A Thesis
entitled
Human Nature and Intelligence: The Implications of John Dewey’s Philosophy
by
Joshua August Skorburg
Submitted to the Graduate Faculty as partial fulfillment of the requirements for the
Master of Arts Degree in Philosophy

Dr. James Campbell, Committee Chair

Dr. John Sarnecki, Committee Member

Dr. Benjamin Grazzini, Committee Member

Dr. Patricia R. Komuniecki, Dean
College of Graduate Studies

The University of Toledo
May 2012
An Abstract of

Human Nature and Intelligence: The Implications of John Dewey’s Philosophy

by

Joshua August Skorburg

Submitted to the Graduate Faculty as partial fulfillment of the requirements for the Master of Arts Degree in Philosophy

The University of Toledo

May 2012

This work demonstrates the continued relevance of John Dewey’s philosophy, especially as it relates to questions at the intersection of ethics and the philosophy of mind. I begin by taking up a fundamental philosophical question: “what kind of beings are we?” I argue that the Deweyan answer is “embodied, habitual, problem solvers.” Working from this conception of human nature, I show that intelligence is continuous with - and not something apart from - the embodied, habitual, and reconstructive nature of human existence. Finally, I point to the ways in which human nature thus construed, poses a fundamental challenge to the computational and representational models of the mind. Similarly, I point to the ways in which intelligence thus construed poses a fundamental challenge to the traditional notions of the moral agent and moral deliberation. I conclude by suggesting that Dewey’s conceptions of human nature and intelligence provide a useful framework for re-thinking many of the problems associated with better understanding what kind of beings we are and how we ought to live.
“Faith in the power of intelligence to imagine a future which is the projection of the desirable in the present, and to invent the instrumentalities of its realization, is our salvation. And it is a faith which must be nurtured and made articulate: surely a sufficiently large task for our philosophy.”

Acknowledgements

It is one of the greatest privileges of authorship that I can publicly express my gratitude to those who have been integral in my development, both in terms of becoming a better person, and becoming a better scholar. As regards the former, I must first and foremost thank my parents, Jon and Mary Ann Skorburg, for their open-mindedness, their continued support, and their thoroughgoing dedication to the vision that their children ought to have more and better opportunities than they did. It is in the deepest and most profound sense that I can say I would not be where I am today - doing philosophy, the thing I love most in the world - without them.

As regards my development as an aspiring scholar, I am first of all indebted to Dr. James Campbell, who has in his own work demonstrated unerring commitments to thorough and tireless research, clear writing, and sympathetic reading. The present work attempts to reflect these commitments, though if it falls short in any respect, it is only a fault of my own. Luckily, I may take solace in the fact that I have grown immeasurably as a researcher, writer, reader, thinker, and teacher as a direct result of my interactions with Dr. Campbell. I am also indebted to Dr. John Sarnecki for opening many doors for me, both in terms of research and teaching. If my efforts to engage classical American pragmatism with the pressing questions of 21st century philosophies of mind are to any degree successful, it is entirely due to the fact that the latter was introduced to me by Dr. Sarnecki. I am also greatly indebted to Dr. Benjamin Grazzini, whose dedication to the profession of philosophy is unparalleled. In more ways than can be elucidated here, Dr. Grazzini has served as an exemplar of excellence in teaching, administration, and professionalism.
# Table of Contents

Abstract ................................................................................................................................. iii

Acknowledgements .................................................................................................................. v

Table of Contents ................................................................................................................... vi

Preface ........................................................................................................................................ viii

1 Human Nature ......................................................................................................................... 1

1.0 Introduction ......................................................................................................................... 1

1.1 Human Nature as Embodied .............................................................................................. 2

1.1.1 Organism and Environment ......................................................................................... 3

1.1.2 Stimulus and Response ............................................................................................... 7

1.1.3 Individual and Society ............................................................................................... 13

1.2 Human Nature as Habitual ............................................................................................... 22

1.2.1 Habits as Functions of an Embodied Existence ......................................................... 24

1.2.2 The Creative/Aesthetic Dimension of Habit ............................................................ 26

1.2.3 The Social Dimension of Habit ................................................................................ 30

1.2.4 The “Psychological” Dimension of Habit ................................................................ 32

1.3 Human Nature as Problem Solving .................................................................................. 35

1.3.1 The Pattern of Inquiry ............................................................................................... 36

1.3.2 The Tension Between Habit and Inquiry .................................................................. 43

1.4 Conclusion ......................................................................................................................... 45
2 Intelligence.................................................................................................................46

2.0 Introduction........................................................................................................46

2.1 Human Nature and Intelligence.................................................................47

2.1.1 Embodied Intelligence........................................................................48

2.1.2 Intelligence and Habit...........................................................................54

2.1.3 Intelligence and Problem Solving......................................................58

2.1.4 The Social Dimension of Intelligence...........................................63

2.1.5 The Qualitative Dimension of Intelligence...................................73

2.2 Intelligence as the Creative Re-Appropriation of Past Experience…81

2.3 Conclusion..................................................................................................85

3 The Implications of Dewey’s Notions of Human Nature and Intelligence....85

3.0 Introduction................................................................................................87

3.1 Implications of Dewey’s Notion of Human Nature.................................88

3.1.1 The Embodied Approach................................................................89

3.1.2 The Representational and Computational Approach.............100

3.2 Implications of Dewey’s Notion of Intelligence.................................103

3.2.1 The Normative Force of Intelligence........................................104

3.2.2 What Does it Mean to Live Intelligently? .................................114

3.3 Conclusion ................................................................................................121

3.4 The Deweyan Challenge........................................................................122

References..........................................................................................................126
Preface

This work aims to take up two of the most fundamental philosophical questions: (1) what kind of beings are we? (2) how should we live? I contend that the philosophy of John Dewey provides us with the resources to provide an answer to both questions. The first chapter begins with the assumption that humans are intelligent beings, and then seeks to find the basis for this assumption. That is, the first chapter will give a comprehensive account of Dewey's notion of human nature. In second chapter, I will provide a comprehensive account of Dewey's notion of intelligence, and show that it is continuous and integrated with his conception of human nature. In the third chapter, I will explore the implications of the Deweyan conceptions of human nature and intelligence. With regard to the former, I will show that many of Dewey's insights have stood the test of time, and offer a valuable framework for contemporary philosophers concerned with a scientific study of the mind. With regard to the latter, I will show that Dewey's notion of intelligence possess normative force so as to act as a directive force in our lives, and thus provide an answer to the second question.

In the end, I hope to show that Dewey's view of human nature and intelligence hangs together in such a way that it can offer valuable insights into a variety of theories about who we are and what we do. The most important point I wish to make, however, is that the real value of Dewey's philosophy does not lie solely in its capacity to provide comprehensive and coherent accounts of human nature - though that is certainly an important part. The real value, I contend, lies in studying the way in which Dewey goes
about providing such an account. Dewey's metaphysical commitments to continuity and integration allow him to construct a theory of intelligence which is completely continuous with his theory of human nature. The result is that the forces which allow the theories of human nature and intelligence to hang together, are the same forces by which the theories are transformed into practices. In order to see how this works, I will begin with an account of human nature, and then show how intelligence is continuous with, and grows out of, the same forces that shape human nature. I will then show that this way of understanding the connection between human nature and intelligence is immensely valuable both as a framework for constructing theories about the mind more generally, as well for constructing theories about how we ought to live. In the end, we will see that this “metaphysics of continuity” is what allows our theories to be transformed into practices.¹

¹ Unless otherwise noted, all references to Dewey's work are to the thirty-seven volume critical edition, *The Collected Works of John Dewey*, edited by Jo Ann Boydston, and published by the Southern Illinois University Press between 1969 and 1990. The critical edition is divided into three series: *The Early Works* (Henceforth abbreviated as “EW”), *The Middle Works* (Henceforth abbreviated as “MW”), and *The Later Works* (Henceforth abbreviated as “LW”). All references will indicate the series, followed by the volume number and page number.
Chapter 1

Human Nature

1.0 Introduction

This first chapter aims to give a comprehensive answer to the question: “what kind of beings are we?” I will show that the Deweyan answer is “embodied, habitual, problem-solvers.” In this chapter, I will further elucidate this conception of human nature by considering each of these three themes in detail. First, and perhaps most importantly, I will take up Dewey's notion of embodiment. I say most importantly because Dewey's notions of habit, problem-solving, and intelligence are all rooted in his understanding of the human organism as fundamentally and inextricably embodied in a multi-dimensional environment. Thus, elucidating these various dimensions of embodiment will be the focus of much of this first chapter.

In the second section, I will consider Dewey's notion of habit in its various dimensions. First of all, habits will be shown to be functions of an embodied existence. In considering Dewey's formulation of habits as such, I will briefly consider the influence of William James, and attempt to show how Dewey appropriates James's notion of habit, as well as shifts James's emphasis in some important ways. The most important way is perhaps Dewey's extension of James's notion of habit beyond its individual, psychological dimension, and into the realm of social institutions. I will also consider
Dewey's take on the psychological dimension of habit, as well as the creative and aesthetic nature of habits.

In the last section, I will take up Dewey's notion of problem solving, or, put another way, his theory of inquiry. Again, we will first conceive this aspect of human nature as a function of an embodied existence. From there, I will consider Dewey's account of the pattern of inquiry, or how it is that humans generally go about solving problems. I will conclude by setting up the tension between habit and inquiry, which will be seen to play a large role in understanding Dewey's notion of intelligence.

1.1 Human Nature as Embodied

The first theme of Dewey's conception of human nature I will consider is embodiment. In saying that humans are embodied, I mean that the human organism is a part of her environment just as much as her environment is a part of her. Much more needs to be said, of course, as this formulation does little more than beg the question of what we mean by organism and environment, and their relation to one another.

In the first place, we must broaden our conception of the environment to include not only the traditional ecological/biological dimension, but also the physiological/psychological and social/political dimensions. Each of these will be examined by way of a Deweyan analysis of the traditional dualisms which correspond to each dimension: Organism-Environment, Stimulus-Response, and Individual-Society, respectively. The Organism-Environment dualism will be considered in light of Dewey's Lectures on Ethics (1898 – 1901); the Stimulus-Response dualism will be taken up in the context of Dewey's early essay, “The Reflex Arc Concept in Psychology” (1896); the

### 1.1.1 Human Nature as Embodied: Organism and Environment

In considering what it means to be embodied in an environment, we will find that dualistic accounts are contrary to the facts of lived experience. Indeed, a project such as my own, which attempts to advance claims about how one ought to navigate specific problematic situations, hinges upon the verifiability of such claims to actual lived situations. Being able to do so, it will be shown, requires a commitment to a non-dualistic account of the human organism as fundamentally embodied in a multidimensional environment. The dimensions we will consider – ecological/biological, physiological/psychological, and social/political – are three specific applications of Dewey's metaphysics of integration and continuity. Although the immediate discussion will be couched entirely in terms of organism and environment, the metaphysical principle which integrates, or interprets organism and environment as continuous, is easily extendable and applicable to the concepts of stimulus and response, individual and society, feeling and thought, emotion and reason, body and mind, means and ends, problems and solutions, actualities and idealities, theory and practice, etc.

With that being said, we can move to consider the standard biological/ecological conception of the environment, and the organism's place therein. As will be a recurrent theme, it is of the utmost importance to stress that this distinction between organism and environment is, for Dewey, intellectual, conventional, arbitrary, teleological, and
imposed from without. In his 1898 *Lectures on Psychological and Political Ethics*, Dewey says:

No matter how much one school may insist on the organism, no matter how much another school may insist on the environment, it is certainly true that both are parts of a common world...From the larger standpoint we must have one thing, one reality, the world at large, *and the distinction between the organism and the environment and their adjustments to each other must be capable of definition and interpretation from the standpoint of this larger whole.*

Here, the larger standpoint is simply *living*, or what Dewey calls the organic process. Therein, there is no line drawn between organism and environment, there is simply *living*. When we are walking, for example, insofar as we are actually doing so, we do not distinguish between the movement of our feet and the solidity of the ground. It is only after the fact, or retrospectively, that any distinction is made between the feet as somehow “belonging” to the organism and the ground as somehow “belonging” the environment. We make such distinctions, Dewey thinks, because:

---

2 Dewey, John. *Lectures on Psychological and Political Ethics: 1898*. ed. Donald F. Koch. New York: Hafner Press, 1976. pg. 272. Emphasis mine. Cf. Dewey’s *Lectures on Ethics: 1900-1901*: “So it is not simply that we happen to have an organism drop down into an environment and then these two react upon each other. It is quite the opposite. Organism and environment are the two things which converge in the life process. We do not begin with the two things and have them react and produce the life process.” (pg. 364). Emphasis in original.

3 The distinction I make throughout this chapter between “the level of lived experience” and “retrospective, or *ex post facto* reflection,” is the same distinction Dewey makes in the first chapter of *Experience and Nature* between “primary” and “secondary” experience. For this discussion see LW 1: 15-42.
functional activity is maintained only through readjustment and readaptation. We commonly talk of the organism and the environment and of the adaptation of one to the other...but when we come to an analysis of the factors involved, it is quite necessary to start from the unity of function and see that the distinction between organism and environment arises because of adaptation in that process, not vice versa...readaptation, readjustment, has to take place within the function, or the functional activity, or the organic process, and at the time of that readaptation it is at least a teleological necessity to make a distinction between phases or factors concerned in that readjustment. What we mean by organism is something which exercises one function, has one office in the readjustment of function; and what we mean by environment is something which has another purpose to serve in that readjustment of function.\textsuperscript{4}

The importance of the organism-environment distinction being imposed, intellectual, teleological, retrospective, etc. cannot be overstated. In the first place, it is impossible to actually experience a divide between one’s self \textit{qua} organism and one’s environment. At the level of functionality what would lungs be without oxygen? What would a fish be without water? What would a tree be without soil? From the perspective of the life process, these “organisms” are inconceivable apart from their “environment.” In the second place, although it is possible, and often useful, to make a distinction between organism and environment, it is always done \textit{ex post facto}, and the distinction is always made to serve some other purpose. For example, a plant biologist might conceive the soil as part of the environment for the plant, but for the ecologist, the soil itself can be conceived as an organism in a larger ecosystem. Similarly, the farmer's conception of the field of corn is likely much different from that of the parasitologist. What is most important for our purposes, though, is the recognition that at the level of lived experience there is no way to absolutely, or non-pragmatically demarcate organism and environment. For the human organism to be-in-the-world is to be integrated as a part of the organic

\textsuperscript{4} \textit{Lectures on Psychological and Political Ethics: 1898. pg. 275.}
process - the constant transaction between organism and environment. Thomas Alexander describes this idea aptly:

The organism and its environment are mutually implicated at each moment; they are aspects of one situation fundamentally related through the act. The organism is just this ability to draw on a range of material in the world and transform the energy in that material into an organized pattern of activity. An environment is in turn that range of energy which is available to the organism and necessary for its survival.5

The important point here is that organism and environment are mutually implicated at each moment. This reinforces the idea that the human organism is not aloof from her environment, but rather, inextricably a part of it, embodied in it. Her actions have consequences which implicate and transform the environment of which she is a part. The environment then, is an arbitrary term for the range of available energies from which the organism draws in order to reorganize itself in dealing with changes and fluctuations.6

At this point we have already begun to intimate the interrelatedness between the three aspects of Dewey’s conception of human nature. If we accept an embodied, non-dualistic account of the relationship between organism and environment, then the human organism’s place in the world is not aloof from, nor in control of, the forces in the environment. Rather, the organism is constantly subjected to the fluctuating and precarious changes in the environment. In short, the organism is constantly faced with problems that need to be solved in order to survive. Thus, what we mean by organism is

5 Alexander, pg. 135.
6 Cf. LW 1: 194: “Empirically speaking, the most obvious difference between living and non-living this is that the activities of the former are characterized by needs, by efforts which are active demands to satisfy needs, and by satisfactions. In making this statement, the terms need, effort and satisfaction are primarily employed in a biological sense. By need is meant a condition of tensional distribution of energies such that the body is in a condition of uneasy or unstable equilibrium. By demand or effort is meant the fact that this state is manifested in movements which modify environing bodies in ways which react upon the body, so that its characteristic pattern of active equilibrium is restored. By satisfaction is meant this recovery of equilibrium pattern, consequent upon the changes of environment due to interactions with the active demands of the organism.”
simply something that can have a purpose, that strives, that has needs to be met, or problems to be solved. What we mean by environment is, in part, the range of available energies which can be drawn from in order to meet certain needs, or solve problems. In addition, the environment is also the source of many problems for the organism. The Deweyan notion of embodiment, then, is staked on the claim that this distinction between organism and environment is contingent or accidental, and is not a feature of lived experience. At the level of lived experience, there is only the process of living: organism and environment are unified in an organic whole through functional activity. Thus, the nature of human existence must be understood from the standpoint of this life process where organism and environment are in constant transaction with each other; where the organism is as much a part of her environment as her environment is a part of her. In attempting to understand how the nature of human existence shapes the development of intelligence, we must, in the first place, adopt an embodied and non-dualistic account of the human being's place in the world.

1.1.2 Human Nature as Embodied: Stimulus and Response

In the previous section, we saw that understanding the ecological dimension of embodiment entailed a rejection of the dualism between organism and environment. In this section, the focus will be on understanding the physiological/psychological dimension of embodiment, which will similarly entail a consideration and rejection of a traditional dualism: stimulus and response in the peripheral and central nervous system. An analysis of Dewey's seminal 1896 essay “The Reflex Arc Concept in Psychology”
will thus bring out what many scholars take to be the strongest expression of the Deweyan notion of embodiment.\(^7\)

Dewey begins the essay with the following claim:

The reflex arc is not a comprehensive, or organic unity, but a patchwork of disjointed parts, a mechanical conjunction of unallied processes. What is needed is that the principle underlying the idea of the reflex arc as the fundamental psychical unity shall react into and determine the values of its constitutive factors. More specifically what is wanted is that sensory stimulus, central connections and motor responses shall be viewed, not as separate and complete entities in themselves, but as divisions of labor, functioning factors, within the single concrete whole, now designated the reflex arc.\(^8\)

Dewey is here arguing that the reflex arc— the received model of sensory stimulus leading to motor response— should be replaced by what he terms a “sensori-motor coordination.” To demonstrate this coordination, Dewey points us toward William James's example in *The Principles of Psychology* (1890) where a young child notices the light from a candle, reaches for the flame, burns her hand, and retracts it.\(^9\) On the traditional view, the light of the candle is characterized as the stimulus, and the response is reaching for the flame. The burning of the hand is then characterized as a new stimulus, completely independent of the original stimulus of seeing the light. The retraction of the hand is then conceived as the response to this second stimulus, also distinct from the original seeing and reaching.

---

\(^7\) In the introduction to the second volume of *The Essential Dewey: Ethics, Logic, Psychology* (Bloomington: Indiana University Press, 1998. pg. ix), Thomas Alexander and Larry Hickman write, “‘The Reflex Arc Concept in Psychology’ (1896) is one of Dewey's most famous essays. It signaled the end of introspectionist psychology and the beginning of a new functional, organic, social behaviorism. In 1942, a committee of seventy eminent psychologists polled by the editors of *The Psychological Review* voted this essay the most important contribution to the journal during its first 49 years of publication.”

\(^8\) EW 5: 97.

Dewey's idea of a sensori-motor coordination replacing this model entails the claim that “both sensation and movement lie inside, not outside the act.” On this view, the “beginning” is the engaged act of seeing, not the passive reception of the sensation of light. The movement of the muscles in the head, neck, eyes, etc., determine what it is that will be seen, and consequently, what the hand will be reaching for. The act of seeing guides the hand, and as such, implicates both the seeing and the reaching within a larger coordination. “The act is seeing no less than before, but it is now seeing-for-reaching-purposes. There is still a sensori-motor circuit, one with more content or value, not a substitution of a motor response for a sensory stimulus.” The next phase is the child burning her hand. On the traditional view, the sensation of burning constitutes a new stimulus apart from the reaching for the flame which caused the burn in the first place. Dewey points out that if this were in fact the case, there would be no way for the child to learn that the act of reaching for a candle, grasping the flame and burning one's hand is painful, and should not be repeated. There would only be the isolated response of retracting the hand from the flame, with no reference to the fact that the pain inflicted by the burn was the result of reaching for it in the first place. Because we know that there is such a reference, we must again conceive of this particular phase within a larger coordination. “It is simply the completion, or fulfillment of, the previous eye-hand coordination and not an entirely new occurrence.” This larger coordination is the

---

10 EW 5: 98.
11 Ibid.
12 Ibid.
“seeing-of-a-light-that-means-pain-when-contact-occurs.” Thus, sensory stimulus and motor response cannot be thought of as discrete and independent psychical entities.

A consideration of Dewey's treatment of James Mark Baldwin's notion of the reactive consciousness also serves to illustrate the problems with the traditional stimulus-response model. Baldwin identifies three distinct phases in the response to a stimulus: the receiving consciousness, the registering element, and the ensuing muscular reaction. In his *Handbook of Psychology: Feeling and Will*, Baldwin writes:

By reactive consciousness is meant the state formerly designated as involuntary attention. In passive consciousness only the reception of stimuli is a matter of sensibility: here consciousness seems to attach to both members of the nervous arc. There is as truly a reaction in consciousness as there is in the nervous system. We may accordingly analyze this form of consciousness for purposes of treatment into three elements, corresponding to the three elements of the nervous arc. First, the receiving consciousness, the stimulus—say a loud unexpected sound; second, the attention involuntarily drawn, the registering element, as appears below; and third, the muscular reaction following upon the sound—say flight from fancied danger.

Thus, in staying with light examples, a Baldwinian account might look something like the following: One is walking down a dark alley at night, and is suddenly blinded by the headlights of an oncoming vehicle, so she quickly moves out of the way to avoid being hit. In this example the initial sensation of the bright lights shining in our subject's face would constitute the receiving consciousness. From there, she registers the blinding lights as coming from the headlights of an oncoming vehicle. This realization then elicits the motor response of moving out of the way of the vehicle. Dewey's criticism of this model is that the light from the headlights is not a passively received stimulus, but is rather a part of a larger coordination which is the act of seeing. It is through the motor

---

13 EW 5: 198.
activity of the eyes being previously adjusted to the dark, and then subsequently bombarded with light that the “stimulus” of the bright lights from the headlights can occur. In other words, the muscular activity which, on the traditional model, is characterized as the “response,” actually precedes the “stimulus.” In this sense it is just as true to say that the movement away from the oncoming vehicle is as much a motor response as is the reception of the sensation of the bright lights. The latter is what determines exactly what kind of “stimulus” will be presented; in this case, bright-lights-mean-vehicle-is-approaching-get-out-of-the-way. Thus Dewey says, “what we have is a circuit, not an arc or broken segment of a circle. This circuit is more truly termed organic than reflex, because the motor response determines the stimulus just as truly as sensory stimulus determines movement.”¹⁵ In other words, the idea of three distinct elements, as Baldwin has it, is confused - there is instead a circuit, an unbroken, unified whole.

In the previous section we saw how emphatically Dewey insisted that the distinction between environment and organism is purely contingent and teleological, and only applied to lived experience ex post facto. In his later writings, especially in *Experience and Nature*, he expressed this integrated relationship between the physiological and psychological, the physical and the mental, as “Body-Mind.”¹⁶ The conception of sensori-motor coordination or the organic circuit we have laid out in this

---

¹⁵ EW 5: 102.
¹⁶ Cf. LW 1: 211-2: “The world is subject-matter for knowledge, because mind has developed in that world...In ultimate analysis the mystery that mind should use a body, or that a body should have a mind, is like the mystery that a man cultivating plants should use the soil...Every 'mind' that we are empirically acquainted with is found in connection with some organized body. Every such body exists in a natural medium to which it sustains some adaptive connection: plants to air, water, sun and animals to these things and also to plants...An animal can live only as long as it draws nutriment from its medium, finds there means of deference and ejects into it waste and superfluous products of its own making...At every point and stage, accordingly, a living organism and its life processes involve a world or nature temporally and spatially 'external' to itself but 'internal' to its functions.”
section serves precisely the same purpose. In *Experience and Nature*, the proposed solution of the “Body-Mind” primarily emphasizes embodiment in the biological or ecological sense. In the reflex arc essay, the sensori-motor coordination or organic circuit is meant to emphasize one's embodiment in the physiological/psychological dimension. In the following passage drawn from the reflex arc essay, we find sentiments that are relevant to both the preceding section, and the sections to follow. Dewey writes:

they [stimulus and response] mean distinctions of flexible function only, not of fixed existence; that one and the same occurrence plays either or both parts, according to the shift of interest; and that because of this functional distinction and relationship, the supposed problem of the adjustment of one to the other, whether by superior force in the stimulus or an agency *ad hoc* in the centre or soul, is a purely self-created problem. In the physical process, as physical, there is nothing which can be set off as stimulus, nothing which reacts, nothing which is response. There is just a change in the system of tensions. The fact is that stimulus and response are not distinctions of existence, but teleological distinctions, that is, distinctions of function, or part played, with reference to reaching or maintaining and end.¹⁷

We can replace the words stimulus and response with organism and environment, or individual and society, and the force of the passage will remain the same. In lived experience, these dualisms are simply not experienced, they are injected after the fact. In the reflex arc essay, Dewey writes that when “a set of considerations which hold good only because of a completed process, is read into the content of the process which conditions this completed result,” we commit what is “virtually the psychological or historical fallacy.”¹⁸ This is what he will later refer to as the philosophical fallacy, and what it amounts to is neglect to recognize the embodied nature of human existence in its various dimensions.

¹⁷ EW 5: 102-3.
¹⁸ EW 5: 105.
1.1.3 Human Nature as Embodied: Individual and Society

In this section, we will consider the social aspect of Dewey's notion of embodiment by way of an analysis of the relationship between the individual and society. What follows will necessarily be an abridged discussion, as the relationship between the individual and society is one that occupied Dewey throughout his prolific career. In keeping with the goals of this first chapter, I will focus on the social dimension of human existence with an eye toward how the relationship between individual and society shapes the development of intelligence. To this end, I begin with a discussion of how humans learn to become human by virtue of their embodiment in a social environment.

The idea that humans must learn to become human, as strange as it may sound, is central to understanding Dewey's general conception of human nature, as well as the specific role of social embodiment. The clearest expression of this idea is found in the fifth chapter of *The Public and Its Problems*. Therein, Dewey says that “everything which is distinctively human is learned...to learn to be human is to develop through the give-and-take of communication an effective sense of being an individually distinctive member of a community.” In order to fully grasp the significance of this idea, more will need to be said about what “distinctively human” means for Dewey, because he is not suggesting here that we are born as something other than human beings. Rather, he is simply pointing out that what distinguishes humans from other animals is, in part, the

---

19 For example, in one of Dewey's earliest essays, “The Ethics of Democracy” (1888), he writes, “men are not isolated non-social atoms, but are men only when intrinsic relations to men.” (EW 1:231). In his 1932 revision of *Ethics*, he and James Hayden Tufts write: "nothing in the universe, not even physical things, exists apart from some form of association; there is nothing from the atom to man which is not involved in conjoint action...apart from the ties which bind him to others, he is nothing.” (LW 7: 323).
20 LW 2: 331-2. In this passage, Dewey qualifies the categorical claim that “everything which is distinctively human is learned, not native,” by adding: “even though it could not be learned without native structures which mark man off from other animals.”
complex social realm of which we are inextricably a part. What it means to be “distinctively human” will hopefully become clearer as we examine the various aspects of Dewey's conception of human nature. Similarly, we will also explore what Dewey means when he suggests that one has to learn how to become “a distinctive member of a community.” For example, Dewey writes: “We are born organic beings associated with others, but we are not members of a community. The young have to be brought within the traditions, outlook and interests which characterize a community by means of education.”21 Thus, what it means to be part of a community is more than being in overt proximity to others. Exactly what that “more” is, will be taken up below.

For now, let us return to Dewey's claim that everything which is distinctively human is learned. I must first note that it is outside the scope of the present project to attempt to evaluate the soundness of this claim. Doing so would lead us astray into some manifestation of the empiricist-nativist debate, for which there is not space to adequately address here.22 What we must recognize, though, is that Dewey is embedded in an ongoing discussion about the proper balance between hyper-individualism and collectivism. What is more important for our purposes, however, is to take note of the amount of emphasis that Dewey places on the role of the social environment in shaping a distinctively human member of a community. This emphasis is well worth noting because

21 LW 2: 331. Another way to frame the question of what makes human communities distinctively human, is to ask, “what is it about humans that allows us to do more than concern ourselves with passing on our genes?” We strive to pass on our traditions, our institutions, our art, our stories, our beliefs – in short, our culture. The answer to the former question, then, likely has something to do with the fact that there are many aspects of our lives that are as important, if not more important, than simply reproducing.

for Dewey, “the social, in spite of whatever may be said regarding the temporal and spatial limitation of its manifestations, furnishes philosophically the inclusive category.”23 In other words, the social is the most fundamental and basic ontological category for Dewey.24 As such, our conception of the embodied nature of human existence should not risk understating the importance of the social aspect of human nature.

In order to demonstrate the embodied nature of human existence in its social dimension, we will examine the purported dualism between the individual and society. Dewey is very straightforward about the existence of a dualism between individual and society, at least in a very basic, and perhaps obvious, way. He writes: “the social and the individual are not opposed terms. Indeed, in the strict sense of the terms, no question can be reduced to the individual on one side and the social on the other.”25 This is by no means a novel or controversial idea. At a superficial level, it is of course true that we are primarily social beings. As Dewey says, “human beings are generated only by union of individuals; the human infant is so feeble in his powers as to be dependent upon the care and protection of others; he cannot grow up without the help given by others; his mind is nourished by contact with others and by intercommunication.”26 At a fundamental level, we could not even talk about “individuals” were it not for their relations to others. When we talk about the social, however, the scope of our discourse spans much wider than the

23 LW 3: 45. Emphasis mine.
26 LW 7: 323.
primary caretaker which enables the infant to survive. Thus, to talk about the relationship of the individual to *society* is to engage in a much more complex and difficult task.

In the first place, we must say more about precisely what we mean by "individual" and "society." With regard to the latter, Dewey says, "it is surely a fact that there is nothing called society over and above John Smith, Susan Jones, and other individual persons. Society as something apart from individuals is a pure fiction."27 We can say that, at the least, society is a collection of associated individuals. Whatever else society may be, it does not exist apart from associated individuals. So what can we say about why individuals associate such that the resultant collection can be properly termed a human society? According to Dewey, not much:

There is no mystery about the fact of association, of an interconnected action which affects the activity of singular elements. There is no sense in asking how individuals come to be associated. They exist and operate in association. If there is any mystery about the matter, it is the mystery that the universe is the kind of universe it is. Such a mystery could not be explained without going outside the universe.28

There are two important points here. The first is that the only meaningful kinds of questions we can ask about human association are not *how* humans come to associate, but "how they come to be connected in just those ways which give human communities traits so different from those which mark assemblies of electrons, unions of trees in the forests, swarms of insects, herds of sheeps, and collections of stars."29 We need not worry about how it is that humans come to associate, because it is a simple fact that we *are* associated, and that we would not exist apart from those associations. The more pressing concern is

27 LW 7: 323.
28 LW 2: 249. Cf. MW 14: 44: "To talk about the priority of 'society' to the individual is to indulge in nonsensical metaphysics. But to say that some pre-existent association of human beings is prior to every particular human being who is born into the world is to mention a commonplace...There is no problem in all history so artificial as that of how 'individuals' manage to form 'society.'" Emphasis in original.
29 LW 2: 249.
to find out what characterizes human societies as human. One possible answer is that humans have the capacity to organize themselves in such a way as to direct their collective actions toward the improvement of their world. Humans are able to consciously observe and reflect on the connectedness of their actions in this way: “they think of the consequences of their behavior upon that of others and that of others upon themselves.”

This is, of course, a hasty characterization, but in many ways, the question of what makes human society distinctively human is akin to the question this first chapter is attempting to answer: What kind of beings are we? As such, it would be even hastier and preliminary to attempt to give a more complete answer here. Nonetheless, we can say that the capacity to reflect on past experience, observe present conditions, and integrate these insights into actions directed at the creation of a more favorable future is a large part of what makes humans distinctively human. The mark of a distinctively human society then, is in part, the collective realization of this capacity among a group of associated individuals.

The second point to note is that Dewey's notion of society as an association of individuals is part and parcel of a larger metaphysical principle of his philosophy writ large. This larger principle subsumes each aspect of the notion of embodiment we have considered thus far, as well as each of the larger themes of human nature we will consider below:

---

30 LW 2: 249.
Association in the sense of connection and combination is a “law” of everything known to exist. Singular things act, but they act together. Nothing has been discovered which acts in entire isolation. The action of everything is along with the action of other things. The “along with” is of such a kind that the behavior of each is modified by its connection with others.  

As we saw above, it is the act that unifies the energies of organism and environment, and it is through constant motor activity that the organism is poised to receive stimuli. From the standpoint of an active being in the world, organism-environment and stimulus-response are not discrete, separate elements, but continuous and unified processes. Similarly, an individual implicates others through her action, and is implicated by the actions of others. Individual-society, then, is also best understood as a continuous transaction. What this means in terms of the present section is that to be human is to be actively engaged in the social world – to implicate the environment and others through one's own actions, and in turn, to be implicated by the environment and the actions of others. If for no other reason than infants would perish without the care of others (not to mention the fact that humans “stick around” these caretakers long after infancy), it is simply a fact that humans must exist in relations to others. Thus we can attempt to define the individual in as many ways as one may please, but we cannot do so...
outside the context of one's social relations. In the same way that a functioning organism is inconceivable apart from its environment, and that a stimulus is inconceivable apart from motor activity, the individual is inconceivable apart from a social context.

At this point, we have now seen three instantiations of what Suzanne Cunningham calls the “classic Deweyan move”: the move toward full integration. The need to integrate the organism and environment, stimulus and response, and individual and society, all arise from the fact that we have a tendency to commit what Dewey calls the historical or philosophical fallacy: “A set of conditions which hold good only because of a completed process, is read into the content of the process which conditions this completed result.” It is only because some phase of the life process has been completed that we can then go back and identify particular conditions which may have led to its conclusion. To be alive is to be actively engaged and functioning in the world – and activity and functionality are, by their very nature, the integration or assimilation of the energies of the organism and the energies of the environment. Thus, the process of acting is integrative or assimilative, and it is not until after the phase of action has been completed that discrete elements can be “unpacked” and identified as constitutive of the original process. As we have seen, this “unpacking” process is relative, contingent, and done to serve specific ends. Dewey's argument is that a failure to recognize the

---

33 Cf. William James: “Properly speaking, a man has as many social selves as there are individuals who recognize him and carry an image of him in their mind.” (PP, 281-2). If we accept James's account here, it would seem to lend credence to the Deweyan argument that what we mean by “individual” is, in the first place, inconceivable apart from a social context. Further, the possible meanings of the “individual” are so varied and relative that it also seems impossible to clearly demarcate what is meant by an “individual”.


35 EW 5: 105.
contingent and relative nature of reading these distinctions into the life process *ex post facto* – and treating them as if the distinctions were there all along – causes us to search for solutions to non-problems. Accepting the embodied, integrative nature of human existence simply dissolves the problems associated with a dualistic understanding of human existence.

Importantly though, recognizing the embodied nature of human existence does not dissolve all, or even most, problems. Rather, it gives rise to an entirely new and important set of problems. This is made most palpable in the context of social embodiment: “Conflicts nevertheless do exist; they are not got rid of by asserting, what is perfectly true, that there can be no wholesale opposition between society and individuals.”36 The point here is that by recognizing that the individual is inseparable from society, we have dismissed one set of problems (for example, explaining how it is that humans came into association), but we have also opened up a new set of possibilities, some of which may prove to be problematic. Instead of searching for explanations about why humans associate and form societies – which as we saw above, boils down to an attempt to explain “why this universe is the kind of universe it is” - we are now faced with practical problems like, “what is the best way to organize a society?”; “should we focus on promoting the freedom of individuals in this society? Or should we focus on promoting the equality of individuals in this society?”; “should each individual do what is best for him or her? Or should each individual do what is best for the whole society?”

The same is true of the other dimensions of embodiment we have considered. In recognizing that a functioning, active organism is constantly integrating the energies of

36 LW 7: 324.
its environment, we have on the one hand, moved beyond the questions of how the organism and environment come into relation. On the other hand, we are now faced with much more difficult questions like: “what is the most effective way for the human organism to assimilate the energies of the environment?”; “What responsibilities, if any, does the human organism have to the environment she implicates through her actions?” Similarly, the recognition that the reception of a stimulus is preceded by motor activity dissolves many questions about the link between external stimuli and internally organized responses. In turn though, it raises new questions about the adequacy of the terminology we use to describe psychological and physiological phenomena. The difference between these latter dimensions and the social dimension is one of degree and not kind. That is to say that in all three dimensions of embodiment we have considered, the adoption of an integrated conceptual viewpoint dissolves many problems (and consequently, the solutions to these non-problems), and gives rise to new ones. In the social dimension, however, the problems that result from accepting an embodied account seem to be much more palpable. This is due, in part, to the fact that we have many practical reasons for maintaining a dualism between the individual and society. For example, in our non-Deweyan, dualistic judicial system, when an individual commits a crime, it is the individual who is held responsible and has to stand trial, not the social conditions which may have largely influenced the decision to commit the crime. It is not necessarily a bad thing (nor is it necessarily good) that individuals can be understood in this way. It is, however, important to be aware of the fact that even though one may accept that an individual is inextricably embodied in a social environment, conflicts will inevitably still
remain. In this case, questions like: “should we focus on reforming the individual
criminal? Or the social conditions which contributed to the crime?”

The larger point here is simple: “Almost all important ethical problems arise out
of the conditions of associated life.”37 This, in short, is why the notion of embodiment is
so central to Dewey's thought. The most pressing problems of human existence arise
from the fact that humans are fundamentally and irreducibly embodied creatures. It is the
embodied nature of human existence that forms the basis for Dewey's conception of
human nature; the notions that humans are habitual and that they are problem-solvers are
both rooted in an understanding of the human organism as fundamentally embodied in a
multidimensional environment. Although “embodied” is an important and fundamental
part of the answer to the question, “What kind of beings are we such that we can be
intelligent?” - it is not the whole story. The development of habits and problem-solving
ability out of an embodied existence are also crucial to understanding human nature, and
as such, will comprise the subject matter of the next two sections of this chapter.

1.2 Human Nature as Habitual

“Few persons have either the energy or the wealth to build private roads to travel upon.
They find it convenient, 'natural,' to use the roads that are already there; while unless
their private roads connect at some point with the high-way they cannot build them even
if they would.”38

In this section, we will take up the second facet of Dewey's conception of human
nature: habit. In the first place, I will show the connections between Dewey's conception
of habit and the various dimensions of embodiment we considered above. Without

37 LW 7: 318.
38 MW 14: 43-4.
getting too far ahead of ourselves though, a few brief remarks should be made regarding
the importance of habit in the analyses of human nature provided by the classical
American pragmatists. Perhaps the most influential analysis of habit is contained in
William James's 1890 masterpiece *The Principles of Psychology*, and his subsequent
1892 revision, *Psychology: Briefer Course*. It is easy to see the immense influence of
these texts on Dewey's thought, and Dewey himself says with respect to James's
*Principles*, “As far as I can discover one specifiable philosophic factor which entered into
my thinking so as to give it a new direction and quality, it is this one.” Nonetheless, it is
still important to understand the ways in which Dewey appropriated the work of his
predecessors and contemporaries. Most germane to our purposes is James's four-part
summary of the notion of habit contained in the *Briefer Course*. His account can be
briefly summarized as follows:

1. “Habit simplifies our movements, makes them accurate, and diminishes fatigue...if
   habit did not economize the expense of nervous and muscular energy, man would be in a
   sorry plight.”
2. “Habit diminishes the conscious attention with which our acts are performed.”
3. “In action grown habitual, what instigates each new muscular contraction to take place
   in its appointed order is not a thought or perception, but the sensation occasioned by the
   muscular contraction just finished.”
4. “Habits depend on sensations not attended to.”

At present, let this summary suffice as a reference point to which we will return
below. Much more can of course be said about James's notion of habit, but for our
purposes, this summary will help to highlight important ways in which Dewey's

---

40 LW 5: 157.

23
conception is continuous with James's, and it will also help to highlight important ways in which Dewey moves beyond James. With this general conception of habit in mind, we must first examine the ways in which habits thus broadly construed, are linked to the embodied nature of human existence.

1.2.1 Habits as Functions of an Embodied Existence

If we accept the embodied account of human nature laid out above, one of the most important consequences that follows is that the human organism cannot be conceived as aloof from the forces of her environment. She is no more in control of her environment than her environment is in control of her. This leads to a potentially unsettling view of the human organism's place in the world because as Dewey notes, “the world is a scene of risk; it is uncertain, unstable, uncannily unstable. Its dangers are irregular, inconsistent, not to be counted upon as to their times and seasons.”

Yet, one may well comment that one's own experience of the world today is rather stable, predictable, and not so dangerous. Indeed, Dewey would agree that for most people, most of the time, the world is experienced rather unthinkingly, uncritically, and uncontroversially – and probably too much so. So how do we reconcile the efficacy of the precarious and unpredictable with the perceived dominance of the stable and routine? In a word, the answer is habit. In the first chapter of Human Nature and Conduct (1922) Dewey says that “habits are like functions in many respects, and especially in requiring the cooperation of organism and environment.” He continues, “we must begin with recognizing that functions and habits are ways of using and incorporating the

42 LW 1: 43.
In other words, habits are, in part, responses to stimuli. As we saw above, the organism constantly implicates the environment through its actions. The actions of the organism cause changes in the environment, and these changes, in turn, demand further re-organizations and changes on part of the organism. The environment, then, is both the source of the stimuli or problems, as well as the fund from which the organism draws in order to respond to the stimuli to or solve the problems. In a general sense, then, what we mean by habit is a certain set of responses that are likely to occur given a certain set of stimuli. If the response to a stimulus turns out to be profitable, effective, or satisfactory, then as long as those stimulating conditions persist, that particular response will likely become habituated, so as to deal with those conditions more economically and efficiently in the future. What we mean when we say that a response becomes habituated is that a certain set of responses is linked to a certain set of stimuli in such a way that the former occurs nearly automatically, unthinkingly, and instantaneously in the presence of the latter. This is the third component in James's summary given above. The explanation behind this is a simple evolutionary one. The environment is constantly in flux. If organisms had to consciously and deliberately register every single change that occurred in the environment and then actively select the proper response, they would be absolutely overwhelmed, and would, in James's terms, “be in a sorry plight.” Habits are the instruments of physical and mental economy which allow for routine, stable, and persistent stimuli to be registered automatically, and for the corresponding response to be

43 MW 14: 15.
entered into nearly unthinkingly: “stimulus and response are mechanically linked together in an unbroken chain.”

Thus, the development of habits must first be understood as a functional necessity arising from the embodied nature of human existence. Habits as we have formulated them thus far – as the mechanically linked and unbroken chain between stimulus and response – are hardly distinguishable from the programmed response of a robot. That is, we can very easily program any number of devices to produce output $x$ given input $y$. But does input $y$ truly qualify as a “stimulus” in the sense we have been using the term? Can output $x$ rightly be called a “response”? Although some may argue that the answer is “yes,” I will demonstrate below that the Deweyan conception of habit is importantly multidimensional in ways that set human habits apart from the rote response of programmed robots.

1.2.2 The Creative/Aesthetic Dimension of Habits

It is what I will here call the creative or aesthetic dimension that, in part, sets off human habits from the rote response of a robot. This dimension is perhaps best illustrated in the following passage from Human Nature and Conduct (1922):

Habits are arts. They involve skill of sensory and motor organs, cunning or craft, and objective materials. They assimilate objective energies, and eventuate in command of the environment. They require order, discipline, and manifest technique. They have a beginning, middle and end. Each stage marks a progress in dealing with materials and tools, advance in converting material to active use.

44 MW 14: 121.
45 MW 14: 15-6.
In the first place, we can see that the notion of habit presented here relies on an embodied understanding of human nature, such that a habit is conceived as an assimilation of the energies of the organism and the environment. It is also important to note that habits, as assimilated energies, incorporate the environment in such a way as to better control the unstable and precarious features of our experience. Thus, habit provides a stable ground to fall back upon when one is confronted with the uncertainties and instabilities of the future. For Dewey, however, this falling back is not merely a rote response to a persistent stimulus. The environment is precarious and uncertain precisely because it is always in the process of transacting, changing, and re-organizing. As such, no stimulus is ever presented in exactly the same way; the deployment of a habit is, in part, a creative act, adapted to the unique circumstances of each situation. Thus Dewey writes:

Repetition is in no sense the essence of habit. Tendency to repeat acts is an incident of many habits but not all...The essence of habit is an acquired predisposition to ways or modes of response, not to particular acts...Habit means special sensitiveness or accessibility to certain classes of stimuli, standing predilections and aversions, rather than bare recurrence of specific acts.  

What Dewey is saying here is that habits are not reducible to particular, specific outputs which result from particular, specific inputs. Many habits can be characterized in this way, but not all. The more accurate characterization is that habits are a range of

---

46 MW 14: 32. Emphasis in original. Also cf. William James: “Plasticity, then, in the wide sense of the word, means the possession of a structure weak enough to yield to an influence, but strong enough to not yield all at once. Each relatively stable phase of equilibrium in such a structure is marked by what we may call a new set of habits. Organic matter, especially nervous tissue, seems endowed with a very extraordinary degree of plasticity of this sort; so that we may without hesitation lay down as our first proposition the following: that the phenomena of habit in living beings are due to the plasticity of the organic materials of which their bodies are composed.” (PBC, 126 and PP, 110). Emphasis in originals.

47 Cf. MW 14: 50: “All habit involves mechanization. Habit is impossible without setting up a mechanism of action physiologically engrained, which operates 'spontaneously,' automatically, whenever the cue is given. But mechanization is not of necessity all there is to habit.” Emphasis mine.
actions which are *likely* to occur in the presence of certain classes of stimuli. The range of possible actions and the size of the classes of stimuli are not static and concrete. They are, to varying degrees, flexible and adjustable to the peculiarities of specific contexts. For example, consider the habit of brushing one's teeth before going to bed. If habits were entirely reducible to a particular mechanical act, then we might say something like, “given the input 'it's time for bed,' the output 'go to the bathroom, turn on the faucet, apply toothpaste to toothbrush and brush your teeth' would follow.” This may be a correct characterization some, or even most, of the time. But suppose upon going to the bathroom, one finds the tube of toothpaste empty. The particular act of “brushing one's teeth” is no longer possible, yet one may instead still use dental floss, or mouthwash before going to bed. In this case, the class of stimuli is narrow: “it's time for bed.” The range of possible responses though, is not limited to a single, particular act of brushing one's teeth. If one uses dental floss or mouthwash in place of, or in addition to brushing one's teeth, that does not make the act any less habitual. The habit of brushing one's teeth before going to bed then, is better characterized as the *disposition* to act in certain ways which promote dental hygiene before going to bed. The ways of doing so are limited to be sure, but they are not singularly reducible to *the* act of brushing one's teeth.

Although the preceding example does not demonstrate “creativity” in the sense we usually think of the term, it does demonstrate that habits are necessarily plastic, flexible, and adjustable within certain parameters. If this were not the case - if habits were entirely rigid and merely repetitions - they would cease to effectively reduce the cognitive or physical workload they are meant to help alleviate in the first place. Thus, in
saying habits are creative, we mean that they are necessarily capable of adjustment and adaptation so as to be applicable to various classes of stimuli.

The special sensitiveness that Dewey describes in the passage above hints at the other dimension of habit I wish to consider in the present section: the aesthetic sensibility to salient features of a situation. The point I wish to make is that the deployment of a habit, in part, rests on one's ability to identify the relevant and salient features of a given situation. I contend that this ability is best described in terms of an aesthetic sensibility. An examination of the following passage from Dewey's 1930 essay, “Qualitative Thought,” should help to demonstrate this idea:

The underlying unity of qualitativeness regulates pertinence or relevancy and force of every distinction and relation; it guides selection and rejection and the manner of utilization of all explicit terms...We are aware of it not by itself but as the background, the thread, and the directive clue in what we do expressly think of...If we designate this permeating qualitative unity in psychological language, we say it is felt rather than thought.48

Thus it is a “pervasive quality” which makes a situation a situation, as opposed to a random collection of objects, thoughts, movements, etc. It is this qualitativeness which ties all the disparate elements of experience together into a coherent and meaningful whole that constitutes our life. And it is because of this qualitative unity in the background of our experience that we can make distinctions and identify relations. In short, it is the qualitative, or felt dimension of experience, that makes things matter to us. The deployment of habits then, is an example of a specific application of this broader metaphysical principle. The reason that some features of experience jump out at us from the “big blooming, buzzing confusion” - to borrow a phrase from James – as stimuli to

which we have developed a coordinated response, is that there is a unifying pervasive quality in the “background” which allows meaningful and important features to stand in contrast in the “foreground.” Because one must be aware of these salient features of a situation in order to deploy the corresponding habit, the ability to discriminate between relevant and irrelevant features is highly important. Although we are talking in terms of awareness, discrimination, and deployment, these are not rational or intellectual processes first, rather they are first qualitatively felt. Because the meaningful and relevant features of our experience are felt in this way, the proper deployment of habits is rooted in our ability to develop a sensitivity and sensibility to those dimensions of experience which are felt as relevant, salient, or meaningful. Developing this attentiveness or conscientiousness to how one feels is best characterized in terms of an aesthetic sensibility to the relevant features of a situation.

1.2.3 The Social Dimension of Habit

It should be noted that the picture thus far of human existence, and the role of habit therein, has been painted in largely biological and physiological terms, i.e. organism and environment, and stimulus and response. At this basic and fundamental level, Dewey's notion of habit seems to be entirely in line with the account given by James above. In the present section, we will explore the social dimension of Dewey's conception.

To say that one “must be aware of the relevant features of a situation” is perhaps misleading, as it may imply conscious awareness. If we recall the second and fourth components of James's summary of habit given above (to which Dewey also undoubtedly subscribes), it should be clear that habits, by their very nature, lessen the cognitive workload required by active, conscious processing and awareness. Thus, perception must also be admitted as subject to the forces of habit. That is, our perceptual apparatus is habituated to filter out the features of experience that normally do not matter to us, and identify those features that normally do matter.
of habit, and how in this respect, Dewey seems to move beyond what we find in James.

To begin, we will compare two passages from *Human Nature and Conduct*:

Our individual habits are links in forming the endless chain of humanity. Their significance depends upon the environment inherited from our forerunners, and it is enhanced as we foresee the fruits of our labors in the world in which our successors live. For however much has been done, there always remains more to do. We can retain and transmit our own heritage only by a constant remaking of our environment.\(^50\)

We often fancy that institutions, social customs, collective habit, have been formed by the consolidation of individual habits. In the main this supposition is false to fact. To a considerable extent customs, or widespread uniformities of habit, exist because individuals face the same situation and react in like fashion. But to a larger extent customs persist because individuals form their personal habits under conditions set by prior customs.\(^51\)

We must first take note of the definition of custom offered here: widespread uniformities of habits. In this sense, habits apply not only to the routine actions of individuals, but to the collective actions of associated individuals. This point about habit mirrors the notion of social embodiment we considered above. That is, in the same way that the individual is inextricable from society, personal habits are inextricable from custom. It is pre-existing set of widespread uniformities of habit which define the parameters for which personal habits can be developed.

The other important point to note here is that the habits we form are conditioned by the environment we have inherited from our ancestors, as well as the environment we are creating for our successors. Because habits are “working adaptations of personal capacities with envoiring forces,”\(^52\) and these envoiring forces are shaped by the actions of the past and the possibilities of the future, our habits are always shared. Habits implicate the individual and her community in the same way they implicate the organism

\(^{50}\) MW 14: 19.  
\(^{51}\) MW 14: 43.  
\(^{52}\) MW 14: 16.
and the environment. It is in this sense that Dewey's notion of habit – while giving a nod to James's notion of the “flywheel of society” - is broadened and more fully explicated to include things like custom and tradition.53

This social dimension forces us to expand our conception of habit to include institutions such as languages, religions, laws, political ideologies, economic systems, and media outlets. Within a given society, all of these institutions demonstrate widespread uniformities to which individual habits conform. To say more at present about the degree to which this is good or bad, or to which non-conformity is possible, would be to step outside the scope of this section. Although we will return to these questions in the second chapter, the present section must be concluded by simply taking note of the ways in which habits are not limited to individual routines or actions. In fact, habits are actually conditioned by the broader set of pre-existing habits which are customs.

1.2.4 The “Psychological” Dimension of Habit

Perhaps one of the most important contributions of classical American pragmatism was its recognition that habits extend far beyond the scope of individual routines. As we saw in the section above, our conception of habit must be broad enough to include the social institutions which set the parameters for the development of individual habits. In the present section, we will examine the ways in which habits also

53 To be sure, James is well aware of the social dimension of habit: “Habit is thus the enormous flywheel of society, its most precious conservative agent. It alone is what keeps us all within the bounds of ordinance.” (PP, 125 and PBE, 132-3). All I am suggesting here is that Dewey gives this theme a more thorough and careful treatment, and that the social dimension of habit is more strongly emphasized in his thought than it is in James's.
figure into our thinking. In a very straightforward sense, Dewey says that “the medium of habit filters all the material that reaches our perception and thought,” and that “our ideas are as dependent, to say the least, upon our habits as are our acts upon conscious thoughts and purposes.” The idea that habits are filters for perception must be understood in an evolutionary context. That is, our perceptual apparatus has become habituated to notice things that matter to us (potential threats), and to ignore things that do not matter (the insect one stepped on while fleeing from a predator, for example). The matter is perhaps a bit more complicated when we turn to role of habits as filters for our thoughts. Dewey writes:

Habits are conditions of intellectual efficiency. They operate in two ways upon the intellect. Obviously, they restrict its reach, they fix its boundaries. They are blinders that confine the eyes of mind to the road ahead. They prevent thought from straying away from its immanent occupation...outside the scope of habits, though works gropingly, fumbling in confused uncertainty.

What Dewey describes in this passage is the negative or limiting operation of habit. To say that habit filters our thoughts in this negative sense, is – if taken to the extreme - to eliminate the operation of thought altogether. If the blinders are so confined to the task at hand, one “no longer thinks of his path or destination.” Thus, unthinking, routine, mechanical action is the extreme result of this negative filtration of thought. As we saw above though, we cannot reduce habits to rote responses, and it is precisely this idea which leads to the positive conception of the filtering operation of habit. Of this operation, Dewey says:

---

54 MW 14: 26.
55 MW 14: 121.
56 MW 14: 121.
Habit is however more than a restriction of thought. Habits become negative limits because they are first positive agencies. The more numerous our habits the wider the field of possible observation and foretelling. The more flexible they are, the more refined is perception in its discrimination and the more delicate the presentation evoked by imagination.\textsuperscript{57}

In its positive formation, the filtering operation of habits can actually refine perception, awareness, and thinking. Habits are not simply negative or limiting functions – one can become habitual in their efforts to carefully survey the nuances of a task at hand. The more habits one has developed, and the more flexible they are, the more likely it is that a habit fitting the unique context of a particular situation can be deployed.

In all likelihood, the negative description of the operation of habits is probably more in line with most people's common-sense conception of habit than is the positive description. It also probably equally as likely that most habits operative in a negative, limiting way rather than the positive, and widening manner. Nonetheless, we must grant that the latter cannot be reduced to the former, and that whether we are talking about institutions, actions, or thoughts, these two operations of habit will always exert their influence.

Given this pervasive influence, there is of course more that could be said about the role of habit in human affairs. We must conclude the present section, however, by summarizing how habits shape the nature of human existence. In Dewey's words, a habit is, “the kind of human activity which is influenced by prior activity and in that sense acquired; which contains within itself a certain ordering or systematization of minor

\textsuperscript{57} MW 14: 123.
elements of action.” The world and the future are precarious, uncertain, and unstable. Habits then, intervene to provide stable and predictable modes of action and thought to fall back upon in the face of this uncertainty. In addition to these dispositions toward various modes of action, habits are also, as we saw, “conditions of intellectual efficiency” which determine the path of least resistance for our actions, thoughts, and social institutions. In both of these senses, habits are ways of being-in-the-world that allow us to deal more effectively with the precarious and variable nature of our embodied existence.

1.3 Human Nature as Problem-Solving

In the previous two sections we have seen that in order to give an accurate account of lived experience, we must accept a non-dualistic, embodied account of the nature of human existence. We have also seen that accepting this account leads to what many would consider a rather unsettling view of the human organism's place in the world: namely, that humans are constantly subjected to the forces of the environment, and not entirely in control of them. One of the primary ways that humans cope with this precariousness and instability is through the development of habits. The nature of human existence, however, is such that falling back on habitual ways of thinking and acting will not always suffice. Further, habits often come into conflict with one another. The need for a third dimension of human nature then, apart from embodiment and habit, stems from the fact that humans encounter many problems in the course of their existence.

---

58 MW 14: 31.
59 MW 14: 121.
which habits developed in the past are simply not fit to solve. Thus, the final dimension of Dewey’s conception of human nature is that humans are problem-solvers.

Habits, as we saw above, are primarily “conditions of intellectual efficiency.” These are necessary features of human existence because, “if each act had to be consciously searched for at the moment and intentionally performed, execution would be painful and the product clumsy and halting.” But there are, of course, some acts which do have to be consciously sought out and intentionally employed. The human ability to do just this in response to problematic situations is what Dewey calls the process of inquiry. He defines this ability as follows: “Inquiry is the controlled or directed transformation of an indeterminate situation into one that is so determinate in its constituent distinctions and relations as to convert the elements of the original situation into a unified whole.” Much of this section will be devoted to unpacking the various components of this formulation.

1.3.1 The Pattern of Inquiry

To begin, we can say that inquiry starts where habits leave off. Habits are a determinate, stable and predictable mode of thinking and acting. When one encounters a situation where it is either not possible, or not beneficial, to fall back upon these habitual modes of thinking or acting, and yet one must act or think, the process of inquiry commences. For Dewey, this process has a number of features that are consistently identifiable, regardless of the specific subject matter of the inquiry. The clearest

---

60 MW 14: 51.
formulation of this idea is found in *How We Think* (1933), wherein Dewey identifies the following “five logically distinct steps”:

1. Felt difficulty
2. Its location and definition
3. Suggestion of a possible solution
4. Development by reasoning of the bearings of the suggestion
5. Further observation and experiment

The first step in the pattern of inquiry is the chasm resulting from a determinate, habitual mode of thought or action clashing with an indeterminate situation to which a habit is not adequately fit to address. The qualitative, or *felt* dimension of this chasm must be emphasized. As Dewey says, “a variety of names serve to characterize indeterminate situations. They are disturbed, troubled, ambiguous, confused, full of conflicting tendencies, obscure etc. It is the *situation* that has these traits.” In other words, the pervasive quality of the situation is felt as “something is amiss here.” Importantly, this feeling precedes any rational or intellectual evaluation of the situation – it is felt rather than thought.

This feeling of irritation or discomfort then blends into the second step: the location and definition of the problem. The process by which the difficulty is felt and then located will vary. In extreme cases (witnessing a murder, say) the felt difficulty can be manifest in the form of paralyzing shock. In more routine cases - such as botching a

---


simple arithmetic problem - the felt difficulty is much more subtle, and one locates the problem (not carrying a “1”, say) fairly quickly and easily.

Similarly, the second and third components are often blended together. That is, when one has clearly identified the location of the difficulty, one has effectively framed the problem presented in the situation. And as Dewey notes, when the problem is identified as such, solutions begin to take shape:

A problem represents the partial transformation by inquiry of a problematic situation into a determinate situation. It is a familiar and significant saying that a problem well put is half-solved. To find out what the problem and problems which a problematic situation presents to be inquired into, is to be well along in inquiry...The way in which the problem is conceived decides what specific suggestions are entertained and which are dismissed; what data are selected and which rejected; it is the criterion for relevancy and irrelevancy of hypotheses and conceptual structures.

In other words, by identifying a problematic situation as problematic, we have already set the scope of its possible resolutions. To state a problem as a problem is to determine what kinds of solutions can be entertained, and consequently, which cannot. This idea is perhaps best stated in Logic: The Theory of Inquiry (1938) by Dewey's designation: “Determination of a Problem-Solution.” The hyphenation emphasizes the idea that if one has identified a problem, the solutions to it are already in the making. The notion of a problem-solution then, is another instantiation of Dewey's metaphysics of integration. Importantly though, the notions of habits and inquiry are also integrated. That is, inquiry can become a habit, and inquiries certainly employ habits. Consider the car mechanic or the physician: both professionals are trained to diagnose problems – to enter into inquiries about cars and humans, respectively. In their training, they are taught to identify causes and effects (i.e. vibration when rotating the wheel is associated with a bad

64 LW 12: 112.
wheel bearing; swollen lymph nodes are associated with some kind of infection). A competent, trained professional is one who has developed a wide array of these kinds of habitual associations. That is, the physician can, by means of developed habits, associate certain symptoms with bacterial as opposed to viral infections; the mechanic can similarly distinguish between electrical and mechanical problems. The point is that the development of these habits of associating certain causes with certain effects helps the professional to home in on the actual problems, and subsequently, the effective solutions.

The fourth and fifth steps in the pattern of inquiry – development by reasoning of the bearings of the suggestion, and further observation and experimentation, respectively – are both intimately related to Dewey's notion of deliberation, which is not explicitly addressed in his discussions of the pattern of inquiry. Before we address the notion of deliberation, we should take note of the shifting emphasis in these last two phases of the process of inquiry. As we have seen, once the problematic nature of the indeterminate situation has been located and identified as such, the emphasis then shifts to the development and emergence of possible solutions. In the last two phases, the emphasis shifts to the conditional acceptance of these possible solutions: “If I were to accept this particular solution for the problem at hand, what practical consequences, what results, would likely follow?” This is what Dewey means by developing through reasoning the bearings of a suggestion. To be sure, the term “reasoning” is a loaded one which Dewey may have done well to avoid, given the sense in which he uses it. For most people in the business of writing books on logic, “reasoning” counts as “reasoning” insofar as the process is reducible to operations on formal symbols. Thus, “reasoning” usually means the imposition of logical forms onto propositions (which represent the subject matter of a
given inquiry) in order to establish the range of permissible inferences which can be made about them. For Dewey, the process of reasoning does not involve the *imposition* of logical forms onto propositions. Rather, “logical forms accrue to subject-matter in virtue of subjection of the latter in inquiry to the conditions determined by its end – institution of a warranted conclusion.” In other words, for Dewey, validity is not something that exists “out there” for propositions and inferences to be molded to. It is rather a resultant property which emerges from the subjection of the subject matter to an inquiry in such a way that the conclusion can be asserted as a warranted one. Reasoning, then, is a forward-looking, creative process, not one which attempts to fit the subject matter into pre-existing habits. As a result, the development by reasoning of the bearings of a solution is more akin to Dewey's notion of *deliberation* than to traditional notions of reasoning. Of the process of deliberation, Dewey says the following:

deliberation is a dramatic rehearsal (in imagination) of various competing lines of possible action...deliberation is an experiment in finding out what the various lines of possible action are really like...The experiment is carried on by tentative rehearsals in thought which do not affect physical facts outside the body. Thought runs ahead and foresees outcomes, and thereby avoids having to await the instruction of actual failure and disaster.

To develop the bearings of a possible solution is to act them out in imagination, to find out what the various solutions might look like if they were adopted. In this fourth phase, the emphasis is on the exploration of the practical consequences that might result from enacting a given solution to the problem at hand, and on Dewey's account, this

---

65 LW 12: 370.
process is largely carried out by a dramatic rehearsal in imagination. Indeed, something quite different than “reasoning” as it is traditionally conceived.

The move from the fourth to the fifth phase assumes that some solution to the problem at hand has been adopted, and some consequence resulted from its employment. In the fifth phase – further observation and experimentation - the emphasis is shifted from the evaluation of possible solutions and their bearings, to an evaluation of the actual consequences that resulted from the selection and application of a solution. The questions are now: “was the problematic solution resolved satisfactorily?”, “why or why not?”, “how could I do better in the future?” This fifth step in the process is also closely related to the process of deliberation, as the answers to the latter questions will inform future deliberations.

Having now described each step in the pattern of inquiry, it may seem to be a highly technical process which requires a serious cognitive effort. To be sure, the process of inquiry requires more cognitive resources than does habitual thinking (more will be said about the relationship between the two below), but inquiry as Dewey conceives it, is a process we enter into all the time, not one reserved for scientists and logicians. A narrative example should help to demonstrate this point:

Let us imagine the routine task of driving home from work along the same route one has driven for many years. The situation is characterized by its normalcy - everything along the route is exactly how one would expect it to be. The buildings are in the same places, the traffic lights are operating as they always do, the street signs have not changed, fellow drivers are obeying traffic laws, etc. In this situation, one's commute home is more habitual than anything else. Indeed, it is not uncommon for drivers in this
situation to arrive at their destination with no recollection of actually driving there. When this happens, one can be said to be “operating on auto-pilot”; the situation has the pervasive quality of stability, determinacy, and predictability. But suppose that traffic suddenly and unexpectedly comes to a halt. One snaps out of the habitual mode of driving and the previously routine, determinate task of driving home becomes momentarily indeterminate and confused. One feels a qualitative discomfort, irritation, and perhaps a sense of alarm at this unexpected interruption. This is what Dewey identifies as the first step – a felt difficulty. After applying the brakes, one notices that traffic has stopped because the road is closed ahead due to a major accident. It is at this point that the second phase is entered into - the problem has been identified, and possible solutions begin to take shape as one enters into the process of deliberation: What caused the accident? Is everyone okay? Should I wait here for the accident to be cleared? Or should I find an alternative route home? What is the best alternative route home? Answers to these questions comprise the third and fourth phases of the pattern of inquiry.

In our example, one will eventually have to make a deliberate choice in order to clear up the confused situation and to return home. It could be as simple as taking another slightly less familiar route home, or as complex as having to stop and ask a stranger for directions. Whatever the case may be, the process of inquiry concludes when a qualitative harmony is restored to the situation and one can comfortably fall back to a more habitual mode of thinking, acting, or driving, as it were. The fifth stage then, is likely as simple as, “I shouldn't take that route home again,” or, “That wasn't as bad as it could have been.” Whatever the actual evaluation might be, the important point to note is that the process of inquiry concludes when the situation has been transformed so that it is characterized
again by its normalcy, determinacy, and stability – such that reflection and evaluation can be conducted about the situation in its entirety. This demonstrates an important point to which we will return below: inquiry is a *consummatory experience*. That is to say, when the situation has come “full circle,” from a qualitative harmony or stability to a felt discomfort, to the identification of a problem-solution, to the evaluation, and back to a qualitative harmony, the situation is then characterized as a situation, one which has run its course to completion. This movement from stability, to instability, and back to stability is precisely what Dewey means when he says that “life is interruptions and recoveries.”67 The interruptions are the impetus for inquiry, and the recoveries are the return to a more comfortable, familiar, and habitual mode of thinking and acting. This movement between interruption and recovery sets up an important tension between habit and inquiry which will be the subject of the next section.

1.3.2 The Tension Between Habit and Inquiry

We began this section by noting that inquiry picks up where habits leave off, which is to say that they are *continuous* with one another, and not diametrically opposed. This is important because it is easy to think of habits as mechanical, non-thinking routines on the one hand, and inquiry a process reserved for cutting-edge scientists on the other. At these two extremes, it is true that habit and inquiry have little, if anything in common. In everyday practice, however, there is significant interplay between the two. In the following passage, Dewey asks us:

67 MW 14: 125.
Consider what happens to thought when habit is merely power to repeat acts without thought. Where does thought exist and operate when it is excluded from habitual activities? Is not such thought of necessity shut out from effective power, from ability to control objects and command events? Habits deprived of thought and thought which is futile are two sides of the same fact. To laud habit as conservative while praising thought as the main spring of progress is to take the surest course to making thought abstruse and irrelevant and progress a matter of accident and catastrophe...Thought which does not exist within ordinary habits of action lacks means of execution. In lacking application, it also lacks test, criterion. Hence it is condemned to a separate realm.68

If we take Dewey's usage of “thought” in this passage in a broad sense so as to include the process of inquiry, then it becomes clear why we cannot set up a dualism between habit and inquiry. As we saw above, habits are, and indeed must be, flexible and plastic. Some thought was involved in our example of using dental floss and mouthwash in the absence of toothpaste; did that process clearly demonstrate the critical, engaged character of the process of inquiry? No, but neither was it completely mechanical and unthinking. Similarly, even when one is engaged in the process of inquiry – as was the commuter in the example just given – one still relies on habits. Even when trying to determine the best alternative route home, our commuter is, in all likelihood, operating the gas and brake pedals, turn signals and steering wheel by means of habit.

Given the interrelatedness of habit and inquiry, I contend that their relationship is best described as tensional. On the one hand, we want to say that each and every problematic situation should be treated in the engaged and critical fashion characteristic of the process of inquiry (i.e. define and locate the problem, suggest possible solutions, develop the bearings of those suggestions through critical reasoning, form a hypothesis, test it, and observe the results). On the other hand, we are well aware that without habitual modes of thinking and acting, we would hardly be able to get out of bed and get

68 MW 14: 49.
dressed in the morning. The former extreme purchases well thought-out options at the price of inefficiency in action. The latter extreme purchases efficiency and expediency of action at the price of dogmatism. We operate somewhere in between these extremes in everyday practice, but where between them should we strive to be? Is living well a function of developed, flexible habits? Or does living well entail a critical, engaged reconstruction of situations? In the next chapter, I will argue that the art of living intelligently, in part, entails the integration and mediation of habits and inquiry.

1.4 Conclusion to Chapter 1

Having now laid out Dewey's conception of human nature, we have seen how his understanding of the human organism as fundamentally embodied in a multi-dimensional environment shapes the development of habits and problem-solving ability. In the next chapter, we will turn to a consideration of how Dewey's understanding of humans as embodied, habitual, problem solvers shapes his notion of intelligence. In this respect, intelligence will be seen as a function of an embodied existence with biological, psychological, and social dimensions. Intelligence will also be seen as a mediating or integrating force between the tension of habit and inquiry. In short, intelligence will be shown as continuous with the aspects of human nature we have just considered, and in this respect, yet another instantiation of Dewey's metaphysics of continuity and integration.
Chapter 2

Intelligence

2.0 Introduction

In laying out a comprehensive view of Dewey's notion of human nature, we have answered the first half of the question, “what kind of beings are we such that we can be intelligent?” In this chapter, we will tackle the second half of this question by attempting to provide a formulation of Dewey's notion of intelligence. The goal of this chapter is to demonstrate the continuity of Dewey's conception of human nature with his notion of intelligence. In other words, I will argue that intelligence is not a faculty above or outside our experience of the world – intelligence is, in the first place, embodied. I will also show that intelligence is not to be understood as diametrically opposed to habit, but is rather an incorporation and organization of habits. I will then move to consider the intimate relationship between intelligence and problem-solving by way of Dewey's notion of the method of intelligence. After showing how intelligence is linked with each aspect of human nature we considered in the first chapter, I will make some further remarks about the social and qualitative dimensions of intelligence. The possibility of the social application of intelligence is a theme that occupied Dewey and many of his colleagues at
the University of Chicago, and it is a theme with tremendous real-world, practical import, and as such, is worth treating in detail. The qualitative dimension of experience is a thread that also runs throughout Dewey's massive corpus, and one that shapes his notion of intelligence in a distinctive and important way. These considerations will round out our conception of intelligence, and allow us to conclude the chapter by providing a synthesized, operative definition of intelligence which encompasses the continuity between human nature and intelligence.

2.1 Human Nature and Intelligence

To begin, it should be noted that defining Dewey's notion of intelligence is no short order, as there are hundreds of passages where Dewey explicitly states the definition, office, function, essence, role, etc. of intelligence. There is hardly a philosophical theme which Dewey did not, at some point during his long career, address and similarly, there is hardly an aspect of Dewey's thought to which his notion of intelligence does not apply. According to Michael Eldridge, “what unifies Dewey's thinking [is] his effort to increase the intelligence of our practices.”Given this wide scope of Dewey's notion of intelligence, I must, at present, limit my focus to those formulations of intelligence which demonstrate the continuity with the conception of

---

69 Dewey came to the University of Chicago from the University of Michigan in 1894, and he left Chicago in 1904 for Columbia University.

human nature laid out in the first chapter. In doing so, I will also expand the scope of this discussion to include two of Dewey's colleagues from the University of Chicago: James Hayden Tufts and George Herbert Mead. Both of these prolific thinkers were very much concerned with the role of society in shaping human nature, as well as the development and application of intelligence to social problems. Their insights undoubtedly helped to develop the notions of human nature and intelligence I am describing here, and as a result, are worthy of a careful consideration. By incorporating our conception of human nature with the notion of intelligence to be laid out here, we will, by the end of this chapter, establish something resembling a comprehensive answer to the question, “what kinds of beings are we such that we can be intelligent?”

2.1.1 Embodied Intelligence

“The separation of warm emotion and cool intelligence is the great moral tragedy.”

Keeping in line with the method of the first chapter, we will first ground our understanding of intelligence in the embodied nature of human existence. To this end, I will first characterize intelligence in terms of the traditional notion of reason. In everyday parlance, the ideas of reason and intelligence are practically synonymous. For Dewey, however, the notion of reason is synonymous with overly intellectualistic, rationalist, and absolutist philosophies: “Reason was the faculty of insight into the universal, the law, cause or principle, which was the only source of scientific explanation and demonstration and sure direction of conduct.” In other words, reason was a means by which absolute,

---

71 For an overview of the school of thought known as “Chicago pragmatism” see Darnell Rucker's *The Chicago Pragmatists*. Minneapolis: University of Minnesota Press, 1969.
72 MW 14: 177.
73 MW 11: 346.
unchanging, and universal laws and Truth could be apprehended and subsequently provide a guide for action. Dewey's colleague in Chicago, James Hayden Tufts, noted another important connotation: “The term reason as used by the Stoics and by Kant meant control of the passions by some 'law' – some authority cosmic or logical.”

Tufts continues, “The category of right has usually been closely connected, if not identified, with reason or 'cognitive' activity as contrasted with emotion. Professor Dewey on the contrary has pointed out clearly the impossibility of separating emotion and thought.”

With these characteristics and connotations on the table, we can begin to make a comparison between the notions of intelligence and reason. The former is perhaps best understood as a response to, and a movement beyond the latter. In their introduction to the critical edition of Dewey and Tufts's 1932 Ethics, Abraham Edel and Elizabeth Flower note that “the shift from Reason to Intelligence is not simply a verbal shift, nor the discovery of a fresh faculty; it is a philosophic turn to pragmatism, resting on a new psychology. This critical shift lights up many points in the 1932 Ethics.” Thus, in attempting to understand the embodied nature of intelligence, we must first examine the differences between it, and the notion of reason as traditionally construed.

Dewey explicitly addresses these differences in The Quest for Certainty (1929):

---

75 Tufts, pg. 389.
76 LW 7: xxv.
'Reason' has the technical meaning given to it in classical philosophic tradition, the *nous* of the Greeks, the *intellectus* of the scholastics. In this meaning, it designates both an inherent immutable order of nature, superempirical in character, and the organ of mind by which this universal order is grasped. In both respects, reason is with respect to changing things the ultimate fixed standard...For the marks of 'reason' in its traditional sense are necessity, universality, superiority to change, domination of the occurrence and the understanding of change. Intelligence on the other hand is associated with *judgment*; that is, with the selection and arrangement of means to effect consequences and with choice of what we take as our ends. A man is intelligent not in virtue of having reason which grasps first and indemonstrable truths about fixed principles in order to reason deductively from them to the particulars which they govern, but in virtue of his capacity to estimate the possibilities of a situation and to act in accordance with his estimate.77

In order to grasp what Dewey is getting at here, we do not need to reach a universal agreement on the precise definition of *nous* or *intellectus*. Rather, we need to note that intelligence is not geared toward the apprehension of fixed, eternal, universal Truth; intelligence is not deductive. Rather, intelligence is a creative, inductive process aimed at better controlling the precarious features of our existence. Put another way, reason is geared toward abstract thought, intelligence toward the integration of thought and practical action. Dewey's emphasis on actions and consequences – as opposed to principles and laws – plays a central role in his ethics, and will be considered below.

To return to our consideration of the move from reason to intelligence, we can also examine Tufts's 1917 essay “The Moral Life and the Construction of Values and Standards,” as he explicitly gives two reasons why he – and by extension Dewey – prefer the concept of intelligence to that of reason. First, Tufts says, the concept of reason is “a question-begging term which tends to commit us at the outset to a specific doctrine as to the source of our judgments.”78 What he means here is that an uncritical confirmation of one's beliefs and prejudices often passes for “reason.” For example, when one says

---

77 LW 4: 170.
78 Tufts, pg. 365.
something like, “It seems entirely reasonable to me that \( x \),” or, “It does not seem unreasonable to believe \( y \),” insofar as those statements are not inviting further inquiry, they are merely reaffirming one's commitment to previously held beliefs and opinions. The habitual adherence to doctrines and previously held beliefs is, in fact, the antithesis of what we would want to call either reason or intelligence. The second justification Tufts offers for privileging the latter over the former, is that reason is “inadequate to do justice to that creative element in the formulation of hypothesis which finds the new, and it tends to leave out of account the social point of view involved in the widening of the area of human intercourse.” 79 In this second formulation, Tufts points out that the notion of reason tends to suggest an isolated and analytic cognitive process. Given our discussions of social embodiment and the creativity of habits, for example, it is not hard to see why this idea does not square with the conception of human nature laid out above. Thus, in seeing a few inadequacies of the notion of reason as it is traditionally construed, we have arrived at two distinctive and essential features of intelligence: it is inherently creative and synthetic, and it is engaged in a social context. Tufts provides a nice summary of these points which represents a more fully-formulated notion of intelligence, and also helps to highlight the embodied character of intelligence. He writes that intelligence implies:

79 Tufts, pg. 367.
considering the proposed act or the actually performed act as a whole and in its relations. Especially they mean considering consequences. In order to foresee consequences there is required not only empirical observation of past experience, not only deduction from ready formulated concepts...but that rarer quality which in the presence of a situation discerns a meaning not obvious, suggests an idea...to interpret the situation...Analysis into elements and rearrangement of the elements into a new synthesis are required. This is imminently a synthetic or 'creative' activity. Further it is evident that the activity of intelligence in considering consequences implies not only what we call reasoning in the narrower sense but imagination and feeling. For the consequences of an act which are of importance...are consequences which are not merely to be describes but are to be imagined so vividly as to be felt, whether they are consequences that affect ourselves or affect others.\textsuperscript{80}

There is obviously a lot to unpack from this passage, and we will indeed return to many aspects of it throughout this chapter. For the purposes of the present section, though, I would like to highlight the idea that Tufts's notion of intelligence includes the imagination and feeling. This idea directly relates back to the quotation which opens this section, as well as to Tufts's claim that Dewey demonstrated the impossibility of a thought-feeling or reason-emotion dualism. In Dewey's own words:

Intelligence, as distinct from the older conception of reason, is inherently involved in action. Moreover, there is no opposition between it and emotion. There is such a thing as passionate intelligence, as ardor in behalf of light shining into the murky places of social existence, and as zeal for its refreshing and purifying effect. The whole story of man shows that there are no objects that may not deeply stir engrossing emotion.\textsuperscript{81}

In short, Dewey rejects the traditional notion of reason insofar as it connotes a supernatural faculty or law which governs the passions. His notion of intelligence instead integrates the passions as an essential and inseparable component. Intelligence is not to be understood as a transcendental, pure faculty which governs the impurities of the flesh, but rather, intelligence is embodied in the flesh. It is a function of both the mental and

\textsuperscript{80} Tufts, pp. 363-4.
\textsuperscript{81} LW 9: 53. Cf. LW 14: 323-4; 332-3.
physical, quantitative and qualitative dimensions of experience. It is in this sense, we can say that intelligence is embodied in a physiological/psychological context.

Importantly, we must also consider the social context which Tufts mentions above. As we saw, for Tufts and Dewey, the ability to consider, foresee, and evaluate consequences is a hallmark of the pragmatist conception of intelligence. For example, Dewey says in *Human Nature and Conduct* that “intelligence is concerned with foreseeing the future so that action may have order and direction.”\(^82\) As we saw in the first chapter, the notion of social embodiment is built on the fact that the *actions* of an individual necessarily implicate others, and the actions of others necessarily implicate the individual. Thus, to foresee consequences is to envisage the effects of one's actions on others, and the actions of others on one's self. To affect and be affected by others in this way *is* to be embodied in a social environment. Insofar as intelligence is concerned with actions and consequences, then, it is engaged in a social context. This is precisely what Dewey means when he says that “conduct is always shared...it is not an ethical 'ought' that conduct *should* be social; it *is* social, whether bad or good.”\(^83\) The social dimension of intelligence will be discussed in much more detail below, but for now, it should be emphasized that the social dimension of embodied intelligence demonstrates another important way in which Dewey and Tufts think that intelligence moves beyond reason.

We may conclude the present section in the same way we concluded the first section of the first chapter. Namely, by asserting that the notion of embodiment serves as the jumping-off point for the rest of our investigation. In terms of this chapter, this means

\(^{82}\) MW 14: 53.
\(^{83}\) MW 14: 16. Emphasis in original.
that we must first conceive intelligence as a function of an embodied existence. This is best understood by a comparison to (Dewey's version) of the traditional notion of reason. Where the latter emphasized thought, analysis, and detachment from the emotions, intelligence emphasizes action in a social context, synthesis, and the incorporation of emotions. In this way, Dewey's notion of intelligence reflects his commitment to a non-dualistic, embodied account of human nature. In the same way the organism is embodied in the environment, and the individual in society, so is feeling in thought, and intelligence in experience.

2.1.2 Intelligence and Habit

In this section, I will examine the relationship between habits and intelligence, largely by way of the section in *Human Nature and Conduct* entitled “Habit and Intelligence.” I will focus mainly on dispelling the notion that intelligence must be understood as a purely intellectualistic faculty on the one hand, and that habits are merely unthinking routines on the other. I will instead show that the organization and integration of habits is a central feature of intelligence.

Recall that in Section 1.2 above, we explored the robust and pervasive nature of Dewey's conception of habit. For the purposes of this section, we will return to the distinction Dewey makes between the positive or expanding, and the limiting or negative functions of habits. In the latter sense, habits act as blinders, and if unchecked, lead to thoughtless action; in the former sense, habits widen the field of observation and possible action. Keeping in mind also the flexible and plastic nature of habits, consider the following passage:
Yet habit does not, of itself, know, for it does not of itself stop to think, observe or remember...Habits by themselves are too organized, too insistent and determinate to need to indulge in inquiry or imagination...Habit as such is too definitely adapted to the environment to be capable of reporting anything about it. Habit incorporates, enacts or overrides objects, but it doesn't know them.  

Even in their most positive or expanding functions, habits cannot engage in inquiry and imagination. To be sure, habits are capable of adaptation and adjustment, but within a rather fixed set of parameters – at bottom, habits are programmed responses to persistent stimuli. Thus, habits themselves are incapable of *reporting* on the stimulating environment, or *evaluating* responses to it. This is essentially the same problem that, as we saw above, gave rise to the need for problem-solving component of human nature. That is, the embodied nature of human existence is precarious and unstable to such a degree that habitual modes of thinking and acting will simply not suffice in many situations. In light of this point, we arrive at a fundamental formulation of intelligence: “As organized habits are definitely deployed and focused, the confused situation takes on its form, it is 'cleared up' – the essential function of intelligence.”

The parallels to the notion of inquiry here are clear. As we saw above, inquiry aims to transform an indeterminate situation into a determinate one, and this too seems to be the “essential function of intelligence.” Yet, in this formulation of intelligence, it is the deployment of *habits* that clears up the confused situation, not an inquiry as such. Thus, intelligence serves to mediate the tensions described above between the extremes of habit and inquiry. Intelligence does not eschew habitual modes of thinking and acting

---

84 MW 14: 124.
85 MW 14: 126.
particularly when there are no problems), but it tends to endorse the process of inquiry in problematic situations. Intelligence organizes, focuses, and deploys the appropriate habits for a given situation. As we saw above, habits are not mere repetitions of specific acts, but also have a creative and aesthetic dimension. Intelligence too, must be understood in terms of a kind of aesthetic sensibility to the salient features of a given situation. This is precisely what Tufts was talking about above when he said that intelligence is “imminently a synthetic or 'creative' activity.” The “elements” here are the salient features of the situation (stimuli) to which some response is coordinated. It is the work of intelligence, then, to rearrange, focus, and deploy the habits which will clear up the confused situation. It is in this sense that the positive or expanding function of habits is most clearly manifest. As one develops more habits, and the more flexible those habits become, the greater the possibilities become for rearranging or synthesizing them in such a way as to clear up a given problematic situation.

In this sense, intelligence is a method of inquiry whose subject matter is habit. Intelligence *does* report and evaluate on states of affairs in the environment, and it also identifies which habits developed in the past were effective in resolving problematic situations, and which were not. Importantly though, habits are more than instruments to be selected and deployed for the resolution of problematic situations in the manner just described. “There is nothing inherent in the nature of habit that prevents intelligent method itself from becoming itself habitual; and there is nothing in the nature of emotion to prevent the development on intense emotional allegiance to the method.” In the next section, we will define the “method” of intelligence more precisely, but for the purposes

86 LW 7: 54.
of this section, allow the method to stand simply for the organization, focus and
deployment of habits to clear up a confused situation. What Dewey is saying here is that
we can (and probably should) develop the habit of creatively synthesizing the full range
of available habits at our disposal in order to resolve problematic situations. Further, we
can (and probably should) develop a passion for doing so. This emphasis on the
integrated nature of habit, emotion, and intelligence is key, because it might seem as if
intelligence somehow “regulates” habits or emotions. To emphasize the primacy of
intelligence in this way – or habit or emotion, for that matter – is to misunderstand
Dewey's project. Hardly any thought or action completely escapes the filter of habit, and
similarly, it is some form of emotion that guides much of our thinking and action. As a
result, Dewey's metaphysics of embodiment and continuity entails that intelligence
cannot be something above or apart from these pervasive features of our experience, but
rather, that intelligence is an integration of habits and emotion. The distinction to be
made is that habits and emotions do not, on their own, have the capability to reflect upon,
report, or evaluate environing conditions. Intelligence, however, is geared toward
foreseeing consequences – it incorporates habit and feeling in order to paint a more
comprehensive picture of what consequences potential actions might have. Put another
way, intelligence synthesizes the insights of past experience (i.e. the failures or successes
of using certain habits in certain situations) with the possibilities presented by the present
situation in an attempt to foresee the consequences in the future.

Thus, we may conclude this section by offering the following formulation of
intelligence which nicely captures the content of the previous two sections: “Reason thus

---

87 Cf. LW 9: 53; LW 14: 323-4; 332-3.
becomes Intelligence – the power of using past experience to transform future experience. It is constructive and creative.”

2.1.3 Intelligence and Problem-Solving

In this section, we will continue to build on the embodied and habitual aspects of intelligence we have considered above. So far, we have seen that intelligence cannot be reduced to an intellectual faculty outside or above our experience, nor can it be understood in opposition to habit. Instead, we have seen that intelligence integrates, and is continuous with, the embodied and habitual nature of human existence. In this section, we will consider the ways in which intelligence is also continuous with the third aspect of human nature: problem-solving. In this section it will be emphasized that intelligence and problem solving are not limited to the province of cutting-edge science, but are in fact continuous with our everyday experience. To demonstrate this continuity, we will consider the “method of intelligence” in much the same way as we considered the pattern of inquiry in Section 1.3.1.

We can begin by noting as we did in the previous section, that problem-solving and intelligence are intimately related in that both seek to “clear up confused situations.” This is done largely by way of the five steps identified in the pattern of inquiry, as well as by the organization and deployment of focused habits. In this section, we will see how what Dewey calls the method of intelligence can be put to work in the resolution of problematic situations.

The phrase “method of intelligence” is one that Dewey uses frequently – and

---

88 MW 11: 346.
almost exclusively in his later work – but rarely defines. The closest we get to an explicit
definition occurs in *Liberalism and Social Action* (1935), within a discussion about the
precarious and fluctuating nature of the social environment:

For the only adjustment that does not have to be made over again, and perhaps even more
under unfavorable circumstances than when it was first attempted, is that effected through
intelligence as a method. In its large sense, this remaking of the old through union with
the new is precisely what intelligence is. It is conversion of past experience into
knowledge and projection of that knowledge in ideas and purposes that anticipate what
may come to be in the future and that indicate how to realize what is desired. Every
problem that arises, personal or collective, is solved by selected material from the store of
knowledge amassed in past experiences and by bringing into play habits already
formed. 89

In considering the relationship between intelligence and problem solving, the idea
that intelligence is “the remaking of the old through union with the new” will prove to be an
important point. It is, in fact, what marks off problem-solving as such, from the
method of intelligence. In Section 1.3.1, we touched briefly on how the fifth step in the
process of inquiry – further experimentation and observation – serves to inform future
deliberations by evaluating the results of a given course of action. It is this conscious and
directed integration of the insights and lessons drawn from these evaluations that
characterizes the method of intelligence. Put another way, the method of intelligence is
distinguished by its attention to the temporal dimension of human existence, or the ways
in which past experience shapes the conditions of the present and the possibilities of the
future. It is at this point that we must make an important distinction between the pattern
of inquiry and the method of intelligence. The former is best understood as a sort of
descriptive account about the general structure of the resolution of problematic situations.

The process of inquiry by no means guarantees a satisfactory resolution of the problem,

89 LW 11: 37.
nor is it able to prescribe specific, concrete solutions to problems. In short, there are good and bad inquiries; even if the pattern is followed closely, the results may still be ineffective or irrelevant. Even in a “bad” inquiry, where the desired results were not achieved, one can still re-incorporate insights into an inquiry in the future.

Similarly, one may bring about favorable or satisfactory results accidentally, without engaging in the pattern of inquiry at all. Thus, the distinction to be drawn here is between intelligent and non-intelligent inquiry. Put simply, the former addresses *problems*, the latter, *symptoms*. That is, intelligent inquiries seek out the actual conditions which gave rise to concrete consequences – they incorporate the lessons of past experience. This is not to say that intelligently directed inquiries always achieve favorable or satisfactory results, but rather, that the results that are achieved are the result of a directed inquiry into antecedent conditions and resultant consequences. Non-intelligent inquiries, on the other hand, may be characterized in a number of ways, one of which is engaging with a symptom of the problem, rather than the actual problem itself. These kinds of inquiries will often evaporate the *feeling* of the problem, but will do nothing to address the actual problematic conditions and the resultant consequences.

Much of the rest of this section will be devoted to further elucidating how the method of intelligence is employed in an inquiry. For now, let it suffice to say that the pattern of inquiry, as we have described it, is a descriptive account of general features present in an attempt to resolve a problematic situation. Let the method of intelligence as Dewey describes it above, stand for intelligent inquiry – the kind of inquiry that we *ought* to engage in.

The question we must now address is, of course, what gives the method of
intelligence this normative force? The answer is grounded in our conceptions of human nature. Because humans are fundamentally embodied in the biological/ecological, physiological/psychological, and social/political dimensions of experience, our experience cannot be understood as separate or apart from the objective conditions in these dimensions. That is, the functioning organism is not aloof from the precarious forces of the environment; stimulus and response are not disparate elements, and neither are thought and feeling; individuals cannot act outside of a social context, nor can individuals be uninfluenced by social forces. As a result of these conditions, humans have developed habits, and problem-solving abilities. Intelligence, as we have seen, integrates habits in order to solve problems. In order to see why intelligence as a method possesses a normative force, then, consider what Dewey says about magic: “the essence of all hocus pocus is the supposition that results can be accomplished without the joint adaptation to each other of human powers and physical conditions.” In other words, unless we are content with addressing problems with hocus pocus and magic, we must accept the fact that all conduct is the transaction between human powers (organism) and physical conditions (the multi-dimensional environment). This transaction necessarily incorporates the habits developed in the past – both the habits of action and thought on the part of the individual, as well as the wider set of habits (such as institutions) that constitute the physical conditions. Intelligent inquiry, in incorporating this past experience, utilizes the knowledge of the previous transactions and their results or consequences, to better predict the consequences of the present attempt to resolve a problematic situation. As Dewey says, “the discovery of how things do occur makes it possible to conceive of their

90 MW 14: 22.
happening at will, and gives us a start on selecting and combining the conditions, the means, to command their happening.\(^91\) We can say that any method *ought* to incorporate the past in this way, because if we do take note of how things have worked (or not worked) in the past, we are bound to repeat our mistakes. Simply put, to refuse to incorporate past experience into inquiry in the present is to deny the necessary relation between human powers and physical conditions, which is, in effect, to engage in magic or hocus pocus.

The claim that we *ought* to use intelligence – as opposed to magic – in solving problems is not controversial in the slightest. To incorporate habits, emotions, and past experience into the conception of intelligence as Dewey does, though, is to at least step outside of the conventional understanding of the work of intelligence. This step entails that we fully incorporate the affective dimensions of experience into our accounts of rationality, and that we expand our conception of habit beyond its limiting and narrowing functions. Perhaps most importantly, though, the notion of an intelligently directed inquiry sets up the framework to move beyond the mere dissolution of the *feeling* of a problem, and toward the actual assessment and treatment of *the problem itself*. It is only through the application of the method of intelligence to inquiry that we can hope to achieve meaningful and concrete solutions to our problems; that we can construct lasting ideals and goals for a better future, as well as the means to attain and realize them. We may thus close the present section with the following selection from Dewey's 1942 essay “Inquiry and Indeterminateness of Situations,” which helps to clarify the idea of intelligence as a method, as well as provide a segue to the next section:

\(^{91}\) MW 14: 162.
Definition of values and of freedom in terms of extended social use of the method of intelligence is a doctrine of the way in which deep-seated confusions and conflicts, which now prevail and which hamper and prevent attainment of values and of effective or positive freedom, may be progressively overcome.  

2.1.4 The Social Dimension of Intelligence

At this point, we have seen how Dewey's notion of intelligence matches up with each aspect of his conception of human nature. In the last two sections of this chapter, I will emphasize the social and qualitative dimensions of intelligence, respectively, as both are worthy of further elucidation than has been given thus far. In this section, I will address many of the questions that were left unanswered in the section on social embodiment in the first chapter. It will be my goal in the present section to extend the notion of intelligence to the social sphere, much as we did with the notion of habit in Section 1.2.3.

In the first place, we must recall that an important justification for moving from the notion of reason to that of intelligence is that the former tends to connote something akin to the process of ratiocination in isolation, where the latter term is supposed to capture one's involvement and embodiment in a wider social context. To demonstrate the social character of intelligence, we will turn to another of Dewey's colleagues in Chicago, George Herbert Mead. The following passage from Mead's *Mind, Self, and Society* is consistent with the Deweyan notion of intelligence we have formulated so far, and also introduces the relationship between intelligence and society. Mead writes:

---

92 LW 15: 41.
Intelligence is essentially the ability to solve the problems of present behavior in terms of its future possible consequences as implicated on the basis of past experience – the ability, that is, to solve problems of present behavior in light of, or by reference to, both the past and the future; it involves both memory and foresight. And the process of exercising intelligence is the process of delaying, organizing, and selecting a response or reaction to the stimuli of the given environmental situation. The process is made possible by the mechanism of the central nervous system, which permits the individual's taking of the attitude of the other toward himself, and thus becoming an object to himself. This is the most effective means of adjustment to the social environment, and indeed to the environment in general, that the individual has at his disposal. 93

This incredibly pregnant passage demonstrates the embodied nature of intelligence, as well as the orientation of intelligence to solving problems. For the purposes of this section, I wish to address two aspects of the social dimension of intelligence which are captured in this passage: (1) the development of intelligence as a product of social embodiment and interaction, and (2) the possibility of collective intelligence applied to social problems.

What is most important for the first aspect is Mead's notion of “taking the attitude of the other toward himself,” and “becoming an object to himself.” Mead thinks that this ability is the best tool we have at our disposal to deal with the precarious nature of our existence, and that it is made possible by the physical mechanisms of the central nervous system. What I think Mead is getting at with his notion of “taking the attitude of the other” is intimately related to what Dewey and Tufts emphasized as the ability to foresee and predict the consequences of actions. That is, the ability to become an object to one's self is to imagine what one's own actions would look like from the perspective of others. To have the ability to take the attitude of the other, then, is to have the ability to foresee or predict the possible consequences of one's actions from the standpoint of the other.

implications of this view are profound. It is important to note that for both Dewey and Mead, the act is the basic unit of meaning; it is through the act that the organism and environment, stimulus and response, individual and society are related in a continuous, unified, whole. Thus, to deliberate between possible courses of action and attempt to foresee the consequences of one's actions is to place one's self in the thick of the social environment. Thinking about actions and consequences is not, and cannot possibly be, solitary and isolated – it is necessarily socially embodied. Thus, when we said that the notion of reason downplays this social dimension, and that the notion of intelligence is better suited to capture the active, engaged, and social character of our experience, what we really meant was that intelligence is prior to reason, more so than it moves beyond it. In other words, it is only through the social interaction that is a hallmark of intelligence that we develop the individual capabilities usually associated with reason. This is precisely what Stuhr means when he says that social philosophy is First Philosophy for Dewey.94 Alexander similarly echoes this sentiment when he writes:

Subjective speculation is secondary to the primary power of social deliberation. We debate with ourselves because we have debated with others. Discussion of how to deal with a problem in a social context, for Mead as well as Dewey, is what teaches us to deliberate privately. On a more elementary level, we are taught to be mindful and thoughtful. Mind is social and situational, and our efforts at 'working' the immediate problematic phase involving organizing dramatic, dynamic habits of action and meaning into a coherent field.95

The main thrust of this passage encapsulates the claim that we introduced in Section 1.1.3: individuals must learn to become human. It is through the give-and-take of social interaction that we learn to deliberate, but at an even more elementary level, it is

94 See footnote 24 above.
95 Alexander, pg. 148. Emphasis in original.
through the give-and-take of social interaction that we develop our sense of self. It is not only our personal capabilities that are developed from our embodiment in a social environment, but it is our self, our being, our personality, and our values which are developed – learned – through social interaction. Thus, intelligence - the process by which we delay, organize, and select response to environmental stimuli – is an internalization of the process of interaction with others. To sum up, one's situated-ness, embedded-ness, and embodiment in the social environment is affirmed by the ability to take the attitude of the other, or to envisage one's self, one's personality, and one's actions from the standpoint of another. To have the ability to deliberate, organize, and evaluate possible actions from this standpoint is a hallmark of intelligence, and this ability is itself the development and internalization of social interaction.

Having now seen how intelligence is developed as the product of social interaction, I will shift my focus to understanding how the method of intelligence can be collectively realized and applied to problems experienced in the social context. There are two points here that need to be re-iterated. First, according to Dewey, almost all important ethical problems arise out of the conditions of associated life. Second, for both Dewey and Mead the method of intelligence possesses a normative force such that it is conceived as the best way to go about solving problems. When we talk about the application of the method of intelligence to social problems, we are talking about how the lessons of past experience can be creatively employed to deal with social and ethical problems in the present, so that the ideal of a better future is made attainable. The task of explaining how this works will be undertaken largely by way of some of the open-ended questions from the first chapter. Recall that in Section 1.1.3 we posed the question “what
makes human societies distinctively human, as apart from associations of insects, plants, or other animals?” It was suggested in Chapter 1 that part of the answer was that humans have the ability to predict, reflect, and evaluate the consequences of their behavior. Importantly, humans also have the ability to do this collectively on a large scale – that is, humans are capable of social movements, and enacting widespread social changes. The question now becomes, how can intelligence be applied – how can it become a *directive force* – in addressing these problems encountered in a social context, and at a social level.

Acknowledging the social dimension of embodiment dissolves many problems associated with the relationship between the individual and society, but it also brings a set of new problems into sharper focus. One such problem we mentioned above was the evaluation of competing values in the organization of society. In the remainder of this section, I will explore what it might mean to intelligently address a social problem such as this one.

First of all, it is not my intention here to endorse or criticize any political ideology as it relates to the problems of organizing a society. Rather, I hope to show how the method of intelligence, as we have construed it, is easily extendable to the domain of collective, or social problems. There are no principled differences, for Dewey, between intelligently addressing individual problems, and intelligently addressing social problems. I choose the issue of competing values in the organization of society because it is an issue which persists, and which seems to invariably involve competing and irreconcilable values. In other words, the organization of a society is almost always experienced as problematic in some form or another; there always seems to be disagreement about the best way to organize it. As a result, addressing this important, widespread, and perennial
issue will prove instructive in a number of ways.

When it comes to organizing a society, the issue is not with how it is we came to be associated in the first place, but rather, what is the best way to organize ourselves, since we are invariably associated. Insofar as some aspect relating to the organization of society is experienced as problematic for an individual, or a group of individuals, an inquiry can be undertaken to determine the best way to resolve the problem. If this issue, whatever it may be, is to be addressed intelligently, there must, in the first place, be a felt difficulty; the issue of the organization of society must matter to someone. Importantly, although the issue of the organization of society is obviously a “social issue,” the felt difficulty arises in the individual. This felt difficulty may not amount to anything more than the feeling, “something is messed up here,” or, “this isn't quite right.” This feeling may also arise as the result of an interaction between individuals, or between groups of individuals; the important point is that an issue arises for someone. Once the issue is felt as such, the real task of intelligence becomes apparent: the identification of the problem. This means that the felt difficulty is identified as a problem relating to the organization of society, i.e. “it does not seem right to me that someone who makes twice as much money as I do pays half as much in taxes,” or, “it does not seem fair that children who live in this neighborhood have better educational opportunities than children in another neighborhood,” or, “gas prices are too high.” Whatever the issue might be, it is easy to feel that something is amiss, but difficult to pinpoint exactly where the problem stems from. As Dewey says in The Public and Its Problems, “many consequences are felt rather than perceived; they are suffered, but they cannot be said to be known, for they are not,
by those who experience them, referred to their origins."

It is at this point that intelligent and non-intelligent inquiry diverge. The *real* first step in intelligently addressing the problems associated with how to best organize a society is to *locate and identify the problem*. This entails identifying the particular consequence which sparked the difficulty in the first place, and from there, tracing the action(s) and conditions that *actually* gave rise to the consequence(s). To be sure, this is no easy task in the matrix of a globalized society. What is easy, however, is to allow the feeling of “something isn't right” to dissipate, and then act as if the “problem” has been “solved.” This is the difference between merely blaming opposing political ideologues for wealth inequality, quality of education, or high gas prices, and actually addressing the conditions and actions that may have led to the consequences of wealth inequality, high gas prices, or low education standards in the first place. It is the difference between turning up one's car radio to drown out the sound of the troublesome rumbling and clattering of the engine, and looking under the hood of the car to actually diagnose the problem with the engine. Both the “blame game” and the “radio repair” make note of an actual problem, and employ means to transform the problematic situation into a less problematic one. Indeed, in both cases, the individual likely feels as if the problematic situation *has* been resolved, because the situation is no longer experienced as problematic. In both of these examples, however, it is clear that to meaningfully address the real problem – and not merely the symptoms – requires the concerted effort of identifying causes, effects, conditions and consequences. In short, these examples demonstrate the difference between intelligent and non-intelligent inquiry. The

---

96 LW 2: 317.
identification of the problem as such is both the most difficult and the most important aspect of an intelligent inquiry. This is especially true at the level of inquiry into social problems. It is highly unlikely that any problems associated with the organization of society - such as the distribution of wealth – are easily reducible to a single cause or condition. Because there are likely a plurality of causes and effects, there should likewise be a plurality of perspectives involved in the inquiry. Until serious efforts are made to identify specific causes, conditions, and consequences, however, the felt problems associated with wealth inequality will no sooner be solved than will the engine troubles by turning up the radio.

As we saw in Section 1.3, part of identifying the parameters of the problem entails setting the parameters of the possible solutions to be entertained. In other words, if the problem is identified as one relating to wealth inequality, then set of possible solutions to the problem would likely include things related to the tax code and government aid programs, while it would likely exclude things related to environmental regulations and infrastructure, for example. The ability to identify the salient features of the problematic situations is a crucial component of intelligence, and, as I will argue in the next section, largely affective or qualitative in character.

At any rate, it is not until after the problem is identified as such that possible solutions can begin to take shape. The importance of accurately identifying and locating the problem cannot be overstated, as the articulation of a problem conditions its possible

---

97 For a discussion of the difficulties associated with identifying the problem, and engaging in a cooperative inquiry in the political realm, see Campbell's discussion of some of C. Wright Mills's criticisms of Dewey, esp. pp. 235-249.
solutions. If the articulation of the problem is flawed, so too will be any proposed solutions. This is also demonstrates an important point about the social nature of inquiry in general; whether the problem which sparks the inquiry is experienced as strictly “individual,” or more widely experienced as “social,” the statement of the problem must be expressed in social terms. That is, because every problem arises from a transaction between human powers and physical conditions, the statement of the problem must also reflect the interplay between individual, subjective forces, and objective, social conditions. At a more basic level, the statement of a problem must be made in socially recognizable terms, for how else could it be stated, if not in a way that others could understand it? Once a problem has been stated in these terms, the inquiry moves to the phase of deliberation, or the process of entertaining possible courses of action to solve the problem at hand. In addressing social problems, this phase is potentially very powerful and useful, because deliberation upon social problems offers the opportunity to involve multiple perspectives and incorporate diverse ranges of past experiences. In principle, social deliberation is no different from individual deliberation, as in both cases, the lessons of past experience are incorporated to inform the potential outcomes of proposed courses of action. If Mead and Dewey are right about the fact that we learn to deliberate with ourselves only because we have deliberated with others, then the kind of social deliberation being described here is something that comes very naturally to us.

The conditioning of solutions by the articulation of the problem applies not only to individual, or social problems, but also to philosophical systems and historical epochs. For example, in Philosophy in a New Key (Cambridge: Harvard University Press, 1957) Susanne Langer writes: “Therefore a philosophy is characterized more by the formulation of its problems than by its solution of them. Its answers establish an edifice of facts; but its questions make the frame in which the picture of facts is plotted. They make more than the frame; they give the angle of perspective, the palette, the style in which the picture is drawn...in our questions lie our principles of analysis, and our answers may express whatever those principles are able to yield.” (pg. 4. emphasis in original).
Evolutionarily speaking, this makes a good deal of sense, as one can easily imagine the benefits of being able to consult group members and “test out” possible courses of action in thought before carrying them out in actuality.

To return to the issue of intelligently addressing social problems, it should be noted that an inquiry will be better off the more perspectives it incorporates into the deliberation. The more points of view that are represented, the more coherent and comprehensive the picture of the world will be. That is, the deliberation will be more informed as to how past conditions and actions have shaped the conditions of the present, and how proposed courses of action will likely shape the future. In both individual and social deliberations, however, it will not always be the case that a clear-cut and obvious course of action stands out as the best way to resolve the problematic situation at hand. Nonetheless, at some point, an action will be entered into, and consequences will result from it. Such is the nature of human conduct – individual or social. At this point, intelligent and non-intelligent inquiries may part ways again. In the case of the former, the relevant past experiences of the group, in combination with the salient features of the present, will be integrated into the decision to act one way or another. What marks off intelligent from unintelligent action in this case is what happens next. Does the method of intelligence propagate itself? That is, are the actual, concrete results of the chosen action noted in such a way as to become available for us in informing future deliberations? Intelligence, as we have noted, is concerned with consequences. Thus, intelligent inquiry into social problems constantly draws from the bank of the past experience of society and also constantly “deposits” information into that bank for use in the future.

If we stick with the accounting metaphor, the “bank” is the accumulation of
experience, knowledge, habits, institutions, traditions and customs that we call our society, our community. It is not just this ability to “deposit” and “withdraw” information in this way that makes a human society distinctively human, but the ability to do so toward the end of attaining a better future. Thus what marks off human associations from those of insects and plants is our ability to use the lessons of past experience to construct goals and ideals for the present, which are to be realized in the future. A community is intelligent, then, insofar as its shared bank of past experience is utilized to deal with problems in the present, as well as to construct ideals for the future.

2.1.5 The Qualitative Dimension of Intelligence

In this section, I will attempt to tie up a loose end that has been running throughout this work: the place of the qualitative dimension of experience. We have seen that the qualitative dimension of experience plays an important role in each of the aspects of human nature we have considered, but we have not reached a unified conclusion as to its over-arching purpose in Dewey's conception of intelligence. In this section, I will argue that Dewey's emphasis on the qualitative dimension of experience plays an important role in his notion of intelligence, and it reinforces an idea that makes Dewey's notion of intelligence distinctive and worth taking seriously: intelligence is synthetic and analytic, quantitative and qualitative.

In this first place, I must clarify what is meant by “the qualitative.” In the most basic and fundamental terms, the qualitative is that which is felt rather than thought. Importantly, feeling and thought are to be understood as phases of experience, and not disparate entities. It is the qualitative dimension of experience which provides a
“background” for thought. As Dewey says, the qualitative:

enables a person to keep track of what he is doing, saying, hearing, and reading, in whatever explicitly appears. The underlying unity of qualitateness regulates pertinence or relevancy and force of every distinction and relation; it guides selection and rejection and the manner of utilization of explicit terms. This quality enables us to keep thinking about one problem without our having constantly to stop to ask ourselves what it is after all that we are thinking about. We are aware of it not by itself but as the background, the thread, and the directive clue in what we do expressly think of.\textsuperscript{99}

With this brief sketch of the qualitative dimension of experience on the table, there are three points I would like to emphasize throughout this section: (1) the way in which the pervasive quality of a situation "guides" thinking, or enables us to keep one problem in mind without having to stop and ask ourselves what it is that we are thinking about; (2) the way in which distinctions of relevance and importance are made on a qualitative basis, or how the salient features of a situation are determined qualitatively; (3) how evaluations and judgments are grounded in, guided by, and oftentimes made on a qualitative basis.

First, the idea that the underlying qualitateness of a situation is what allows us to "keep thinking about one problem" is a particularly important feature of intelligence insofar as intelligence is geared toward solving problems. We have already seen how a qualitative discomfort or irritation is the first mark of a problematic situation, but what Dewey is pointing to in the passage above is that some kind of qualitateness also persists throughout the experience of the problematic situation, and it functions to keep thoughts "on track" or focused on the problem at hand. I think the terms "background" and "thread" are aptly used by Dewey to describe how a qualitateness undergirds the quantitateness that is usually associated with thought. That is, if thought is something

\textsuperscript{99} LW 5: 247-8.
like an internalization of language (where language is comprised of quantitatively analyzable symbols), the qualitativeness of which Dewey speaks is the context, or background against which language can make sense, or become meaningful. In terms of problem-solving, this background quality of a situation is what allows the problem stand out as something that matters, something that needs to be dealt with. This is what Dewey means when he says that “what we act for, suffer, and enjoy are things in their qualitative determinations.”

The reason that we encounter problems is because the world is meaningful for us, and the reason that we try to solve problems is that their resolution means something to us, it affects us. For Dewey, this meaningfulness and affection is experienced qualitatively – they are felt, and this feltness is prior to thought, and it carries thought along. Thus, Deweyans would say that when one says, “I think that \( x \) matters,” or, “I think that \( x \) is important,” what they really mean is that they feel that \( x \) is important or meaningful, and it is this feeling of importance and meaningfulness which directs their thoughts in such a way as to realize the meaning or import of \( x \).

In considering how it is that the qualitativeness of a situation also allows us to make distinctions of relevance and relations, we must stress the ideas of the “background” or “thread,” and the “situation.” Dewey states that “the selective determination and relation of objects in thought is controlled by reference to a situation – to that which is constituted by a pervasive and internally integrating quality, so that failure to acknowledge the situation leaves, in the end, the logical force of objects and their relations inexplicable.”

\[ \text{In other words, for distinctions to be made and for} \]

---

100 LW 5: 243.
101 LW 5: 246.
relations to be identified, there must be a context or background against which they are contrasted. This background is what Dewey calls the situation:

The situation as such is not and cannot be stated or made explicit. It is taken for granted, 'understood,' or implicit in all propositional symbolization. It forms the universe of discourse of whatever is expressly stated or of what appears as a term in a proposition. The situation cannot present itself as an element in a proposition any more than a universe of discourse can appear as a member of discourse within that universe. *To call it 'implicit' does not signify that it is implied.* It is present throughout as that of which whatever is explicitly stated or propounded is a distinction.\(^{102}\)

It is important to note that the situation, although it can be said to be implicit, it is not *implied*, inferred, or deduced. All of the latter terms entail a cognitive operation, and for Dewey, the apprehension of the situation is pre-cognitive, or perhaps even non-cognitive altogether. It is only because the situation contains an internal, cohesive, pervasive *quality* that objects within it can “hang together.” For Dewey, we could not have the concept of an object (logical, psychological, material, or otherwise) were it not for the context – the situation – within which it inheres.\(^{103}\) And for Dewey, it is a qualitative whole, or pervasiveness which holds the situation together, such that objects and relations between objects may “stand out,” or be subjected to analysis. To be sure, there is a way in which it is futile to even attempt to talk about the pervasive quality of a situation, as doing so amounts to an attempt quantify the universe itself as a member of the universe of discourse. It is like trying to “contain” the mixing bowl within the ingredients – it can of course be done, but only by means of introducing a bigger mixing bowl – a wider universe of discourse. At some point though, there will always be a “container,” without which there could be no contents – and this, for Dewey, is the

\(^{102}\) LW 5: 247. Emphasis mine.

\(^{103}\) We can here think of the child-candle example to demonstrate this point.
pervasive quality of the situation.

But how is it that we can move from the immediately given, qualitative felt-ness, to the distinction and discrimination of objects and their relations? In other words, how is it that the pervasive quality of the situation is experienced as unified and coherent? How is it that situations make sense to us? In *Experience and Nature* (1925), Dewey addresses this move:

The qualities of situations in which organisms and surrounding conditions interact, when discriminated, make sense. Sense is distinct from feeling, for it has a recognized reference; it is the qualitative characteristic of something, not just a submerged unidentified quality or tone. Sense is also different from signification. The latter involves the use of a quality as a sign or index of something else, as when the light of red signifies danger...The sense of the thing, on the other hand, is an immediate and immanent meaning which is itself felt or directly had...The meaning of the *whole* situation as apprehended is sense...Whenever a situation has this double function of meaning, namely signification and sense, mind, intellect is definitely present.104

The force of this passage demonstrates the relation of the qualitative dimension of experience to intelligence. First, there simply is the immediate and given *feeling*, or qualitative apprehension of the continuous transaction between organism and environment. This is the “submerged unidentified quality or tone.” The next phase is distinction and discrimination – the emergence of a “recognized reference.” It is at this point that otherwise qualitatively indistinguishable objects come to matter to us; things that are important “stand out,” objects become available for *us*. For Dewey, the presence of intellect emerges when these discriminated qualities signify something beyond their immediate qualitativeness, while also being felt in their immediate qualitativeness – that is, when the qualities stand for possibilities not felt at present *and* for the actualities apprehended and immediately felt. Thus, *sense* is the consummation of the possible and

---

104 LW 1: 200.
the actual into a meaningful whole. To say that the actual and the possible emerge into a meaningful whole is to say that the individual is embodied in and of the situation - the actualities and possibilities are the individual's. When Dewey says that the whole meaning of the situation is apprehended as sense, he means that the individual emerges as in and of the situation in such a way that the distinctions, relations, saliencies, possibilities, and actualities are experienced as my distinctions, relations to me, salient for me, my possibilities, and actualities as they are given to me. For Dewey, this unity of the actual and the possible constitutes the given and immediately experienced qualitative background to which intelligence is attuned. It is an underlying qualitative unity through which the efficacious past funds the conditions of the present, which in turn shapes the possibilities of the future. The work of intelligence is made possible through the qualitative continuity that connects the past, present, and future in this way. For how could the lessons of the past be incorporated into the problems of the present if the past and the present were not continuous? Similarly, how could ideals and goals be projected into the future without a similar connection to the present? For Dewey, the continuity and cohesiveness of the past, present, and future is held together by the “thread” or “background” which is the pervasive quality of the situation.

Thus far, we have seen how the qualitative dimension of experience undergirds the work of intelligence. That is, the felt dimension of a problematic situation is what guides thought, and keeps it “on track.” Similarly, it is the qualitative unity of a situation that establishes continuity between the past, present, and future in such a way that important or relevant features of our experience “stand out” and become meaningful to us. Problematic situations matter to us, in short, because of the qualitative feeling that
they are our problems, and that we are implicated by them. In other words, in this section we have established that the qualitative dimension of experience is what keeps us “plugged into” the world. I wish to conclude the present section with a consideration of what the qualitative dimension of experience does in this “plugged in” state of our being-in-the-world. As we just saw, distinctions of relevance and relations are made possible by the background that is the pervasive quality of the situation. These characteristics also hold true at the level of conscious, cognitive processing. That is, the immediate apprehension of the qualitative unity of the situation does not somehow disappear when one moves from its immediate given-ness, to the level of analysis, deliberation, comparison, prediction, reflection, etc. This entails that the qualitatively of the situation which makes distinctions of relevance and relations possible, must also be understood as fundamental to the process of conscious, directed choice. Our senses of right and wrong, obligation, and responsibility are in large part determined by what we identify as relevant or important, and what we dismiss as irrelevant or unimportant. The abortion debate provides a clear-cut example: Do we consider the circumstances giving rise to the pregnancy important or relevant? If not, then presumably being raped would not justify aborting a pregnancy. If we do identify the circumstances as important, then it may not be so clear as to what counts as a justification for aborting a pregnancy. In a less divisive example, one's obligation to attend a weekly poker game is identified as all but irrelevant when a family member's funeral is the same day. To be sure, the former example is much more complicated, and would likely require more deliberation than the latter, but both situations are problematic in their own right, and the importance of identifying what is relevant is made clear in both cases. The Deweyan point here is that the identification of
relevant and irrelevant features in a problematic situation, or any situation for that matter, is qualitatively determined. That is, the pervasive quality of the situation will largely determine what features are attended to as relevant and important, and which are filtered out as irrelevant or unimportant; distinctions and discriminations of relevance are made on a qualitative basis – relevancy is first and foremost felt. It follows then, that our account of the work of intelligence in resolving problematic situations cannot exclude the role the qualitative unity of a situation plays in determining relevancies. It should be clear by now that because a problematic situation is identified as such by a qualitative sensation, and because the salient features of the problematic situation are determined qualitatively, intelligence must be bound up with the qualitative dimension of experience. The implications of this view are far-reaching. In the first place, the emphasis on the qualitative eliminates the possibility of a purely rational, quantitative calculus for determining the utility of a particular action. It also forces us to take seriously our “gut reactions” in evaluating morally problematic situations – that is, our emotional responses might be best understood as prior to, and not detracting from, our moral judgments and evaluations. These issues and many others like them all point to the fact that a dualism between feeling and thought is simply untenable. In the context of the present section, then, we may conclude by saying that Dewey's notion of intelligence reflects his understanding of the embodied nature of human existence, and as such, incorporates the qualitative and quantitative dimensions of experience without privileging one over the other. In the next section, I will attempt to synthesize and summarize the preceding discussions, so that we may arrive at an operative definition of intelligence. With this definition, we can then explore in more detail, the implications of this understanding of
human nature and intelligence.

2.2 A Synthesized Definition: *Intelligence as the Creative Re-Appropriation of Past Experience to Solve Future Problems*

At this point, we have seen multiple instantiations of Dewey's metaphysics of continuity and integration. In this chapter, we have demonstrated the continuity between human nature and intelligence, or, put another way, we have shown that intelligence is integrated with and through the embodied, habitual, and reconstructive dimensions of our existence. I would like to conclude this chapter by offering an operative definition of intelligence, so that in the final chapter, we can “put the notion of intelligence to work,” and examine some important implications. For these purposes, I offer the following synthesized definition: *Intelligence is the creative re-appropriation of past experience to solve future problems.*

In the remainder of this chapter, I will attempt to show how this definition encompasses each of the aspects of human nature and intelligence that we have considered thus far. First of all, we must begin with the term “experience.” In *Art as Experience* (1934), Dewey makes the following distinction between experience in general, and having an experience:
experience occurs continuously because the interaction of live creature and environing conditions is involved in the very process of living. Under conditions of resistance and conflict, aspects and elements of the self and the world that are implicated in this interaction qualify experience with emotions and ideas so that conscious intent emerges...In contrast with such experience, we have an experience when the material experiences runs its course to fulfillment. Then and only then is it integrated within and demarcated in the general stream of experience from other experiences. A piece of work is finished in a way that is satisfactory; a problem receives its solution; a game is played through; a situation, whether that of eating a meal, playing a game of chess, carrying on a conversation, writing a book, or taking part in a political campaign is so rounded out that its close is a consummation and not a cessation. Such an experience is a whole and carries with it its own individualizing quality and self-sufficiency. It is an experience.\textsuperscript{105}

This echoes the distinction Dewey makes in *Experience and Nature* between primary and secondary experience.\textsuperscript{106} In both cases, the line is drawn between immediate lived experience (primary experience, or what Dewey here calls the continuously occurring experience), and the reflection or analysis of that experience (secondary experience, or demarcating an experience). It is the latter variety that constitutes the kind of experience that can be creatively re-appropriated. This is important because an experience is consummatory; it possesses a distinctive, unifying, pervasive quality. As such, an experience is distinct from the flow of continuously occurring experience – it stands out – and in virtue of this, becomes available as something to be appropriated. In other words, in saying that intelligence is the creative re-appropriation of past experience, I do not mean that it is the task of intelligence to scan the vast realm of all experience that has ever occurred. Rather, some parts of this realm stand out as distinct - those experiences which have run their course, and are endowed with a unified quality. Thus, the experience that intelligence creatively re-appropriates is the collection of experiences.

\textsuperscript{105} LW 10: 42.
\textsuperscript{106} Cf. LW 1: 15–42.
that we have at some point marked off as an experience. It is in this context that the aesthetic sensibility or attunement of intelligence to salient features is at work.

With this sketch of experience vs. an experience in place – call them the broad and narrow conceptions, respectively - we may now move on to the idea of “past experience.” Keeping in mind that we are concerned here with the narrow conception of experience, we will use the “past” in broad sense, so as to include both the experiences (in the narrow sense) of the individual, as well as those of others. If we extend some of the principles we laid out in Sections 1.1.3 and 2.1.4, the distinctions of an individual's past experience and society's past experience are not easily separable. This entails that the notion of past experience includes the habits developed by the individual (both those that turned out to be fecund and those that did not), as well as the wider set of habits that comprise the institutions of society. Because society is capable of establishing collective habits to which individuals and their habits conform, this wider set of habits must also be included in the frame of past experience.

This conception of past experience is perhaps most relevant and important in the context of inquiries; in the same way that habits must be included in the frame of past experience, so must inquiries. Consequently, our conception of past experience must include the inquiries that both the individual and others have taken part in (successfully and unsuccessfully). It should again be emphasized here that tracking the methods and results of an inquiry, and then incorporating those insights into future inquiries is the mark of the method of intelligence in inquiry. Thus, the possibility for intelligent inquiry is based in the ability to “make deposits” into the bank of past experience, so that relevant experience can be “withdrawn” and incorporated into new inquiries. Indeed, the inability
to draw from the work of others in this way would make progress nearly impossible; geometer do not need to begin every work day re-proving (or disproving) Euclid's axioms, and neither do astronomers need to refute Ptolemy before advancing their own theories. It is because we can and do incorporate the lessons of past experience that progress is made possible, and we don't have to start anew every single day. As a result our notion of past experience must also include this wider notion of inquiry.

Next, we must examine the “creative re-appropriation” of the kind of past experience just described. Dewey's emphasis on the precarious nature of human existence entails that no two situations are ever presented in exactly the same way. As a result, even in the most mundane, repetitive and seemingly insignificant situations (such as the commute home from work), the feeling of “having been there before” alters the present experience of that situation – most notably by allowing habits to bear more and more of the load, so to speak. At the other extreme, some situations are encountered as so radically novel that no past experience seems to be relevant or useful. These examples demonstrate the tension between habit and inquiry, from which intelligence emerges.

Thus, as we saw above, intelligence integrates habit and inquiry. This is inherently a creative process, because in both familiar and novel situations, elements of habits and inquiries must be adjusted to fit the peculiarities of the present situation. Sometimes relying heavily on previously developed habits will suffice, and sometimes one must enter into a deliberate and directed inquiry. This much is obvious; when I have to find an alternative route home from work, I can rely heavily on habitual modes of thinking and driving. When I have to decide where to attend college, there are far fewer habits to fall back on, and I will likely enter into something resembling the pattern of inquiry (i.e.
entertain multiple options, weigh the pros and cons of each, bring family members and friends into my deliberation, and make a decision at a later time). What is less obvious, and much more important, is the way in which the lessons of past experience are integrated, incorporated, and re-appropriated into the present situation. Even if one has never made a decision as to what college to attend, one has still probably made other important life decisions: breaking up with a boyfriend or girlfriend, borrowing money to buy a car, finding a job, etc. To intelligently decide, then, which college to attend is to incorporate the lessons of past experience: what would I have done differently in the last important decision I made? Who else has been faced with making a similar decision, and what can I learn from their experience? The application of the answers to these questions to one's own situation is inherently a creative act; one has to determine which elements of the past are useful, relevant, and applicable to the present situation. To creatively re-appropriate the meaningful experiences of one's self and others into new situations in this manner is the process of growth – of learning from mistakes and building on successes. Thus, the creative re-appropriation of past experience is intelligence.

2.3 Conclusion

In this chapter we have seen how Dewey's notion of intelligence is continuous with his conception of human nature, or, put another way, that intelligence is embodied, and integrates habits and inquiry. By and large, the first two chapters have been descriptive in nature: we have considered what human nature is and what intelligence is. These descriptions – of human nature especially - are important, if for no other reason than they laid the groundwork for many new schools of thought in psychology, social
psychology, sociology, epistemology, ethics, and the philosophy of mind. On their own terms, though, Dewey's conceptions of human nature and intelligence had profound implications for the social, ethical, and political dimensions of his thought. In the next chapter, we will shift gears in order to address the implications of Dewey's understanding of human nature and intelligence. That is, we will move from what they are to what they do.
Chapter 3

The Implications of Dewey’s Notions of Human Nature and Intelligence

3.0 Introduction

In this final chapter I will explore some of the implications of accepting the view of human nature and intelligence that I have laid out in the first two chapters. In order to do so, I have divided this chapter into two parts: the first deals with the implications of Dewey's notion of human nature, the second with the implications of his view of intelligence. In the first part, I will attempt to show how Dewey's conception of human nature is amenable to contemporary approaches in the philosophy of mind, especially in the embodied approach to understanding cognition. I will show that the thinkers in this tradition are working from a Deweyan framework, and are extending and applying pragmatist themes in important and exciting ways. It is not my intent to present an argument to the effect of “Dewey said it first,” but rather, to sharpen some of Dewey's insights in light of some new terminologies and ideas that were not available at the time of Dewey's writing.

In the second part of this chapter, I will examine the normative aspect of Dewey's notion of intelligence. That is, I will argue that Dewey's notion of intelligence entails a prescriptive ethic – that intelligence as we have conceived it ought to be a directive force in our lives. To be sure, on the surface, the claim that we should live intelligently as
opposed to, say, ignorantly, is one that should hardly have to be argued for. If we ask the perennial ethical question, “how ought we live our lives?” the answer, “intelligently” seems uncontroversial. Accepting the notion of intelligence as we have conceived it, however, requires a re-evaluation and reconstruction of many traditional ethical concepts. I will limit my focus to the conceptions of the moral self and moral deliberation, as both are closely related to the themes of human nature and intelligence we have considered thus far. We could also extend the discussions to show how Dewey's philosophy calls for a rethinking of other important concepts, such as environmental responsibility, the community, emotion, social action, political discourse, and the relationship between empirical science and ethics, just to name a few. In the end, I hope that this chapter will help to demonstrate the continued relevance of Dewey's thought today, in both its practical and theoretical applications.

3.1 Implications of Dewey's Notion of Human Nature

In this third chapter, the Deweyan notion of embodiment will again serve as our jumping-off point. In this section I will highlight some of the ways in which Dewey's insights into the embodied nature of human existence have been taken up in contemporary philosophies of mind. I will begin by providing a sketch of the embodied approach to understanding cognition, mostly through the work of Mark Johnson. It will be shown that embodied cognition relies heavily on many of the themes in Dewey's notion of embodiment that we have considered thus far. I will conclude this section by situating the project of embodied cognition within the larger framework of the computationalist and representationalist models which comprise the dominant research
paradigm in contemporary philosophy of mind and cognitive science. In the end, a
correspondence of embodied cognition with these latter two approaches may help to
determine Dewey's place in the discussion today.

3.1.1 The Embodied Approach to the Philosophy of Mind

I begin with a selection from Mark Johnson and Tim Rohrer:

The importance of embodiment in cognition is now widely appreciated in the cognitive
sciences, yet there remains a considerable debate as to what the term 'embodiment'
actually means...a proper understanding of embodiment can be found within the
philosophical context first elaborated in early American Pragmatism in the works of
William James and John Dewey. As we see it, embodiment theory inherits several key
tenets of how these Pragmatist philosophers viewed cognition: (1) Embodied cognition is
the result of the evolutionary processes of variation, change, and selection. (2) Embodied
cognition is situated within a dynamic ongoing organism-environment relationship. (3)
Embodied cognition is problem-centered and it operates relative to the needs, interests,
and values of organisms. (4) Embodied cognition is not concerned with finding some
allegedly perfect solution to a problem, but one that works well enough relative to the
current situation. (5) Embodied cognition is often social and carried out cooperatively by
more than one individual organism.107

Much of this section will be devoted to unpacking this passage. In the first place,
we should take note of the idea that the importance of embodiment in cognition is
“widely accepted” in the cognitive sciences. It is outside the scope of this section to offer
a definitive judgment on the soundness of this claim, though I will attempt to situate the
project of the embodied approach to studying the mind and cognition below. For now,
suffice it to say that despite Johnson and Rohrer's enthusiasm, it is in all likelihood more
accurate to characterize the embodied approach to the study of mind and cognition as
more in the “fray,” than in the mainstream of contemporary cognitive science and

107 Johnson, Mark and Rohrer, Tim. “We Are Live Creatures: Embodiment, American Pragmatism, and the
philosophy of mind. This hasty characterization, however, should by no means detract from the importance of the insights we will consider.

Of the five points given by Johnson and Rohrer, the first two are representative of what I take to be one of the most important contributions of Dewey's thought to contemporary philosophy: the principle of continuity.\(^{108}\) In this particular instantiation, the principle of continuity insists that there is no ontological break between the basic biological capabilities of live organisms interacting with and through the environment, and the abstract, formal reasoning that we typically associate with distinctively human rationality. This particular insight must be understood in a larger context that itself makes James and Dewey worth taking seriously: both were among the first generation of thinkers to fully integrate Darwin's insights into a philosophy of human nature.\(^{109}\) From a contemporary standpoint, however, the instantiation of the principle of continuity between biological capabilities and abstract thought still has many ramifications, many of which we have not fully come to terms with. As Johnson notes in his seminal work with George Lakoff, *Philosophy in the Flesh*, an embodied conception of reason fundamentally challenges our understanding of who we are:

---

\(^{108}\) Dewey explicitly defines the principle of continuity in *Logic: The Theory of Inquiry* as follows: “There is no breach in continuity between operations of inquiry and biological operations, and physical operations. 'Continuity'... means that the rational operations grow out of organic activities, without being identical with that from which they emerge.” LW 12: 26.

Our understanding of what the mind is matters deeply. Our most basic philosophical beliefs are tied inextricably to our view of reason. Reason has been taken for over two millennia as the defining characteristic of human beings...A radical change in our understanding of reason is therefore a radical change in our understanding of ourselves... Reason is evolutionary, in that abstract reason builds on and makes use of forms of perceptual and motor inference present in “lower” animals. The result is a Darwinism of reason, a rational Darwinism: Reason, even if its most abstract form, makes use of, rather than transcends, our animal nature. The discovery that reason is evolutionary utterly changes our relation to other animals and changes our conception of human beings as uniquely rational. Reason is thus not an essence that separates us from other animals; rather, it places us on a continuum with them.\footnote{Johnson, Mark and Lakoff, George. \textit{Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought}. New York: Basic Books, 1999.}

Especially important for our purposes is Johnson and Lakoff’s emphasis on what is at stake in this discussion: our understanding of ourselves, and our relationship to the environment and other animals. As I will argue below, this conception of the human mind has many important and pressing ethical implications. For the purposes of this section, however, we must take up the following question: what advantage, if any, does an embodied conception of cognition offer for the scientific study of the mind? If we are proposing to overturn 2,000 years of thinking, and challenge our very understanding of what it means to be human, there ought to be a good reason. The simplicity of the reason best demonstrates its force: \textit{If we understand cognition as fundamentally embodied, then we do not have to import any explanatory devices from outside the fundamental organism-environment interactions which constitute and sustain life}. That is, we neither have to posit, nor explain, an ontological break between humans and “lower” animals. We must, however, be willing to break with some deeply-engrained and long-held beliefs about ourselves, our world, and our relationships. To be sure, it seems counter-intuitive to say that even the most complex cognitive capacities (such as conceptualization,
generalization, abstraction, comparison, etc.) can be understood in terms of the live organism's ability to adapt and adjust to a constantly changing and precarious environment. Similarly, it may seem disconcerting to admit that humans are not immune from the forces of the environment, or that we are not different kinds of beings than so-called “lower” animals, we only differ in degree. These ideas, and many others like them, are precisely what Dewey's principle of continuity entails.

The first step to understanding how it can possibly be the case that human rationality is continuous with basic biological capabilities is to understand thought, perception, feeling, and indeed consciousness, in terms of action. In his 2009 book, Out of Our Heads, Alva Noë offers a helpful metaphor for understanding what this might mean. “Consciousness,” he says, (and by extension thought, feeling, perception, etc.), “is not something that happens inside us. It is something we do or make. Better: it is something that we achieve. Consciousness is more like dancing than it is like digestion.” In other words, as embodied living organisms, we do not experience an inner/outer divide – we only make such distinctions ex post facto, or reflectively. Therefore, in the context of the live organism, it proves problematic to conceive of cognition, thought, perception, feeling, etc. as something that happens solely “within” us, because insofar as we are alive, we are doing, we are acting, we are transacting with and through the environment – there is no inner/outer divide, there is simply living. Perception, feeling, thought, and consciousness are of the world, they result from our interaction with the world and with others.

This brings us to the third point laid out by Johnson and Rohrer: embodied cognition is problem-centered, and it operates relative to the needs, interests, and values of organisms. When we understand cognition as being largely problem-based, we can begin to make some sense of how abstract thought is continuous with basic biological capacities. The precarious nature of existence, as we have seen, entails that the living organism must be capable of constant adjustment and adaptation in order to survive. The changes and fluctuations in the environment are the “problems” which the organism must “solve” by adjustment, adaptation, and through action. As Johnson and Rohrer note, “cognition is a particular kind of action – a response strategy that applies some measure of forethought in order to solve some practical real-world problem.” The manner in which such cognition can take place is largely shaped by the physical, bodily capabilities of the organism. Michael L. Anderson offers the following example:

Consider the instance of (fairly) simple tool use: using a paperclip to retrieve a life-saver from between the car seats. What we don’t do is exactly pre-compute the distance of the goal, the required shape the paper clip must take, the precise trajectory of approach necessary to hook the life-saver.

The pre-computations Anderson discusses here are not the kinds of forethoughts that Johnson and Rohrer have in mind. The point is rather, that our ability to have any forethought, or any problem solving ability is based in our biological capacities. By biological capacities, I mean all of those features of the human organism that allow it to interact with and through the environment in order to survive. One such capacity (and a very important one at that) is our ability to grasp things with our hands and fingers. As Anderson notes:

---

112 Johnson and Rohrer, pg. 20.
the shape, size, and flexibility of our fingers first rules out the possibility of a tool-free approach (and we may decide this based on a rough visual calculation, or discover this by first trying to reach the candy with our bare hand). Then the size and configuration of the surrounding space [the car] becomes a further constraint, for it, in combination with our overall bodily dimensions and characteristics, determines the range of possible bodily attitudes toward the space...This, in turn, limits the range of possible views of the object, thus determining the difficulty of the visualization required, and the kinds of cognitive and motor strategies required to solve the problem.\(^{114}\)

Thus an important aspect of the principle of continuity is that our cognition is at least fundamentally shaped, if not determined, by the capabilities of our body. Because we have hands and fingers that can grasp things, many objects in the world appear to us as things-to-be-grasped. As a result, we have developed incredibly effective strategies for solving problems based on this ability – e.g. retrieving candy from between seats. The point is that the basic capability of grasping (one which we share, to a degree, with primates) fundamentally shapes the way we can think about solving problems. Even if we were to formulate an abstract conception of the ideal angle to bend the paper clip before actually bending it, we would still be doing so based in the abilities of our physical body to manipulate objects in the environment in such a way as to solve problems that matter to us. As Anderson says of the life-saver example, “cognition is bound up with the shape, size, and motor possibilities of the body as a whole, and further relies on the possibility of repeated interactions with the environment.”\(^{115}\)

It is important to stress that Dewey describes the relationship between basic biological capabilities (such as reaching and grasping) and mental operations (such as abstraction and generalization) as a relationship of continuity, and not identity. He is by no means asserting that our ability to do formal logic, for example, is the same as our

\(^{114}\) Anderson, pg. 108
\(^{115}\) Ibid.
ability to manipulate and distribute pieces of food, or something to that effect. Rather, the assertion is that our ability to perform even the most complex mental tasks emerges from our basic abilities to move around the world, to perceive things, to feel, and to adjust to various changes in the environment – in short, cognition emerges from our ability to solve the problems associated with survival.

This brings us to the fourth point on Johnson and Rohrer’s list: Embodied cognition is not concerned with finding some allegedly perfect solution to a problem, but one that works well enough relative to the current situation. This point is pretty straightforward if we are on board with the claim that cognition emerges out of the ability to solve problems that relate to the survival of the organism. For example, the two biggest problems associated with the survival of any organism are how to eat, and how to avoid being eaten. The perfect solutions to these problems would be an endless stockpile of food, and the elimination of any predators or competitors. This is, of course, impossible. Food is not always immediately available and similarly, one must flee predators to avoid being eaten, rather than attempt to eliminate each and every predator. The point is that to survive, we often need only do just well enough to survive. Ideally, it would be perfect to have an endless supply of food at hand, but practically, that is never the case. As a result, the organism has to “do well enough relevant to the current situation,” that is, to obtain more calories from than food than was required to acquire it. The same goes for fleeing predators – it would be ideal for the snake to live entirely underground where threats from aerial predators were non-existent. The snake, however, must emerge from beneath the ground to hunt for its sustenance, and if in doing so, the snake is in turn hunted by a
hawk, slithering underneath a bush or rock to temporarily avoid being eaten is a good enough solution relative to the current problem.

The larger point is this: cognition emerges as a result of the abilities of the organism to solve problems related to its survival. In this context, the organism is not, and cannot be, concerned with perfect, ideal, or final solutions. In order to survive, the organism must solve the problem not indefinitely, absolutely, or eternally, but well enough, relative to the specific situation at hand. Thus, to posit human rationality as a faculty which ascertains absolute, unchanging, universal Truth, is to introduce, and be forced to explain, an ontological break between biological capabilities, and a “distinctively human” faculty. For pragmatists and embodied cognition theorists, however, there is no such ontological break, and our cognition is explained as emergent from our abilities to survive in a complex and precarious world.

The characterization of cognition as arising from the organism's abilities to solve problems related to their survival has been rather one-sided. That is, the focus has been entirely on the capacities of the organism, albeit insofar as those capacities “reach out” in the environment, but little has been said about the ways in which the environment shapes cognition. As Anderson notes:

We have had our attention called to the myriad ways in which cognition depends upon the physical characteristics, ability, and general situatedness of the agent. For humans, it seems, it is this last which is most crucial. That is, it may be the case that the unique reach and power of human...intelligence is a result not so much of a unique ability to perform complex, symbolic cognition in abstraction from the environment, but is rather due in large measure to the remarkable richness of the environment in which we do our thinking.\footnote{Anderson, 110.}
An important aspect of the remarkable richness of which Anderson speaks here is the also the fifth point on Johnson and Rohrer's list: Embodied cognition is often social, and carried out cooperatively by more than one organism. Thus, we must conclude the present section with a discussion of the ways in which cognition can be understood as socially embodied.

In order to show that cognition can be understood as socially embodied, I will first show that cognition, even in its social dimension, is continuous with fundamental biological capacities. Second, I will attempt to show that one of the most complicated and abstract processes associated with cognition – language use – is continuous with, and understandable in terms of embodied, social cognition.

At a very fundamental level, we can look to social insects to understand the basics of social cognition, and how it might work in the case of human beings. Perhaps the most well-known instance of this is the way in which ants use chemical “markers” to lay out a trail between a food source and the nest. When a worker ant leaves the nest in search of food, they emit a chemical marker, and then each ant goes its own way in search of food. When an ant finds food, the chemical marker changes slightly, so as to attract other ants. The more ants that find food and release the corresponding chemical, the stronger the attraction becomes between worker ants, the food source, and the trail back to the nest. The most fascinating thing about this process is not only that the communication occurs between individual ants, but that the data to be communicated is “offloaded” into the environment. It is not like a game of “telephone” where one ant finds food, tells his

---

friend, and then his friend has to remember the relevant details of where the food is, and then relay it to another, *ad infinitum*. As we all know, this form of communication is highly ineffective, not to mention cognitively taxing.

To be sure, human cognition is much more complicated than the emission and recognition of a limited number of chemicals, and humans are able to do things infinitely more complex than find and retrieve food. The point, though, is that the ability of multiple organisms to coordinate participation in a unified task is by no means unique to human beings. Even with our immensely complex nervous, skeletal, and muscular systems, our capacity for social cognition is not of a different *kind* than the capabilities for social cognition exhibited by ants, bees, wasps, fish, primates, etc. Our social interactions and our capacity for social cognition is better understood as *continuous* with, and *emerging* from, these same capacities exhibited by insects, fish, and mammals – but, as differing in *degree*.

Even if we do accept this brand of “rational Darwinism,” as Johnson and Lakoff term it, we may still feel uneasy about saying that the capability of human beings to learn and manipulate various complex symbol systems is somehow continuous with the same kinds of capabilities for communication we find in ants and bees. To actually catalog the various lines of continuity between species is far outside the scope of this work. All I hope to do at present is show that language use – uncontroversially considered a distinctive mark of humans beings – is essentially social, and as such, can be understood as continuous with the kinds of social capabilities we find in the so called “lower” animals.
Johnson and Rohrer quote a passage from Dewey's *Experience and Nature* which re-iterates much of what we laid out in Sections 1.1.3 and 2.1.4, but nonetheless demonstrates the inherently social nature of language and thought. Dewey writes:

When the introspectionist thinks he has withdrawn into a wholly private realm of events disparate in kind from other events, made out of mental stuff, he is only turning his attention to his own soliloquy. And soliloquy is the product and reflex of converse with others; social communication is not an effect of soliloquy. If we had not talked with others and they with us, we should never talk to and with ourselves. Because of converse, social give and take, various organic attitudes become an assemblage of persons engaged in converse, conferring with one another, exchanging distinctive experiences...Through speech a person dramatically identifies himself with potential acts and deeds; he plays many roles, not in successive stages of life but in a contemporaneously enacted drama. Thus mind emerges.  

There is hardly a more definitive statement of social cognition. *Mind emerges,* Dewey says, because of our social interactions, and our embodiment in a social environment. Our capacity for thought is an internalization of our capacity to converse with others. For Dewey, then, cognition arises not only as a result of our embodied interactions with a precarious environment, but it also arises as a result of our embodied interactions with others. Thus, the complexity of human cognition must be understood as both a function of the complexity of our biological capacities on the one hand, and the complexity of the environment with which these biological capacities are inextricably coupled, on the other.

To sum up, in this section we have seen – via the principle of continuity – that the various dimensions of the Deweyan notion of embodiment form the basis for what Johnson and Rohrer describe as the basic tenets of an embodied approach to the study of mind. As was mentioned at the outset of this section, however, the embodied approach is...  

---

118 LW 1: 135.
not one that enjoys mainstream acceptance in contemporary philosophy of mind and
cognitive science. As a result, in the next section, I will attempt to situate the embodied
approach within this so-called mainstream framework, so that we may better see if and
where Dewey might fit into some contemporary discussions.

3.1.2 The Representational and Computational Approach to the Philosophy of Mind

In the previous section we saw that many of Dewey's insights have found an
outlet today in the embodied approaches to understanding cognition. In this section, I will
try to sharpen some of those insights by showing what embodied cognition is not. In this
way, we will also see why embodied cognition is perhaps characterized as in the fray, or
not widely accepted in the mainstream discussions of the philosophy of mind and
cognitive science. So first of all, what exactly is the mainstream? When it comes to
studying cognition, Tim van Gelder writes:

Contemporary orthodoxy maintains that it [cognition] is computation: the mind is a
special kind of computer, and cognitive processes are the rule-governed manipulations of
internal symbolic representations. This broad idea has dominated the philosophy and
rhetoric of cognitive science – and even, to a large extent, its practice – ever since the
field emerged from the postwar cybernetic melee. It has provided the general framework
for much of the most well-developed and insightful research into the nature of mental
operation.119

Although van Gelder goes on to say that this approach to studying the mind may
be in decline, it does nonetheless form the basis for much of the thinking within the
discipline. For our purposes in the present section, let it suffice to say that by the
“mainstream view,” I mean the view that the human mind is best understood as a

1995, pp. 345-381. pg. 345.
computer, whose operations involve the rule-governed manipulation of internal symbolic representations. The implications of this view are profound. Let us begin with the idea of mental operations as manipulations of internal, symbolic representations. The abstract and formal nature of these symbols dispense with the need for anything like a physical body for cognition to occur. Indeed, any device that can perform rule-governed operations of formal symbols can think in the computationalist sense - the human organism just happens to be one such device. On this view, thinking is a disembodied process; cognition is a series of computations inside the head that happen in the same way that a pocket calculator makes computations inside the plastic shell of the calculator. The “body” of the calculator makes no difference at all – if it is black, blue, plastic, clear, metal, carbon fiber, large, small, inside a teddy bear, or whatever, the computations will be absolutely unaffected. Deweyans and embodied cognition theorists would argue that this particular view ignores the important way in which our physical make-up shapes the way we think about, feel, perceive, and act in the world. To be sure, explaining thought is much neater and much more concise when everything fits nicely into a formal system of symbols governed by a strict set of mathematical and logical rules. This much cannot be denied. What Dewey would deny, however, is that world of formal, rule-governed operations on symbols is the world in which we live.

At any rate, my account of the computationalist model is drastically oversimplified; humans are obviously capable of much more than arithmetical and logical operation. This leads to the second major difference between the embodied and the computationalist accounts of cognition. For the latter, we are capable of representing the complexities of the world. That is, the formal symbols that thought operates on, can be
representations of the world. Thus, there are internal, mental, formal symbols – presumably resembling a language, and then there are the representations of the external world, which the “language of thought” is “about.” Insofar as this is an accurate characterization of representation, it entails some kind of an inner/outer divide: there are things in the outer world, and there are our inner, mental representations of those things. This is not necessarily to assert that “mind-stuff” and “world-stuff” are two ontologically different substances – one can be a representationalist without being a Cartesian dualist (for example, representations can be explained in terms of brain states – material in the same sense that objects in the world are material). At any rate, one can see the difference between saying that our experience of the world is mediated primarily through our bodily, physical capacities, on the one hand, and inner, mental representations of the world, on the other.

Based on this brief sketch, I have no intention of making any judgments about the basic soundness of the computationalist or representationalist approaches. Rather, I simply wish to demonstrate one important difference between the two, and embodied cognition as I have construed it: the latter holds that human cognition is the result of the capabilities of the human body interacting with and through a precarious environment. For the former, cognition is something that is not limited to the province of a human body, and its primary mode of interaction is through mental representations. Now this is not to say, on the one hand, that an embodied view of cognition eschews representation and computation outright. Nor is this to say that a computationalist or representationalist account must entirely ignore the role of the human body. The overarching point here is that embodied cognition theorists treat cognition as primarily biological; the
computationalist treats cognition as primarily logical. For the former, the mind is much more something that we do rather than something that happens inside of us. For embodied cognition theorists, our representations of the world are secondary to our embodiment in the world as organisms transacting with and through the environment.

To be sure, there is much more that could be said about the relationship between the embodied, computationalist, and representationalist accounts of the mind and cognition. For now, let it suffice to say that in very general terms, we can characterize the embodied approach to cognition as largely non-computational and non-representational. Again, this is not to say that an embodied account of cognition denies the roles of computation and representation. Rather, it does not treat them as primary. Insofar as philosophy of mind and cognitive science adhere to a computationalist and/or representationalist model of the mind and cognition, though, the embodied approach to studying the mind will stand in an alternative, if not oppositional, position. Given that Dewey's insights are much more amenable to an embodied approach than a computational one, if he has a place in the contemporary discussion, it will likely be one which challenges the dominant view of the mind as a computer.

3.2 Implications of Dewey's Notion of Intelligence

In this section, I will shift gears from talking about the implications of Dewey's conception of human nature, to the implications of the Deweyan notion of intelligence. There will not a radical break, as it were, between the previous section and this one, because in the same way that we have described cognition generally as embodied, intelligence too must be understood as embodied, and continuous with our biological
capabilities. In this section, however, I will attempt to show that the notion of intelligence as we have construed it entails a prescriptive ethic. After demonstrating the normative force of intelligence, I will move to consider two important implications which comprise the ethical dimension of the larger theme of this project: the nature of the moral self, and the nature of moral thinking.

3.2.1 The Normative Force of Intelligence

Working with the definition of intelligence I have proposed, I contend that the creative re-appropriation of past experience should act as a guiding principle for directing one's actions. But what gives intelligence this normative force? If we take “intelligence” as something merely opposed to ignorance or stupidity, the normative force is obvious. But intelligence as we have conceived it – the creative re-appropriation of past experience to solve future problems – has a much deeper and stronger claim than merely being “not stupid,” or “not ignorant.” The claim is that intelligence is continuous with and integrated in our experience of the world as organisms in constant transaction with the environment. Intelligence is not a superempirical faculty endowed to a select few, nor is it only in the province of academically trained experts and professionals. Intelligence emerges from the embodied, biological nature of human existence:
At every moment, the living creature is exposed to dangers from its surroundings, and at every moment, it must draw upon its surroundings to satisfy its needs. The career and destiny of a living thing are bound up with its interchanges with the environment, not externally, but in the most intimate needs...Every need, say hunger for fresh air or food, is a lack that denoted at least a temporary absence of adequate adjustment with surroundings. But it is also a demand, a reaching out into the environment by building at least a temporary equilibrium. Life itself consists of phases in which the organism falls out of step with the march of surrounding things and then recovers unison with it – either through some effort or some happy chance."

This passage in many ways reiterates Section 1.1, but when we consider what this means in terms of intelligence, we again arrive at one of the most important implications of Dewey's metaphysics of embodiment and continuity: there is no ontological fissure between human rationality and biological functionality. That is, intelligence emerges from the processes of organism interacting with environment; human intelligence cannot be understood as a feature which sets humans apart from other “lower” or “non-rational” animals; intelligence is deeply and intimately a part of who we are as live organisms. To be sure, we can - and often do - act and think in ways that are less than “intelligent” as we use the term in common parlance; but, as a live organism, we are never above or outside the very forces which shape the development of intelligence. It is in this way that we can reject any arguments against the normative force of intelligence that characterize it as “something you get from going to college,” or “something that comes from reading books,” or, “something that only comes with age,” etc. To be sure, these things can certainly cultivate, develop, and increase the scope of intelligence, but they are by no means necessary, or even sufficient conditions. Rather, the capability for intelligently-guided action is built on the very same capabilities that keep us alive: the ability to “reach out into the environment, and build a temporary equilibrium.”

---

120 LW 10: 19.
This much explains how we cannot deny the normative force of intelligence based on some objection that intelligence is imported from without. Although the continuity between intelligence and human nature has been made clear, we still must address the question of why intelligence ought to be a directive force in our lives. To assert that intelligence ought to be a directive force in our lives simply because it is continuous with the nature of our existence is to commit the naturalistic fallacy, or to confuse what it intelligence ought to be for what it is. We must, in other words, answer the objection “just because we have it doesn't entail that we ought to use it.” In considering this objection, we must understand what we would be giving up, if we were to deny that intelligence should be a directive force.

Most importantly, we would give up the continuity between past experience, the present situation, and future possibilities. To deny the directive force of intelligence is to neglect to acknowledge the ways in which the past has shaped the present, and how the present can shape the future. In many ways, it is actually impossible to deny this continuity. To return to a previous example, consider the young child who is intrigued by the dancing candlelight. Once the child grasps the flame and burns her hand, it is quite impossible to imagine that that experience does not shape the child's future encounters with the candle. Perhaps the child may burn her hand once more a month later doing the same thing; but we know that, at some point, the experience of burning one's hand will stand out to the child as an action to be avoided in the future. We may be hesitant to call this “intelligently directed behavior,” but insofar as the child burns her hand once, and then avoids burning it in the future, the child is creatively re-appropriating past experience. Her next encounter with the candle will be identified as similar enough to the
previous encounter, that the experience of “wow-it-hurt-last-time-I-grabbed-the-flame” is re-appropriated into the present situation in the form of burn avoidance behavior.

The larger point here is that to deny the directive force of intelligence is to deny the possibility for growth and learning. To some extent, we can say that re-appropriating past experience just is something that we do, and that is probably true. To a larger extent, though, it is a good thing that we do re-appropriate past experience, because if we did not, our species might not survive. We need only extrapolate the candle example to eating poisonous berries or mushrooms to see that this is the case. It is thus not an overstatement to say that the survival of the species is at stake in the question, “why should intelligence be a directive force in our lives?”

Thus far I have argued that intelligence ought to be a directive force in our lives, because the capacity to creatively re-appropriate past experience emerges as a result of our abilities as live organisms to adjust the constantly changing environment. Intelligence is not an exotic, superempirical faculty to be attained, achieved, or earned; it emerges from the biological processes of organism-environment transaction; it is something we are all, in theory, capable of employing. The second reason that intelligence should be a directive force is that a failure to re-appropriate past experience can be harmful, if not fatal. It is indeed a good reason to do something, if failure to do so results in death. This is, of course, an oversimplification; but both points here are meant to highlight the fact that the notion of intelligence, as we have conceived it, is based in our fundamental biological capabilities, and that intelligence is highly beneficial to survival at this fundamental biological level.
It seems odd, however, to say that the survival advantage that would result from the ability to creatively re-appropriate past experience is what gives intelligence its *normative* force. This weirdness is due to the fact that there is more at stake in our lives than simply surviving: the possibility of *living well* is also tied up with our ability to creatively re-appropriate past experience. This brings us back to an important point that was only hinted at above. What makes humans and our communities distinctively human is our capacity to *not concern ourselves solely with passing on our genes*. It is not immediately clear how one could explain art, morality, or religion, for example, if our only concern was passing on our genes. If the latter were the case, then why do most of us prefer a flavorful, prepared meal to a pill that could provide us with more and better nutrients? Why do we let terminally-ill children, with no chance of living long enough to reproduce, live? Why do some of us fast as part of religious ceremonies and traditions? Why do people donate their organs to others? We could qualify all of these as “fitness-sacrificing behaviors,” because none of them promotes the passing on of our genes, and many of them would, in fact, deter it. So why do we engage in such behaviors? In short, because as J.S. Mill famously proclaimed, “it is better to be a human being dissatisfied than a pig satisfied; better to be Socrates dissatisfied than a fool satisfied.” That is, we want to do more than just survive, we want to *live well*. To be sure, the former is a necessary condition for the latter; but through the development of effective habits and problem-solving skills, many (though certainly not all) of us are able to dispense with many of the problems and worries of how to survive, and can instead concern ourselves with how to *live well*. It is at this point that we find the locus of the normative force of

---

intelligence. We have seen how intelligence possesses something like a normative force, in that the ability to creatively re-appropriate past experience would increase one's chances for survival over those who lacked that ability. But this is only part of the story; because for our conception of intelligence to have a true normative force, it must also be shown that intelligence *should* be a directive force in our lives because it helps us to *live well*.

First of all, what does it mean to live well? To be sure, it would be impossible to give a complete answer here, or anywhere for that matter. But it must suffice at present to say that, at the least, three very important parts of the answer are: (1) to be happy while one is here, (2) to have a sense of belonging within a community, and (3) to try and leave the world a better place than one found it. So the question then becomes, how does intelligence help us to do those things? If it can be shown that the use of intelligence as a directive force in one's life helps us to be happy, to become members of a community, and to aid in our effort to leave the world in better shape than we found it, then it ought to follow that intelligence should be a directive force in our lives, that is, that we ought to live intelligently.

First, we must bear in mind that no matter how developed our habits and problem solving skills are, the world is still, and always will be, ever-changing and precarious. This means that we will always be confronted with problems to solve. So why should we address these problems intelligently, as opposed some other way? Given the fact of our embodiment in social environment, the experiences of the whole group will span much deeper and wider than those of any individual part. That is, the method of intelligence - in re-appropriating the past experience of both one's self and others - makes possible the
integration of experiences with more breadth and depth than one's own. Creatively re-appropriating past experience is a cumulative process by which we can avoid the mistakes and build on the successes of both one's self and others. It is because of this ability that we no longer have to experience first-hand the harmful side effects of asbestos, lead paint, or radiation, for example. Similarly, it is equally beneficial to re-appropriate the successful methods of the past (i.e. the use of non-violent protests in social movements), creatively tweaking them to fit the present situation. It is through this same ability that we can also engage with problems that are larger than our own individual problems. For example, individually, I can offer very little in the way of a solution to the problem of access to clean water in underdeveloped countries, but with enough individuals with diverse backgrounds, experiences, and abilities collaborating on the problem, meaningful and effective solutions can emerge on a much greater scale. Thus, intelligence affords the opportunity to draw from insights and experiences greater than our own to solve our problems, and it also allows us to contribute our individual insights and experiences to problems much bigger than our own.

One must be a part of a community in order to “have access to” the kinds of experiences that can be re-appropriated in the resolution of an individual's problems. That is, there must be commonalities between individuals in the community, such that the experiences of others are similar enough to be applied to a given problem that one is experiencing. Thus, to make use of the breadth and depth of the experiences of others in order to ameliorate one's own situation, is to bring one's self into a meaningful relationship with others – to make their lives a part of one's own. The reverse is also true; by contributing one's own experiences and insights into the resolution of a problem larger
than an individual problem, one is making one’s life a part of the lives of others. In both cases, one stands in a meaningful relationship to others, and it is in this sense that the creative re-appropriation of the past experience of others, as well as the contribution of one's own past experiences to others, helps to create the sense of membership and belonging that we identified as an important characteristic of living well.

In a basic and perhaps obvious way, one's happiness is also closely related with the ability to effectively and satisfactorily solve problems that one is confronted with. The problems I have in mind – which are often associated with appraisals of happiness - include things like staying healthy, having job security, having job satisfaction, having financial security, maintaining stable relationships, taking part in recreational activities, etc., though one can add any number of things to the list. At any rate, as was the case with live organism in the environment, changes are constantly occurring in one's health, at one's job, at home, in the marketplace, etc., and many adjustments have to be made in order to survive – or in this case, to be happy, to live well. Speaking broadly, insofar as one generally succeeds at solving the problems associated with health, wealth, relationships, and whatever else might be on the list, one is likely to be happier than if one generally fails at solving those problems. The ability to make the necessary adjustments is, in large part determined by the way in which similar problems were dealt with in the past. What was the best way to go about resolving a dispute with one's boss or spouse? What kinds of foods triggered my allergies before? What made this a wise financial investment? What worked well in the past and what did not? Why? As we have seen, intelligence is geared toward better controlling the precarious features of our existence, and the more we know about how we controlled those features in the past - that
is, the more and better answers we have to the questions just mentioned - the easier it will be to predict how to best control them in the present. It is in this sense that the ability to creatively re-appropriate past experience in order to solve the problems that one associates with being happy. It is in this way that intelligence helps to meet another criterion on our list.

Lastly, we must consider how the creative re-appropriation of past experience can help us to try and leave the world a better place than we found it. What I am getting at here is a generalization of the desire of the individual to do better at something: get a promotion at work, make more money, buy a nicer house, pay off the mortgage, get another degree, raise a child, put a child through college, help others in need, raise awareness of those in need, enact policy changes, etc. Again, one may add any number of things to the list; the point being that each of us has goals, aspirations, and desires to be fulfilled, many of which involve the betterment of ourselves or others. So how does intelligence help us to get there? In the first place, we should note that everything on the list above (and whatever else one may add to it) requires some form of directed action. That is, getting a college degree, increasing access to clean water for underdeveloped countries, paying off the mortgage, giving your child more and better opportunities than you had, increasing sustainable farming practices, etc., are not things that just happen - there must be concerted, directed effort. An end must be identified, and some means must be utilized to achieve it. Insofar as one does not want to rely on mere caprice or magic, one must integrate human powers and physical conditions in order to actualize the goal that has been set up. What is needed, Dewey says, is a:
deliberate control of policies by the method of intelligence, an intelligence which is not the faculty of intellect honored in textbooks and neglected elsewhere, but which is the sum-total of impulses, habits, emotions, records, and discoveries which forecast what is desirable and undesirable in future possibilities, and which contrive ingeniously in behalf of the imagined good.\textsuperscript{122}

The way to progress, improvement, betterment and the actualization of our ideals is to use all the resources available to us – impulses, habits, emotions, records, and discoveries – in order to construct an informed guide for action which integrates the sum-total of these resources in order to produce the highest likelihood of success. It is thus through the use of the method of intelligence that we can most effectively change our world for the better.

To sum up, we have seen that intelligence emerges from our basic biological capacities as a living organism, transacting with and through the environment. In this way, intelligence is continuous with even the most fundamental aspects of human existence. Thus, when we take up the question of the normative force of intelligence we cannot answer in the negative on the grounds that intelligence is something imported from without, or endowed to a select few with special training. In order to demonstrate the true normative force of intelligence, however, we showed that not only does intelligence as a directive force help us survive; it helps us to live well. Adhering to the principle of continuity, we saw that the precariousness and fluctuation which characterizes the biological environment also characterizes the social environment. As a result, the approach to living well is also centered on the resolution of problematic situations. The creative re-appropriation of the past experience of others in resolving

\textsuperscript{122} MW 10: 48. One can also profitably understand what Dewey is saying here in terms of the pattern of inquiry as we have discussed it in Section 1.3.1.
one's own problematic situations, as well as the creative re-appropriation of one's own experiences to the problematic situations of others, both places the individual within a network of meaningful relationships that constitute membership in a community. Similarly, the aspects of life which many people associate with happiness - health, wealth, relationships - are also characterized by many changes and subsequent adjustments; problems and solutions. In this way, we found that the degree to which one succeeds at effectively solving the problems which one associates with happiness is very likely related to degree with which one is happy. That is, the more effectively one can incorporate the insights of past experience into solving the present problems related to their own notion of living well, the happier they will likely be. Finally, we saw that insofar as improvement, betterment, and progress matter to an individual, the method of intelligence – or the application of the knowledge of how things worked in the past – is the best way to construct a directed and deliberate plan of action to realize a projected ideal in the future. In conclusion, then, insofar as one desires to live happily, maintain meaningful relationships to others, and improve the world of which one is a part, intelligence ought to be employed as a directive force in the realization of that desire.

3.2.2 What Does it Mean to Live Intelligently?

Having now defended the claim that we ought to live intelligently, we must examine the implications of this normative claim. That is, if we are to understand Dewey's notion of intelligence as entailing a claim about how we ought to live, we must attempt to give an account of what living intelligently might actually look like. We will
find that in order to do so, we must revise and reconstruct many of the ideas and concepts that are usually employed in prescriptive ethical accounts.

We can begin with a telling prescription that Dewey gives in *Human Nature and Conduct*: “The most important thing,” he writes, “is the fostering of those habits and impulses which lead to a broad, just, sympathetic survey of situations.”\(^{123}\) If our actions are to be guided by the creative re-appropriation of past experience, then the broader our bank of past experience is to draw from, the more possibilities will be at our disposal for pursuing meaningful, informed courses of actions. With regard to this sympathetic survey of situations, Gregory Pappas writes,

Sympathy is a special kind of sensitivity. Through sympathy we obtain material for moral deliberation that cannot be obtained through other means. To emotionally and imaginatively put oneself in the place of another is the only way to widen our intellectual horizon in moral situations and to determine effectively what ought to be done.\(^{124}\)

This passage conveys the sentiment that we ought to develop a sensitivity or conscientiousness to the salient factors of both our past experience and the present situation. We need to develop habits which cultivate sensitivity to situations, so as to open up a wider array of possible courses of meaningful action for the future. It is in this sense that Dewey says “varieties of competing tendencies enlarge the world.”\(^{125}\) To live intelligently then, is to be aware of how past experience has shaped the possibilities of the present situation. The more possibilities one is aware of in the present, the more informed

---

\(^{123}\) MW 14: 144.  
\(^{125}\) MW 14: 137.
a chosen course of action will be. This is precisely what Dewey means when he says “the highest task of intelligence is to grasp and realize genuine opportunity, possibility.” \( ^{126} \)

Given this general prescription, we must still consider what the notion of intelligence offers us in the way of a specific situation, and our clue is to be found in the brief discussion of the pattern of inquiry. Recall that in *How We Think*, Dewey identifies “five logically distinct steps” of an inquiry: felt difficulty, its location and definition, suggestion of a possible solution, development by reasoning of the bearings of the suggestion, and further observation and experiment. A crucial part of developing possible solutions and their bearings was, as we saw, the process of deliberation. Let us revisit a passage quoted above:

> deliberation is a dramatic rehearsal (in imagination) of various competing lines of possible action...deliberation is an experiment in finding out what the various lines of possible action are really like...The experiment is carried on by tentative rehearsals in thought which do not affect physical facts outside the body. Thought runs ahead and foresees outcomes, and thereby avoids having to await the instruction of actual failure and disaster. \( ^{127} \)

The broader one's past experiences, and the more sympathetic and sensitive one is to situations, the more options will be available as courses of possible future action in the dramatic rehearsal. The more options one has to “play with” in imagination (this is the creative aspect of the re-appropriation), the more likely it is that a meaningful and informed course of action can be entered into, thus resulting in a favorable resolution of the problematic situation.

To act intelligently in a specific problematic situation, then, is to consult the bank of relevant past experience in order to maximize the number of viable courses of action.

---

\(^{126}\) MW 14: 161.

\(^{127}\) MW 14: 132-33.
that will resolve the problem at hand. These potential courses of action are then “tried out” in imagination to see what might result from them, if they were entered into. The broader and deeper one's past experiences are, the more informed and accurate this prediction will be. And the more accurate the prediction, the greater the chances that the best and most meaningful course of action will be undertaken. In order to increase the possibilities for meaningful action in the future, one must develop a sensitivity to recognize the full scope of possibilities in the present. One must cultivate aesthetic sensibilities to broaden the scope of instrumental possibilities. As Dewey says, “is there...any intelligent way of modifying the future except to attend to the full possibilities of the present?” The answer then, to the question of what it means to live intelligently, is to attend to the full possibilities of the present, so as to secure the maximum breadth and depth of experience from which one can draw in the future.

We must now consider what all of this means for our ethical theory. In the same way that accepting the embodied account of human cognition requires us to part with some traditional and deeply-engrained conceptions of ourselves, our world, and our relationships, accepting the account of living intelligently that we have just laid out entails a similar reconstruction of some traditional ethical concepts. The two we will focus on here – the moral self and moral deliberation – represent an extension of our study of human nature and intelligence into the domain of ethical theory. That is, the following can be understood as an attempt to detail the ethical implications of the embodied view of cognition laid out above. If we are to understand ourselves as embodied organisms, and if we are to understand our cognitive capabilities as emergent

---

128 MW 14: 183.
from the embodied nature of our existence, what does this mean for our conceptions of
the moral self and moral thinking?

Let us begin with the moral self. Given the account of what it means to live
intelligently, one thing should be immediately clear by now: one cannot discount the role
of the aesthetic dimension of experience. I use “aesthetic dimension” loosely, so as to
include the affective, creative, and imaginative dimensions of experience – as opposed to
the merely rational and calculative. In the first place, this entails that concepts of the
moral self must reflect the aesthetic dimension of experience – the role of feeling,
creativity, imagination, etc. These dimensions of experience are, for Dewey, viscerally
real, and not be understood as merely “imaginary,” “fanciful,” or “abstract.” Pappas
captures this idea eloquently:

The emotional aspects of experience are always the result of a transaction between the
organism and environment. Emotional appreciation is about something in a situation that
is experienced as having certain qualities. Our sensory reactions are not the only means
of access to knowledge of the world, and they are not even essential to our acquaintance
with and knowledge of persons. Instead, our 'emotional reactions form the chief materials
of our knowledge of ourselves and of others. Just as the idea of physical objects are
constituted out of sensory material, so those of persons are framed out of emotion and
affectional materials. The latter are as direct, as immediate as the
former, and more
interesting.’

Thus, our conception of the moral self must reflect the embodied nature of human
existence – in its social dimension (individual and society) as well as in its
physiological/psychological dimension (feeling and thought). We are not merely rational
calculators – we have the capacity for feeling and emotion, and it is because of this
capacity that we come to be associated with, to know, and to appreciate other people.
Further, we cannot help but be associated with other people, and it is for this reason that

129 Pappas, 204. Pappas is here quoting a passage from Dewey and Tufts's 1932 Ethics (LW 7: 269-70).
Alexander is justified in saying that “Dewey thought that all conduct was ‘moral.”’ The moral self, then, must be understood as always standing in relations to others in such a way that the conduct of the individual may implicate others, and the conduct of others may implicate the individual. Further, the moral self cannot be understood as a radically free, totally autonomous agent. Given the notion of embodiment we have laid out, it should be clear that the kinds of bodies we have largely shape - and also limit and constrain - our cognitive, conceptual, and physical capabilities. Similarly, the societies and communities in which we are embodied largely shape – and also limit and constrain – the habits of thought and action that can be developed. The ecological environment in which one is embodied also shapes and limits the possibilities of the organism in this way. Perhaps most importantly though, we must understand the moral self in contradistinction to the Cartesian self, where mind and body, reason and emotion, feeling and thought are discontinuous and not integrated. Each of these dimensions of embodiment represents a challenge to the way that we typically understand ourselves, our relationship to others, and our relationship to the environment.

These conceptions of the moral self also have implications for moral deliberation, or the “cognition” of an embodied moral agent as related to moral problems. The biggest and most important challenge Dewey poses in this respect is in the role of the imagination. It is through the power of the imagination that we can move outside of the constraints of the present situation, and look to the future. In evaluating the possible consequences of one's actions on others, this is obviously a very helpful ability. For

---

Dewey, moral thinking and moral considerations must be understood as primarily imaginative, rather than rational or calculating. Thomas Alexander states this beautifully:

We are creatures seeking a kind of dynamic, embodied fulfillment which goes far beyond generating mere propositional attitudes and other abstract cognitive needs. As active beings, we are in constant touch with the possibilities of our situations. Indeed, this is Dewey's definition of intelligence: to see the actual in light of the possible. This is also his definition of imagination. Imagination is rooted in the organic embodiment of our existence and flowers in our highest consciously articulate moments. 131

The imagination is not merely “imaginary” or “fictional,” it is rather rooted in the actualities of the present situation, and it is the ability by which the possibilities of the future may be ascertained. The moral imagination allows us to project goals, ideals, and whatever is generally desirable into the future so that the means may then be organized to achieve and attain them. Thus, whether one is faced with two incompatible courses of action in a given situation, or if one is attempting to formulate the best course of action to reach a goal, the imagination plays a crucial role.

In many ways, the implications that we have briefly outlined here are simply instantiations of the Deweyan metaphysics of integration, continuity, and embodiment as applied to the domain of ethical concepts. This does not make the implications any less important, however. For example, to assert that feeling and thought, emotion and reason, intelligence and imagination are integrated, is to turn the concept of a pure practical reason on its head. To assert that deliberation is essentially imaginative and creative - as opposed to purely calculative - is to undercut the idea of a utilitarian calculus. Although there is not space here, similar endeavors could - and should - also be undertaken to explore the implications of Dewey's metaphysics of embodiment, continuity, and

---

131 Alexander, 384.
integration, as related to topics such as environmental responsibility, the relationship of empirical science to ethics, the possibility for social change, or the nature of political discourse.

3.3 Conclusion

In this chapter, I have pointed to what I take to be the two most important implications of Dewey's view of human nature and intelligence: (1) Dewey's ideas about human nature have an important place today within the scientific study of the mind and (2) Dewey's ideas about intelligence provide us with an account of how to live well. In other words, Dewey's philosophy provides a comprehensive account of the two of the most important kinds of philosophical questions: What is the nature of human existence and the world? And how should we live therein? When these questions are couched in terms of embodied cognition, the aesthetic dimension of experience, the role of the imagination, the role of the human body, computationalism representationalism, etc., the relationship of these two kinds of philosophical questions may seem disparate, if not at odds. The larger purpose, however, is to show that how we conceive of ourselves, our abilities, our heritage, our world, and our relationships matter deeply. Our theoretical commitments have practical consequences, whether in terms of our relationships, our responsibilities, or our conception of the good life. In terms of Dewey's philosophy, this has been cashed out in terms of an embodied, habitual, and reconstructive conception of human nature and intelligence: we are not aloof from the forces of the environment; we are not aloof from the so-called lower animals; our rationality is not aloof from feelings and emotions; our bodily make-up shapes, determines, and limits our conceptual,
perceptual, and cognitive abilities; our actions implicate others, and the action of others implicates us; the habits of our society determine, limit, and shape the habits we develop.

Dewey's philosophy is one that places us firmly in and of the world, with all the tools necessary to utilize the past, live meaningfully in the present, and construct a better future. Dewey's view of human nature and intelligence – or his account of what we are and how we should live – poses many challenges to our theoretical understanding of ourselves and our world, as well as our practical understanding of how we ought to act toward others and the world. Above, Suzanne Cunningham termed the “classic Deweyan move” the move toward full integration. In the last section of this work, I will use this classic Deweyan move to pose what I take to be the Deweyan challenge.

3.4 The Deweyan Challenge

The first two chapters of this work set out to answer the question, “what kind of beings are we such that we can be intelligent?” In the first chapter, we asked “what kind of beings are we?” and found that the answer was “embodied, habitual, problem solvers.” In the second chapter, we asked “what is intelligence?” and we found that the answer was, “the ability to creatively re-appropriate past experience to solve future problems.” In third chapter we explored what these conceptions of human nature and intelligence contribute to our contemporary theories of the mind, as well as our theories of the moral self, moral deliberation, and living well.

Throughout, we have seen that Dewey's metaphysics of embodiment, integration, and continuity permeate every aspect of his conception of who we are and what we do. The constant move toward integration ties the notions of human nature and intelligence
together to form a thoroughgoing naturalism. That is, who we are and what we do is shaped by the forces of our interaction with and through the multi-dimensional environment. All of the “distinctively human” faculties, abilities, capacities, and attributes emerge from the organic circuit of organism-environment interaction. Nothing is imported from outside of these interactions and experiences, and everything can be explained in these terms.

This leaves us with a challenge – indeed, the Deweyan challenge. We have seen how Dewey integrates the organism and the environment, the body and thought, the individual and society, and most importantly, human nature and intelligence. The challenge, then, is to live the metaphysics of integration: to integrate this theory of human nature with the practice of living. There are three parts to this challenge: As concerns embodiment, one must embrace the organism-environment relationship. Because we are, at bottom, biological organisms sustained by the energies of the environment, we ought to embrace that relationship, and treat our environment not as something to be mastered, or as something that serves us, but rather as something that nurtures us, as something that sustains us, as something that is as much a part of us as we are a part of it. We must embrace the integrated relationship between the mental and the physical. Because the two are not distinct, we ought to embrace the fact that our bodily make up shapes our mental capacities; that thinking and feeling cannot, and should not be separated or divided; the body is not something to be transcended. We must also recognize the way in which one's social environment shapes one's self, and act, as a result, in such a way that is conscientiousness of the effects one's actions have on others.

The second part of the challenge concerns habits: given that habit exerts its
influence on nearly every thought and action, we ought to pay careful attention to the habits that we develop, and cultivate those habits that expand, rather than limit, the possibilities for thought and action. The habits that are social and cultural institutions also deserve similar critical examination, as they too shape the possibilities for thought and action. Perhaps the most important kinds of habits one can develop are those which passionately attend to the unique features of each situation, and do not revert to unthinking repetition.

The last part of this challenge concerns problem solving: given that our survival and well being is predicated on our ability to solve problems, we ought to integrate solutions formed in the past into problems of the present and future. This entails making use of the experiences of others, as well as contributing one's own experience to individual and social problems.

What I am suggesting here is that Dewey's metaphysics of integration and continuity provide for a holistic, comprehensive, and naturalistic account of how we can think about what kind of beings we are, what kind of world we live in, and how we should act. The challenge of pragmatism generally, and Dewey's thought specifically, is how to integrate theoretical understanding into practical action. In this work I have attempted to lay out a comprehensive theory of human nature and intelligence. If it was laid out coherently, understandably, and comprehensively, it is only because the concepts and the relationships between concepts are cast entirely in terms of a naturalistic, biological, and continuous framework which posits no radical ontological breaks, and imports no explanatory devices from outside of the fundamental transaction between organism and multi-dimensional environment which sustains life. What we are left with
is a philosophy of life, and of living, which can hang together through the metaphysics of integration and continuity.

The Deweyan challenge, then, is to live a life of integration and continuity; to integrate and make continuous one's theory and one's practice. The challenge is to engage the precarious features of experience through the resources of experience. As rich, complex, and unstable as our world may be, the same features that give rise the richness, complexity, and instability are the same features by which we can adjust, adapt, reconstruct, and flourish. The challenge is to live continuously, and enrich the present by mining the past, and illuminating the possibilities of the future. The challenge is to integrate human nature and intelligence: to live intelligently.
References


