

Possibilities and Pitfalls: Dewey and Ortega y Gasset as Technological Diagnosticians

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English Abstract

In this paper I propose to further a conversation between the works of José Ortega y Gasset (1883-1955) and John Dewey (1859-1952). I do so by focusing on issues related to the philosophy of technology, and to what we might call the ontology of persons. I believe there are important commonalities, and that in spite of some significant differences in terminology and what are often taken to be fundamentally distinct philosophical orientations, we find in the work of Dewey (the pragmatist) and Ortega (the existentialist) that each has an account of the role and place of technology and of the nature of human persons. These accounts are, if not identical, at least mutually reinforcing, and I believe that reading them together can provide us with some intellectual tools for understanding, and perhaps transforming, our world. I explore Dewey and Ortega across four issues: the idea of humans as situated, natural, social, and in-process, the claim that we humans focus on only part of the full range of our experience, the account of technology as mediating human situatedness, and often embodying and directing the focus of our attention, and finally a consideration of some threats and possibilities of modern technological society.

Resumen en español

En este ensayo propongo explorar una conversación entre las obras de José Ortega y Gasset (1883-1955) y John Dewey (1859-1952). Lo hago, centrándome en cuestiones relacionadas con la filosofía de la tecnología y con lo que podríamos llamar la "ontología de las personas." Creo que sus ideas tienen elementos comunes importantes. Es verdad que la terminología de sus teorías tiene algunas diferencias significativas y que ambos representan orientaciones filosóficas fundamentalmente distintas. Pero también encontramos que las obras de Dewey (el pragmatista) y Ortega (el existencialista) incluyen consideraciones sobre la tecnología, la naturaleza, y los seres humanos. Sus respectivas versiones no son idénticas, pero se refuerzan mutuamente, y creo que leyendo a estos dos filósofos juntos podemos adquirir herramientas intelectuales que nos permitan comprender, y quizás transformar, nuestro mundo. Exploro esta conversación entre Dewey y Ortega a través de cuatro temas: la idea de los seres humanos como situados, naturales, sociales, y en proceso; la afirmación de que los seres humanos nos centramos solamente en una parte de nuestra experiencia; la idea de la tecnología como mediadora de la situación de los seres humanos y como entidad que incorpora y dirige el enfoque de nuestra atención; y finalmente consideraciones sobre posibles amenazas y promesas de nuestra sociedad tecnológica.

Resumo em português

Neste ensaio eu proponho promover uma conversa entre as obras de José Ortega y Gasset (1883-1955) e John Dewey (1859-1952). Eu faço assim focalizando em assuntos relacionados à filosofia da tecnologia, e a o que nós talvez chamemos o

“ontologia de pessoas.” Creio que existem semelhanças importantes, e que, apesar de algumas diferenças na terminologia e que são muitas vezes tidas como fundamentalmente distintas orientações filosóficas, encontramos nas obras de Dewey (o pragmatista) e Ortega (o existencialista) que cada um tem uma conta sobre da tecnologia, da natureza, e de pessoas humanas. Estas contas são, se não idêntico, pelo menos que se reforçam mutuamente, e eu acredito que a leitura juntos podem nos fornecer algumas ferramentas intelectuais para a compreensão e, talvez, transformar o nosso mundo. Eu exploro Dewey e Ortega através de quatro assuntos: A ideia de seres humanos como situado, natural, social, e em processo, a alegação de que nós seres humanos foco em apenas parte de nossa experiência, a, a conta da tecnologia como mediadora situacionalidade de nós seres humanos, e finalmente uma consideração de algumas ameaças e possibilidades de nosso sociedade tecnológica moderna.

Very little has been published that brings José Ortega y Gasset (1883-1955) and John Dewey (1859-1952) into dialogue. In many ways this seems quite surprising. Their public careers were roughly contemporaneous. Each was one of the most prominent philosophers and public intellectuals of the time, each had an international reputation, each had substantial interest in art and the role it plays in human life, both were very concerned about education and about creeping anti-intellectualism and fundamentalism in life and thought, each was politically active, and each traveled widely. Additionally, in the past decades - again the period roughly coincides - there has been something of an explosion of interest in each.[1] Yet with the notable exceptions of an important work by Doug Browning, Ortega and Dewey on the Starting Point,[2] and some work by Larry Hickman,[3] little has been published that brings them together. Further, in the published works of each there are no explicit references to the other. Dewey did write about Spain and the civil war, but made no mention of Ortega. Ortega had some volumes of Dewey's work in his library, including *Democracy and Education*, and might well have drawn the notion of “trial and error” from Dewey, but he does not cite Dewey (there are some passing references to William James, and some have argued that James is a significant and underappreciated influence on Ortega's work[4]). In what follows I propose to further the conversation between the works of Dewey and Ortega by focusing on issues related to the philosophy of technology, and to what we might call the ontology of persons. I believe there are important commonalities, and that in spite of some significant differences in terminology and what are often taken to be fundamentally distinct philosophical orientations, we find in the work of Dewey (the Pragmatist) and Ortega (the existentialist) that each has an account of the role and place of technology, and of the nature of human persons. These accounts are, if not identical, at least mutually reinforcing, and I believe that reading them together can provide some intellectual tools for understanding, and perhaps transforming, our world. I explore Dewey and Ortega across four issues: the idea of humans as situated, natural, social, and in process; the claim that we humans focus on only part of the full range of our experience; the account of technology as mediating human situatedness and often

embodying and directing the focus of our attention; and finally, a consideration of some threats and possibilities of modern technological society.

What follows is in many ways a promissory note. As a promissory note, there is much that I do not undertake here, some of which will be directions of future work. I do not claim that either Dewey or Ortega was directly influenced by the other, nor do I offer any direct mapping of the ideas of one onto the ideas of the other. You will note that, at least as outlined here, I rely more on Dewey to develop some points and Ortega for others. My hope is that this reading together allows me to take a step through the door opened by Browning and Hickman, to engage these two rich and insightful philosophers in conversation, and to set the stage for further research.

The Human Situation

What sort of individuals are created?[5]

I am myself plus my circumstance, and if I do not save it, I cannot save myself.[6]

Both Dewey and Ortega give us accounts of what we might call “human nature.” Importantly, in neither instance is it a traditional notion of human nature, one that is grounded in some notion of natural law or the divine. Rather, in the thought of each we find accounts of humans as largely self-making creatures, natural creatures, and social creatures. It is in these accounts that we find the origins of human inquiry and technology, and also grounds for normative critique.

For both Dewey and Ortega, we humans are natural creatures who enter a world that is already ongoing and that we do not chose. The world we enter presents both possibilities and obstacles, and to us is given no definite preexisting telos.[7] It is because of these factors that we are the sorts of creatures we are, and that we have certain responsibilities and possibilities. In this section I explore some of what Dewey and Ortega have to tell us about this, before turning in the next section to what they have to say about inquiry.

John Dewey posed the question that comprises the headnote of this section - “What sort of individuals are created?”[8] - in *Reconstruction in Philosophy*, first published just after the First World War. He argues that when we evaluate social institutions and changes they should be “viewed in their educative effect: -- with reference to the types of individuals they foster.”[9] Do new social forms, that is, new modes and possibilities for our transactions with our environment, awaken curiosity, “release capacity,” operate in a coherent or capricious manner, increase our sensitivities and skills, further and nurture our searches for (makings of) meanings, or do they not? This apparently simple question points toward the normative dimension in Dewey’s thought, and also directs our attention to his account of what sorts of creatures we are.

In *Art as Experience* Dewey famously offers an account of aesthetic experience as an incipient presence in the process of living, in what he calls “the live creature.” He writes, “No creature lives merely under its skin; its subcutaneous organs are means of connection with what lies beyond its bodily frame, and to which, in order to live, it must

adjust itself, by accommodation and defense but also by conquest. At every moment, the living creature is exposed to dangers in its surroundings, and at every moment, it must draw upon something in its surroundings to satisfy its needs. The career and destiny of a living being are bound up with its interchanges with its environment, not externally but in the most intimate way.”[10]

We find here the strong influence of a Darwinian worldview on Dewey’s thought. Humans, like all creatures, are natural creatures and as such we are always, from the start, enmeshed in the world. The world in which we find ourselves is simultaneously a threat and an opportunity; it presents dangers and also resources for overcoming these threats. This process, what Dewey calls a biological commonplace, is true for all living things. In accommodating to threats and opportunities, living things will suffer injury and setback, in some cases wither and die, in others sustain or even flourish. He continues:

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 effort or by some happy chance. And, in a growing life, the recovery is never mere return to a prior state, for it is enriched by the state of disparity and resistance through which it has successfully passed. If the gap between organism and environment is too wide, the creature dies. If its activity is not enhanced by the temporary alienation, it merely subsists. Life grows when a temporary falling out is a transition to a more extensive balance of the energies of the organism with those of the conditions under which it lives.[11]

The moments of falling out of balance are times of danger in which individuals, or entire species, could fail to regain some sustainable equilibrium with the environment. But notice that these situations of “temporary alienation” are also when growth and, importantly, change are possible. As far as we know, we are unique among living things on this planet in that we are consciously and self-consciously aware of this alienation, and consciously direct its resolution for good or ill. “The rhythm of loss of integration with environment and recovery of union not only persists in man but becomes conscious with him; its conditions are material out of which he forms purposes.”[12]

These situations will be those in which humans experience “the irritation of doubt,”[13] an uncertainty about what to do, and perhaps even why. These are situations in which our existing stock of tools, including concepts, practices, social institutions, metaphors, and machines, fail us in some ways. As we shall see in the next section, this is the start of inquiry. The ways in which we respond to these moments determine whether we thrive, merely subsist, or pass away. The ways in which we respond to these situations answer the question, “What sorts of individuals are created?”

Dewey is concerned with interactions between human and environment in part because in our interactions with our environment we find resources to meet our needs. Our external or physical survival is bound up with these interactions, but so too is our inner life. In arguing that “the career and destiny” of the human being are the product of an ongoing interaction between an organism and an environment that presents both

resources and dangers, Dewey presents an argument strikingly similar to Ortega's argument regarding the existential situation of humans as natural beings. Ortega first considers human natural instincts and asks whether these alone account for human needs, desires, and activities. He argues that human needs form as they do because of our relationship to nonhuman nature. As he notes, we find ourselves in a world that, while open to our existence, does not guarantee it. Thus the nature and quality of our lives depends on what we do and how we do it. We literally make ourselves through a process he calls "autofabrication."^[14] Ortega y Gasset argues that humans are self-making beings in a world that presents both opportunities and obstacles. "If man encountered no facilities it would be impossible for him to be in the world, he would not exist, and there would be no problem. Since he finds facilities to rely on, his existence is possible. But this possibility, since he also finds difficulties, is continually challenged, disturbed, imperiled. Hence, man's existence is no passive being in the world; it is an unending struggle to accommodate himself in spite of unfavorable circumstances; that means he has to make his own existence at every single moment. . . . Man must earn his life, not only economically but metaphysically."^[15]

As humans we seek to increase the meaning and significance of and in our lives. We do this, in part, as natural beings. As Ortega y Gasset notes, "He [the human] is an entity compelled, if he wants to live, to live in nature, he is an animal."^[16] And "we shall then come upon the fact that an entity in the universe, man, has no other way of existing than by being in another entity, nature, or the world."^[17] The general form of our interactions, our creations of meaning, is rooted in this fact. But merely being in the world is not enough. We are in a world that requires that we struggle against it and ourselves, and the means and goals of these struggles make us, both individually and collectively, the persons we are. Further, this world is not just nonhuman nature, but the rich, and ever-increasingly dense, world of human making, including social institutions and practices, language and culture, science and technology. As Dewey observed, "In experience, human relations, institutions and traditions are as much a part of the nature in which we live as is the physical world. Nature in this meaning is not 'outside.' It is in us and we are in and of it."^[18]

The means and goals by which we make our way in this world can be, if epistemological, technological, and moral conditions are right, the subject of conscious choices. The specific content of our lives, of situations that produce meaning, depends on the particular aspirations of individuals and collectivities as situated. This means we must seek to make thriving relations with self, other people, nonhuman nature, and social and cultural institutions. Or, to paraphrase Ortega, we must seek to save ourselves and our circumstances. As Dewey noted, "It [nature] is in us and we are in and of it. But there are multitudes of ways of participating in it, and these ways are characteristic not only of various experiences of the same individual, but of attitudes of aspiration, need and achievement that belong to civilizations in their collective aspect."^[19]

The "it" in this passage from John Dewey's *Art as Experience* is every aspect of the situation in which we humans find ourselves, including both the natural and the human-made. As he notes, the ways we construct institutions and practices say much

about who we are and who we aspire to be, what we consider important, worth advancing, and preserving. In Dewey's terms, we pursue some "end-in-view," some way of resolving an issue at hand. For Ortega, this is pursuing one's (or a collective) program or project.[20]

Focus and Fringe

There are two ways of becoming aware of something, of having something exist for me: one in which I become aware of the thing as separate and distinct, ... and the other way in which the thing exists for me without my reflecting on it. [21]

As we have just seen, both Ortega and Dewey offer us accounts of humans as self-making beings, making ourselves and our ways in a world that is both open and threatening to our presence. It seems accurate to describe this situation as precarious. In a world of considerable possibilities and dangers, and without a given plan or purpose, we select and make a path, or many paths. How does this take place? Why do we attend to some matters and not others? Why do we ask certain questions or select certain projects? In what follows I begin to sketch the answers given by Dewey and Ortega. Again, I will suggest that there is considerable convergence between their answers to these questions, and that further engagement along these lines seems most promising.

We start our exploration of Dewey and Ortega on inquiry by considering their claims that humans have two sorts of awareness of things. Ortega makes this point in *Some Lessons in Metaphysics*:

Therefore--and for whatever we say in this course, this is decisive--there are two ways of becoming aware of something, of having something exist for me: one in which I become aware of the thing as separate and distinct, in which (let us put it this way) I take it before me as man to man, make it a precise and limited end and purpose of my becoming aware; and the other way in which the thing exists for me without my reflecting on it. . . let us put this discovery which we have just made into two new technical terms-- reparar, which is the same as what was traditionally called "being conscious of something," and the simple contar con (count on, rely on, depend on), which expresses the effective presence, that existing for myself, which all the ingredients of my situation always possess. [22]

One thing to notice is that this distinction between reparar and contar con applies to both self and world, both human made and nonhuman. I come to take certain things for granted – that the sun will rise in the east, but also that people will drive on a certain side of the roadway, that the greenish pieces of paper that proclaim themselves legal tender can be exchanged for goods and services, that I am a certain sort of person with certain values and goals, and so on. As we shall see below when we examine technology as second nature, this common and necessary feature of human awareness can also be a danger, one of our own making.

Dewey makes very similar distinctions, discussing focal awareness as well as the distinction between focus and context. As Dewey develops a model for inquiry, what he calls the method of intelligence, that is rooted in our being the sorts of beings we are[23] he largely follows William James. Given the foundation of his view in the earlier work of James and Peirce, I turn briefly to considering their views. In *Principles of Psychology* and *Essays in Radical Empiricism*, William James develops a theory of consciousness in which he argues that some aspects of our experience become the focus of our attention because we cannot attend to everything that could attract our attention.[24]

How does the conscious select? At times it will be because of the press of the world, the resistance we meet as we go through our activities, the dangers and threats both Ortega and Dewey understood as partially constitutive of our situation. At times we consciously select. Why does consciousness select one focus rather than another? According to James, in both instances - the world pressing in and our conscious selection - this selection is guided by one characteristic of our being the sorts of beings we are -- namely, that we are limited biological beings. We select as a focus the needs and desires that press in and call for resolution. This was what Charles Sanders Peirce called "the irritation of doubt." [25] Both James and Peirce [26] discuss models of inquiry and select that of science as the method most compatible with Pragmatism and pluralism and with the human as natural being. [27] Consciousness, as a natural attribute of humans, follows inquiry to make choices that are advantageous given the needs and interests of the person (or persons) choosing. [28] Recalling what Dewey and Ortega tell us about humans in the world of obstacles and possibilities, the "temporary alienation" of encountering a difficulty gives rise to this irritation, moves something from the fringe of our awareness to its focus, from *contar con* to *reparar*.

For example, imagine a person moving through a forest and coming upon a twenty-foot rock face. The particular shape of her interactions with this rock face will depend on the interests that she brings to the situation. If she is out for a run then the rock face could be an obstacle; if seeking a spot to climb the rock face may be the challenge sought; if on a stroll the rock face might be a ground for contemplation or rest for a weary back. The meaning of the rock face depends on the specific and situated activities and purposes of the person who comes upon it. [29]

Inquiry thus arises in response to a situation of doubt and uncertainty, in response to a particular situation of existential need that calls consciousness into focus, as a situation that moves us from the *contar con* to *reparar*. While the interests that lead to inquiry are not the only interests of human beings, these are the interests that lead to technology. The goal of inquiry is to resolve a situation of doubt, uncertainty, or need in the manner most advantageous for the people involved. [30]

Thus in *Logic: The Theory of Inquiry*, Dewey defines inquiry as the confrontation and working through of a problematic situation: "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." [31] This description of the transformation of a dispersed and problematic situation through inquiry and action echoes both Ortega's account of human

"autofabrication" and Dewey's account of the consummatory experience in the aesthetic -- this is an experience that resolves the tensions that lead to inquiry or drive aesthetic experience; the resolutions are particular, contingent, and temporary. We should also note Dewey's claim that the "unified whole" is one of our own making -- one that we might decide we no longer want or need.

Dewey took the open, experimental, and practical nature of technoscientific inquiry, at its best, to be the paradigmatic example of all inquiry.[32] For Dewey, all inquiry is similar in form to technoscientific inquiry in that it is fallibilistic, and resolves in practice some initial question through an experimental method but provides no final absolute answer. In *Studies in Logical Theory* Dewey identifies four phases in the process of inquiry. It begins with the problematic situation, a situation in which our instinctive or habitual responses to the environment are inadequate for fulfilling needs and desires. Dewey stresses throughout his work that the uncertainty of the problematic situation is not inherently cognitive, but also practical and existential. The second phase of the process requires the formulation of a question that captures the problem and thus defines the boundaries within which the resolution of the initial problematic situation must be addressed. In the third, reflective phase of the process the cognitive elements of inquiry, such as ideas and theories, are evaluated as possible solutions. Fourth, these solutions are tested in action. If the new resulting situation resolves the initial problem in a manner conducive to productive activity, then the solution will become part of the habits of living and thus a part of the existential circumstances of human life.[33]

Dewey also argued that inquiry requires the production and stockpiling of intermediate parts. These may include just about any artifact that has proven valuable enough to keep around for further use. In this category Dewey included not just tangible objects such as lumber or sheet metal, but also intangibles such as concepts and habits. Successful inquiry continually uses these intermediate products to produce new and more finished products: new ways of thinking, new materials, and even new tools. This view, that deliberation relies on instruments of all sorts, both tangible and intangible, is the core of what Dewey called "instrumentalism," or his unique brand of Pragmatism.

This method of inquiry works because, as Dewey points out in *Experience and Nature*, human experience of the world includes both the stable, patterned regularity that allows for prediction and intervention and the transitory and contingent aspects of things.[34] Hence, although for Dewey we know the world in terms of causal laws and mathematical relationships, such instrumental value of understanding and controlling our situations should not blind us to the sensuous characteristics of everyday life. Thus, not surprisingly, the value of technoscientific understanding and practice is most significantly realized when humans have sufficient and consistent control over their circumstances that they can live well. We now turn to technology.

Homo Faber

Man without technology,..., is not man. [35]

In the previous section we encountered Ortega and Dewey on inquiry, and found that for each human consciousness our considerations of self and world operate with a fringe and a focus. As situated selves in the world, we select some matters for attention, a focus, a process for which Ortega uses the word *reparar*. We focus on those matters that impinge on our living, those matters that bring about the irritation of doubt. In response we develop tools that embody either a solution or a means to a solution. That is, we engage in technology, developing and using tools.

As we saw in the previous section, Dewey argued that inquiry is neither primarily theoretical nor primarily practical; it is instead a kind of production. He believed that inquiry starts with raw materials and then reworks them with specialized tools, ideally what he called the method of intelligence. But since change is the only constant, the tools of inquiry are themselves always in need of improvement. As conditions change, inquiry uses some of its tools to rework others. Technology and inquiry thus became virtually synonymous for Dewey. Both involve the invention, development, and use of tools and other artifacts to resolve perceived problems.

In response to the lived challenges we face, Ortega proposes that a human's life program or project of existence is a fabricated (not given to us), and in some respects highly individualized, set of aspirations that technology helps makes a reality, "releasing man for the task of being himself." [36] He defines three periods in the evolution of technology: the technology of chance, the technology of the craftsman, and the technology of the technician, in which we still exist today. In keeping with the focus of his investigation, he delimits the periods by considering "the relation between man and technology, in other words by the conception which man in the course of history held, not of this or that particular technology, but of the technical function as such." [37] As we shall see, this attention to how we think about ourselves in relation to technology is centrally important not only to how we think about and use technology, but also to who we become and to the normative dimension of technology.

Technology of Chance is characterized by a lack of consciousness of the fact of invention as such. As Ortega describes it, this is typical of prehistoric humans and also likely of some tribal cultures to this day. It may also be the condition of some individuals even within technologically advanced societies. Here technology is understood as an accident or a gift, perhaps a gift from the gods, as akin to magic. This is the attitude and cultural stage enacted in the myth of Prometheus, who steals fire from the gods and brings it to humans. Changes in technologies occur not because of intentional and conscious seeking of invention and innovation, but through ad hoc responses to environmental conditions.

Over time, a sufficient stock of technical acts and objects accumulates such that they appear to be the province of particular groups of persons: artisans or craftspeople. At this stage persons are not aware of technology as such, but that certain people have specific and not generally distributed skills and knowledge. Thus shoemakers make shoes and potters make ceramics. The skills are understood as human possessions, but not as human in origin. Ortega calls this the Technology of the Craftsman (or

Artisan). Innovation is actually discouraged, and excellence of work is found in replicating the work of masters or existing traditions. A final characteristic he notes is that technology has yet to produce machines.

The last period is characterized by human awareness of technology as a thing unto itself. It is a time in which the artisan has been dissociated into two components - the technician and the worker. Humans have created machines, those things that perform beyond handiwork and are capable of producing objects by themselves with little or no human intervention. "Man becomes clearly aware that there is a capacity in him which is totally different from the immutable activities of his natural or animal part. He recognizes that technology is not a haphazard discovery, as in the primitive period; that it is not a given or limited skill of some people, the artisans as in the second period; that it is not this or that definite and therefore fixed "art", but that it is a source of practically unlimited human activity." [38]

Humans now recognize that technology is a conscious intellectual endeavor that opens up apparently unbounded possibilities, not only for what we might do but also for who we might be. This is the epistemological situation necessary for a fully human moral relationship with technology. Unlike earlier stages in technology, we can now be conscious of innovation as an intentional activity. This takes place through the process of differentiation of activities and values. Ortega calls this period Technology of the Technician. It is in this age, our age, that we find the danger Ortega describes: one of the dangers of the Technology of the Technician is that we will lose sight of our own agency with respect to technology. Thus technology will come to appear as if it is fully autonomous and perhaps even value determining. Through this appearance, insofar as we think and act as if it is true, it will become true. Ortega describes the ways in which the accumulation of technology comes to form a "supranature," or second nature. Herein lies the danger: "Since present day man, as soon as he opens his eyes to life, finds himself surrounded by a superabundance of technical artifacts and procedures forming an artificial environment of such compactness that primordial nature is hidden behind it, he will tend to believe that all these things are there in the same way as nature itself is there without further effort on his part: that aspirin and automobiles grow on trees like apples. That is to say, he may easily lose sight of technology and of the conditions - the moral conditions, for example—under which it is produced." [39] As he points out, one of the risks of great power is that it will hide itself, it will not appear as such, it will become so taken for granted that both its implications and enabling conditions will be obscured. In this manner, although technological determinism is far from a necessary outcome, Ortega y Gasset suggests it is an ever-present danger.

Thus technology opens possible horizons of knowledge, action, and responsibility, but also poses threats to these. Similarly Technology, as Dewey conceives of it, can be a method that opens up and reveals this second nature to us by asking about the relations of means and ends. Embedded within technology as a second nature we focus only on the means, or rather the means become the ends. By demanding that the living creature self-consciously choose ends and constantly reevaluate these choices (and the relative effectiveness of means with regard to these ends), Dewey's philosophy of technology draws our attention to the context, successes,

and failures of technology. The critical philosophy of technology will follow out the practical consequences of present decisions; it will follow the fringe and will shift, or at least broaden, our focus.

On the account I have developed here, both Dewey and Ortega understand humans as necessarily technological creatures. Failure to be such would be failure to survive, and certainly would prevent thriving human lives. As described above, we live in a world of possibilities and threats; in this world we make our way, selecting some matters as pressing for surviving and thriving. In the pursuit of resolving, understanding, and advancing these concerns we develop tools, technologies. Ever wary of misreading the possible here, it does seem reasonable to claim that for Ortega and Dewey we are essentially technological creatures. Or, to revisit the headnote of this section, "man without technology... is not man." [40]

A Cautionary Note

"Speaking without personification, we who have a powerful and perfected instrument in our hands [science and technology], one which is determining the quality of social changes, must ask what changes we want to see achieved and what we want to see averted. . . . Till now we have employed science absentmindedly as far as its effects upon human beings are concerned. The present situation with its extraordinary control of natural energies and its totally unplanned and haphazard social economy is a dire demonstration of the folly of continuing this course." [41]

"Technology for all its practically unlimited capacity will irretrievably empty the lives of those who are resolved to stake their faith in it and it alone. To be an engineer and nothing but an engineer means potentially everything and actually nothing. Just because of its promise of unlimited possibilities technology is an empty form like the most formalistic logic and is unable to determine the content of life. This is why our time, being the most intensely technical, is also the emptiest in all human history." [42]

In the preceding three sections I have attempted to convince you that on three related matters Dewey and Ortega have much in common, and that it can be fruitful to read them together, to place them in conversation. I have suggested that they have quite similar accounts of what we might call an ontology of persons, of the focus of attention and inquiry, and of humans as technological creatures. In this section I suggest that they share diagnoses of some problems with our technological society as it is unfolding. Failure to attend to these problems will leave us on a trajectory ever deeper into a world that is soul killing, a world in which it is increasingly difficult to live morally or aesthetically rich lives, and a world that we make for ourselves. At the same time, listening to their account of the human situation and considering our roles, challenges, responsibilities, and possibilities as technological creatures presents the very real

prospect of greater flourishing, more freedom and creativity, more interesting and richly human lives.

Let me return to a citation from *Art as Experience* that I quoted earlier, but now more extensively: "In experience, human relations, institutions and traditions are as much a part of the nature in which we live as is the physical world. Nature in this meaning is not 'outside.' It is in us and we are in and of it. But there are multitudes of ways of participating in it, and these ways are characteristic not only of various experiences of the same individual, but of attitudes of aspiration, need and achievement that belong to civilizations in their collective aspect." [43]

As I presented this before, Dewey is concerned with the intimate interconnections of the human being and nature. But in fuller context, we can hear Dewey claiming that nature is also something we make, it is our institutions and languages and cultural traditions in addition to our direct experiences of nature and our theories of the natural world. We are always interpenetrated with our social world; we are always already there, in the world and with others. If this is so, and if our relations with nature are central constitutive features of our being - of the meanings of our lives, and if technology is not merely objects but an intelligent method of negotiating our way through nature to pursue our ends, then technology can be brought to bear in critique on itself and on cultural traditions and institutions, including technology.

That is, we can and should use one part of our self-created "nature" to examine this very constructed, or second, nature in order to make explicit the practical consequences of this or that institution or tradition; of the relations of existing beliefs, traditions, and institutions with each other; and the implications of our made world for our present and future. However, the very real risk identified by both Dewey and Ortega is that we will fail to critically engage with artifacts, ideas, and procedures that we have already created. Dewey argues that when we try to "achieve some degree of control of the social consequences which the application of science is, willy-nilly, bringing about ... [what] stands in the way is a lot of outworn traditions, moth-eaten slogans and catchwords, that do substitute duty for real thought, as well as our entrenched predatory self-interest. We shall only make a real beginning in intelligent thought when we cease mouthing platitudes . . . and realize that the choice is between . . . the haphazard use and the planned use of scientific techniques." [44]

In fact, based on past success with particular problems, we will continue using what exists after it has outlived its usefulness. In the passage just cited Dewey is concerned that remnants of older ways of thinking (in this instance a reified dichotomy between capitalism and communism) will stand in the way of considering the real possibilities and effects of scientific advances. This holding on to older ideas takes place within science itself. For example, consider the use of an explanatory scheme in biology that is rooted in a model of competitive individualism. Such a theoretical model will have trouble accounting for evidence of helping behavior and will ignore the possibilities of explanations at the level of the social grouping. [45]

Alternatively, instead of holding tight to the old, we get the new tools and use them everywhere without regard to their appropriateness for the goals at hand. For

Dewey this might be, in terms of his aesthetic, an attempt to hold on to the consummatory experience after it is past -- a refusal to follow the flow of experience. Or in the case of acquiring every tool and using it incessantly, we find an attempt to force the consummatory experience and an actual dissipation of the aesthetic dimension of human existence.[46] For Dewey the end in view is a society of free and creative individuals. We must ask of our technologies and social institutions (that are, in many ways, technologies[47]) whether or not they further and nurture this project. [48]

For Ortega and Dewey our freedom, our creativity, even our selves are possibilities of human life, but do not just happen naturally. The possibilities we actualize depend on what we make of and with the social and natural situation in which we find ourselves. As Richard Bernstein notes in his introduction to *Experience, Nature and Freedom*, both technology and social institutions can be threats to democracy (and human flourishing) because they are "conducive to a lack of individuality and a greater mediocrity." [49] To guard against this possibility, Dewey argues that philosophy should subject "every form of organization to continual scrutiny and criticism." [50] As John McDermott notes, for Dewey we should ask "whether human artifacts . . . are an alienating factor in human life . . . [or whether they offer] an originating aesthetic quality to our lives." [51] When we refuse to critically engage either the form of social institution or the directions of scientific and technological change, we are succumbing to the tendency of institutions to perpetuate themselves and to mold humans as passive. Dewey wrote extensively and critically about this possibility, the possibility that technology and institutions will become what we might call "second nature."

As we saw in the previous section, Ortega describes the world of our tools, the world we make for ourselves, and notes that our attachment to technological advance has given human technological creations the appearance of being inevitable; we appear to be in a situation of technological determinism. This makes the role of technology, and thereby part of our role, in self-creation invisible, a "second nature."

Man [has] succeeded in interposing between himself and nature a zone of exclusively technical provenance, solid and thick enough to form something like a supernature. Present-day man -- I refer not to the individual but to the totality of men -- has no choice of whether to live in nature or to take advantage of this supernature. He is irremediably dependent on, and lodged in, the latter as primitive man is in his natural environment. And that entails certain dangers. . . . [H]e may easily lose sight of technology and the conditions -- the moral conditions, for example -- under which it is produced. . . . We thus have the curious fact that, at first, the prodigious expansion of technology made it stand out against the sober background of man's natural activities and allowed him to gain full sight of it, whereas by now its fantastic progress threatens to obscure it again. [52]

We accumulate so many institutions, habits, things, practices - so much "stuff" - that we no longer have any idea where it comes from, why it is (or is not!) important, where we have been, and where we are going. We thus lose sight of any program or project other

than the perpetuation and extension of what is. Such a situation reveals what we can call one of the tragedies of our culture, and one of the dangers of a culture that lives only into the future and that aims primarily at extending technical mastery to all areas of experience.[53] Thus we find that both Ortega and Dewey suggested over fifty years ago that one of the quite possible trajectories of technological society is an increasing emptiness, thinness of experience, and meaninglessness of lives.

I have suggested that for Dewey and Ortega the technological is, to borrow the words of John McDermott, "the most distinctively human activity." [54] As such, we should not let it just happen to us. The technological determinists are wrong, but they are wrong only insofar as we attend to the course and direction of our everyday life and those social institutions that form a significant part of the environment within which we are always coming to be. The situation is tragic in the classical sense in that we are faced with choices we have made for ourselves, the outcome of which is underdetermined at the outset but that we face with both a sense of loss and possibility. I leave the last word here to Dewey: "Socially as well as scientifically the great thing is not to avoid mistakes but to have them take place under conditions such that they can be utilized to increase intelligence in the future." [55]

NOTES

[1] See Barbara Levine, *Works About Dewey, 1886-2006* (Carbondale, IL: Southern Illinois University Press, 2006), The Center for Dewey Studies, nineteen books about Dewey that were published between 2006 and 2009. Accessed May 31, 2010 online at: http://www.siuc.edu/~deweyctr/scholarship_new_publications.html#field. For Ortega, see Anton Donoso and Harold C. Raley, *Jose Ortega y Gasset: A Bibliography of Secondary Sources* (Bowling Green, OH: Philosophy Documentation Center, Bowling Green State University, 1986); Udo Rukser, *Bibliografía de Ortega* (Madrid: Revista de Occidente, 1971). See also *Revista de Estudios Orteguianos* (Madrid: Fundación José Ortega y Gasset), nineteen volumes between 2000 and 2010.

[2] Douglas Browning, "Dewey and Ortega on the Starting Point," *Transactions of the Charles Peirce Society* 34, no. 1 (winter 1998): 69-92.

[3] Larry A. Hickman, *Philosophical Tools for Technological Culture* (Bloomington: Indiana University Press, 2001).

[4] John T. Graham, *A Pragmatist Philosophy of Life in the work of Ortega y Gasset* (Columbia: University of Missouri Press, 1994).

[5] John Dewey, *Reconstruction in Philosophy* (New York: Mentor Books, 1950), 155.

[6] José Ortega y Gasset, *Meditations on Quixote*, trans. Evelyn Rugg and Diego Marín (New York: W.W. Norton and Company, 1961), 45.

[7] This is the world post-Darwin, Marx, Nietzsche, and Freud, each of whom challenges traditional narratives of human certainty or purpose. It also becomes, during the lifetimes of Dewey and Ortega, the world post-World War I, post apparent failures of revolutionary utopianism in Europe, and the world that gives birth to many strains of fascism as well as the Soviet gulag. Thus, for both Dewey and Ortega, the goal and purpose of human life cannot be understood as given to us, as having some definite external ground.

[8] John Dewey, *Reconstruction in Philosophy* (New York: Mentor Books, 1950), 155.

[9] Dewey, *Reconstruction*, 154.

[10] John Dewey, *Art as Experience* (New York: Perigee Books, 1934), 13.

[11] Dewey, *Art as Experience*, 14.

[12] Dewey, *Art as Experience*, 15.

[13] See Charles Sanders Peirce, "Fixation of Belief," *Popular Science Monthly* 12 (November 1877): 1-15. Accessed online at: <http://www.peirce.org/writings/p107.html>.

[14] José Ortega y Gasset, *History as a System* (New York: W.W. Norton and Company, 1941), 115 ff.

[15] Ortega, *History as a System*, 110-11.

[16] Ortega, *History as a System*, 107.

[17] Ortega, *History as a System*, 109.

[18] Dewey, *Art as Experience*, 333.

[19] Dewey, *Art as Experience*, 333.

[20] Ortega, *History as a System*, 112-13.

[21] José Ortega y Gasset, *Some Lessons in Metaphysics*, trans. Mildred Adams (New York: W.W. Norton and Company, 1969), 48-49.

[22] Ortega, *Some Lessons in Metaphysics*, 48-49.

[23] In *Essays in Experimental Logic* (Chicago, IL: University of Chicago Press, 1916), Dewey uses explicitly Jamesian language to describe the focus and context of experience.

[24] John J. McDermott, ed., *The Writings of William James* (New York: Random House, 1967), 70.

[25] Peirce, "Fixation of Belief."

[26] See Peirce, "Fixation of Belief."

[27] It is important to remember that threesome is not reified "scientific method" for either James or Peirce. Rather, as first articulated by Peirce in "The Fixation of Belief," the method of science is characterized as recognizing human finitude and fallibility; presenting possible resolutions and answers to scrutiny within a community of informed inquirers; and resisting dogmatism, intuitionism, authoritarianism, and isolation. The natural and mathematical sciences can fail to operate according to these methods, and all areas of human inquiry are at their best characterized by this approach. Given the many misunderstandings - Rorty, for instance, gets this wrong (see Richard Rorty, *Philosophy and Social Hope* (New York: Penguin, 1999), 35) - it is perhaps unfortunate that Peirce called this the method of science.

[28] Part of what is at stake in this discussion is how we understand our own needs and interests. Inquiry works within a context that is accepted, even if only tentatively, as given. Recognizing the fringes of consciousness and thereby the contingent character of our understanding of the context is central to a critical engagement with our own needs and interests. The advantageous choice is always "for now, in this place, given these people, for these reasons and to resolve this understanding of the problem." A thoroughgoing critical engagement will ask "When? What place? For whom? Whose interests? What interests are not recognized? Could we understand the context differently?" Of course, not all of these questions can be asked at once, but they must be asked at some point. The remainder of this essay takes up this issue from James and Peirce and moves through Dewey's thought. For more on Dewey's understanding of the method of intelligence see Larry A. Hickman, *John Dewey's Pragmatic Technology* (Bloomington: Indiana University Press, 1990), and Ralph W. Sleeper, *The Necessity of Pragmatism: John Dewey's Conception of Philosophy* (New Haven, CT: Yale University Press, 1986). For some thoughts on needs talk and the construction of needs see Nancy Fraser, *Unruly Practices* (Minneapolis: University of Minnesota Press, 1986).

[29] Of course, the purposes at work here might change in response to the new situation. The possibility always exists that one is merely drifting, engaged in what the Situationists called the "drift." In this case one does not have a single predetermined end in mind, yet the point of the entire process is to shake up received meanings and attempt to create a new ground on which to construct new meanings. While not wanting to fetishize the production of meanings, I think that for Dewey we are always already engaged in this process, and we can either let it happen to us or consciously participate (individually and in a public and social manner). I tend to agree.

[30] In *Logic: The Theory of Inquiry*, Dewey argues that doubts "that are not evoked by and not relative to some existential situation are pathological."

[31] John Dewey, *On Experience Nature and Freedom* (New York: The Library of Liberal Arts, 1960), 116.

[32] See Hickman, *John Dewey's Pragmatic Technology*.

[33] John Dewey, *Studies in Logical Theory* (Chicago, IL: The University of Chicago Press, 1903).

[34] John Dewey, *Experience and Nature* (New York: Dover Publications, 2000).

[35] Ortega, *History as a System*, 96.

[36] Ortega, *History as a System*, 118.

[37] Ortega, *History as a System*, 141.

[38] Ortega, *History as a System*, 149-50.

[39] Ortega, *History as a System*, 153.

[40] Ortega, *History as a System*, 96.

[41] John Dewey, "Science and Society," in *Technology as a Human Affair*, ed. Larry Hickman (New York: McGraw-Hill, 1990). For the complete text in the critical edition see *John Dewey: The Later Works, 1925-1953*, vol. 6: 1931-1932, ed. Jo Ann Boydston (Carbondale: Southern Illinois University Press, 1985).

[42] Ortega, *History as a System*, 151.

[43] Dewey, *Art as Experience*, 333.

[44] Dewey, "Science and Society," 419.

[45] For a discussion of this process within a specific focused area of science see Marcy F. Lawton, William Garstka, and J. Craig Hanks, "The Mask of Theory and The Face of Nature," in *Feminism and Evolutionary Biology: Boundaries Intersections and Frontier*, ed. Patrica Adair Gowaty (New York: Chapman and Hall, 1997), 63-85.

[46] See John McDermott's essay "Experience Grows by Its Edges: A Phenomenology of Relations in an American Philosophical Vein" in *Streams of Experience: Reflections on the History and Philosophy of American Culture* (Amherst: University of Massachusetts Press, 1986), 141-56. In this essay McDermott traces five ways in which our attempts to make relations can take a wrong turn: starvation, amputation, saturation, seduction, and repression.

[47] Many social institutions are clearly technologies. For example, consider varieties of management theories and practices and bureaucracies. Many U.S. universities do not have a College of Business; instead, we have a College of Administrative Science. For a critical account of early twentieth-century management theory told internal to the history of management see Stephen Waring, *Taylorism Transformed*, (Chapel Hill: The University Of North Carolina Press, 1990).

[48] This reading of Dewey runs counter to the critique offered by Max Horkheimer in *The Eclipse of Reason* (New York: Continuum Publishing, 1974). Horkheimer and other critics have accused Dewey of a mere instrumentalism, of proposing a view that lacks the resources to be self-critical and that serves to legitimate the status quo. For a clear indication that this is not Dewey's line, that he argues for constant and necessary self-critique, see *John Dewey, Theory of Valuation* (New York: University of Chicago Press, 1939).

[49] Richard Bernstein, "Editor's Introduction," in John Dewey, *Experience, Nature and Freedom*, xii.

[50] Dewey, *Reconstruction*, 155.

[51] John McDermott, *The Culture of Experience: Philosophical Essays in the American Grain* (New York: New York University Press, 1976), 221.

[52] Ortega, *History as a System*, 152-53.

[53] Thus risking becoming lost in what Kierkegaard calls "The Despair of Infinitude [that] is Due to the Lack of Finitude." We either project ourselves actively into a fantasy of the future, or allow ourselves to be passively carried there; all the while the present is emptied of meaning so that individuals and cultures have no core, no center, no soul. See Soren Kierkegaard, *The Sickness Unto Death* (New York: Doubleday and Company, 1954).

[54] McDermott, *Streams*, 221.

[55] Dewey, *Reconstruction*, 164.