival. Here, these traits are identified as selfish behaviour of the gene. Yet, Dawkins insists that such traits often yield genuinely prosocial outcomes at the level of organisms and groups through culture and rational foresight or reflection. His notion of "misfiring rules of thumb" (acting or

behaving against one's original purpose or intention) corroborated how "heuristics", which were effective among our ancestors, work in the modern social and moral norms. In short, the rule of thumb misfires to be applied beyond its original scope: generosity to strangers, adapting and loving others' offspring...may arise from instincts that "misfire" outside their evolutionary context or purposes. So, these misfirings become the fertile ground for advanced and complex cultural norms and moral commitments. For Dawkins, we humans have a distinctive capacity to "rebel against the tyranny of selfish replicators"(genes): the ability to be cooperative, fair, compassionate, even against our narrow advantage. His defence of evolutionary ethics combines the natural origins of morality with the uniquely human potential to extend and transform it, which distances him from biological reductionism.

Churchland goes further in her defence of evolutionary ethics. She anchors her point in neurobiology to illustrate how moral capacity emerges from mammalian brain structures shaped by evolution and environments. She reduced the foundations of morality into four human capacities: (1) caring for offspring and kin, which is facilitated by "neurochemicals", called "oxytocin"; (2) the ability to understand "others' psychological state; (3) problem-solving in social contexts; and (4) the capacity to learn social practices, which enables to preserve, modify stabilize norms and values over time. In her analysis, she resolved the long-standing problems of the fact-value dichotomy. Though Hume and Moore argue that value cannot be derived from fact, Churchland contends that normativity (value) itself is explicable in naturalistic terms. For her, the value or the capacity for valuing originated from the brain's evolved capacities for impulse regulation, affective attunement, and long-term planning, which in turn form the biological substrate for moral evaluation.

The evolutionary approach of ethics often leads to the tension between biological determinism and moral freedom. From Lamarck and Spencer to Dawkins and Churchland, they have

developed their own argument to demonstrate that moral sentiments have deep biological roots. Yet this leads logical readers to ask: if our characters are shaped by genetic patterns and neural mechanisms, how can we still speak of freedom, responsibility, and moral agency? Hard determinists (e.g., Francis Crick) contend that our joys, ambitions, and choices are nothing more than the results of biochemical interactions, which reduces moral life to ‘neurochemistry’—that is, conduct is, at least in part, ‘hard-wired.’ To this end, I adopted the account of evolutionary compatibilists to preserve the freedom of moral agents. Compatibilist thinkers resist this reduction and argue that freedom itself is an evolved capacity. Dennett and Heisenberg, for instance, treat freedom as an evolved capacity of the brain to predict, inhibit, and deliberate. Here, freedom is not a metaphysical entity that is detached from our nature, but it is a biological and cultural achievement. It is an evolved capacity for normative evaluation that mediates between instinct and reflection, evaluation and anticipation. Dennett’s claim that “you are also the current editor of yourself” captures the fact that we are shaped by genes, but through language, education, and social interaction, we gain the power to redirect and transform inherited dispositions. So, evolutionary compatibilism reconciles biology with responsibility, morality, and freedom, so to speak.

I have strengthened the biological substrate of morality, as presented in Chapter Four, by examining proto-moral patterns or behaviour of primates. Against the Veneer theory, I evaluated various ethological records: chimpanzee consolation after distress points to empathy and affective concern that are not reducible to immediate self-benefit; capuchin monkey and other primates’ inequity aversion displays a sensitivity to fairness; third-party reciprocity among macaques reveals impartiality—the capacity to disapprove of non-reciprocators even when one is not the victim.

All these findings show that the raw materials of moral life—empathy, sensitivity to fairness, reciprocity, third-party monitoring, reputational concern, and group-stabilizing sanctions—are present in forms that natural selection plausibly favored because they sustained cooperation in the ecologies where social animals thrived; to deny these continuities is not an argument for human exceptionalism so much as a refusal to look where the evidence points. In Chapter Four, I also address in detail Huxley’s critiques of evolutionary ethics. His “garden” metaphor—ethics as a rebellion against nature—maintains that evolved motives are often parochial (self-centred and selfish), short-horizon, and status-sensitive. Yet the ethological record undermines his opposition by revealing that nature already contains the seeds of the garden—other-regarding concern, norm enforcement, memory of favours, reciprocity and rudimentary impartiality.

Hence, we learn from primatologists that the building block of morality is not exclusively human character, but rather it is shared with primates. But it does not mean that primates and human beings are similar in entertaining or experiencing morality. It is crystal clear that we humans can articulate and establish abstract normative principles at a higher level, not because we are separated from our animal nature but because we have a more advanced ability to think about, organise, and build upon our fundamental feelings of fairness and empathy.

By combining Dewey’s pragmatist ethics with the biological basis of moral sentiment(evolutionary ethics), as explained in Chapter Four, I contend that morality is both a natural ability and a reflective cultural practice. The merging of evolutionary ethics with Dewey’s scientific approach to ethics gives an all-inclusive understanding of morality. While the former clarifies the development of moral dispositions and provides a scientific rationale for their origins, Dewey offers a pragmatic framework for their growth, transformation, and application in new contexts. Therefore, Dewey’s experimental ethics is not opposed to but

rather complements evolutionary ethics. As other kinds of theory or knowledge, morality or moral judgments, for Dewey, are the tools to resolve practical problems in a given time and context.

Thus, as a tool or method, he maintains the continuity between scientific and moral inquiry: both are experimental, fallible, and oriented toward problem-solving in concrete contexts. In other words, Dewey insists that moral judgment and ethical principles should be approached scientifically: treated as hypotheses, tested against experience and revised in light of practical outcomes. This experimental attitude toward moral reasoning aligns with Darwinian natural selection: just as behaviours are preserved or discarded based on their adaptive and survival utility, our moral convictions should be evaluated by their capacity to resolve conflict, foster cooperation, enhance shared values, and ultimately facilitate growth. In short, just as evolution operates through trial and error, so too normative progress occurs through ongoing experimentation, tested against the problem at hand. This progressive account of morality, in turn, rejects ethical absolutism and instead treats ethics as an open-ended process of both natural inheritance and cultural refinement, rational reflection, and revision.

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