

William James and Evolutionary Psychology: Some Observations (rev'd 6-21-26)

A basic understanding of evolutionary biology (at least through Darwin) is vital to understanding William James writings. WJ died before evolutionary biology was reformulated with modern genetics in the 1930s, but the items listed below would be the kind of things that WJ would expect an educated reader to understand in the post-Darwin era as widely-accepted common knowledge or as plausible implications of evolutionary biology for the field of psychology that WJ himself had worked out, at least in some rough fashion, somewhere or other in his collected writings.¹

1. Everything alive today represents eons and eons of continuous success in survival and reproduction and Darwinian adaptation to the environment. Whatever the limits of incremental Darwinian evolution may be, the things that exist in the world are generally exquisitely adapted to the environment.
2. Human beings, however unusual and extreme they may be in terms of their degree of development of certain capabilities, are part of the adapted ecosystem and, in most respects, have capabilities that are similar in kind to those of higher mammals and certain other animals: emotions, memory, learning, consciousness, habit formation, the ability to communicate, etc. The list of human capabilities that are difficult to compare with those of higher mammals and certain other animals is short. Possibly this list might include: the ability to think in recursive terms, the ability to communicate about things beyond the immediate and concrete, and self-consciousness.
3. Human beings are extreme generalists. They are biologically adapted to be able to deal well, especially with advance warning, to a wide variety of circumstances through their intelligence and their ability to use their intelligence and language and communication skills to coordinate with others.
4. Out of sheer respect for the facts in his original field of psychology and in general, I think it is fair to say that WJ essentially foresaw some of the implications of the “gene’s eye view” of modern evolutionary biology. By the

¹ WJ became a philosopher in the latter half of his career and his approach to philosophy is unique because of his unusual background as a scientist. He was, of course, a leader in the field of psychology, but even more importantly he had a deep understanding of biology. He may have been considering a career in biology when he spent the better part of a year on an expedition to Brazil to collect specimens with the Harvard biologist Louis Agassiz. WJ makes many references in his writings to Darwin and other writers grappling with evolutionary biology such as his friend Chauncey Wright, whose work on certain aspects of evolutionary biology is cited by Darwin in The Descent of Man (1871).

gene's eye view I mean the idea that the most helpful unit of analysis in evolutionary biology is the gene. Genes, rather than organisms per se, are the high fidelity replicators that have been surviving through replication for millions and millions of years. As Richard Dawkins put it in *The Selfish Gene* (1976), organisms such as human beings can be thought of as highly engineered robots "designed" by combinations of genes for the "purpose" of creating additional version of themselves.²

5. To restate some of the above in the "gene's eye view" lingo of modern evolutionary biology, human beings can be thought of as supremely engineered robots with specific features that include intelligence and consciousness and related capabilities that have been developed to an extreme degree.³ And the truly interesting twist is that these capabilities have developed to such an extreme degree that human beings have achieved self-consciousness. Human beings can question why they exist, or why they should do this rather than that, or why they should do anything at all, or even act in a self-destructive manner. They can see that they have certain instincts and tastes and inclinations and they can also see that they can be circumvented, rerouted, ignored, or embraced. Human beings have basically evolved to the point they are, or at least can be, to leverage Richard Dawkin's analogy a step further, "escaped robots."⁴

Another bit of background that deserves mention is that WJ's philosophical writings generally attempt to lay better foundations underneath common sense. This has to be mentioned because, astonishingly, there are sober philosophers and others in the world who interpret WJ's work in philosophy as championing the idea that we are unable to obtain knowledge of the external world and similar things. I believe the people who

² I think the genes versus robots distinction is helpful to clear thinking in many different areas (e.g., in ethics) and not just biology.

³ Possibly, these capabilities of human beings have evolved in a runaway fashion like the peacock's tail.

⁴ I think I coined the term "escaped robots," but the concept clearly appears in the conclusion of Dawkins (1976). I think WJ is essentially making use of this concept in his 1910 essay "The Moral Equivalent of War" in which he highlights how war relates to certain instinctive in-group versus out-group sentiments and inclinations and certain martial sentiments and inclinations of human beings (which are, and have been for millennia, subject to manipulation by unscrupulous people) and then contemplates what a more self-aware and constructive use of such instincts might be in a modern society.

misunderstand WJ to this extent are doing so because of an abysmal lack of understanding of evolutionary biology.⁵

Finally, WJ falls within the Empiricist wing of philosophy as opposed to the Rationalist wing. The dominant tradition for 2500 years in philosophy (at least since the time of Socrates and Plato, with Plato being the patron saint of armchair theorists everywhere as one critic has put it) has been Rationalism. At the risk of oversimplifying things: philosophical Rationalism is the doctrine that the application of pure reason by itself can generate important and utterly certain knowledge (“apodictic truth”) about the universe such as, for instance, conclusions about morality.⁶ WJ makes various critiques of philosophical Rationalism in his writings. At the risk of further oversimplifying things, one part of WJ’s criticisms of philosophical Rationalism is that Rationalism with its emphasis on reason seems at the start to be the polar opposite to religion, but the program of Rationalism comes up with zero results unless it re-invents God in some other guise (called the “Absolute” or something like that) and smuggles in assumptions about what the God-substitute is up to. So Rationalism really works out in practice to be a cousin of religion rather than the polar opposite of it.

Some observations related to evolutionary psychology from the work of WJ:

1. WJ rehabilitated Empiricism by fixing the big weakness of the classical Empiricism of John Locke and David Hume and J. S. Mill and others. He did this by addressing the puzzle of how a human being “subject” that begins with no experience or knowledge can, right from the start, manage to learn from experience and accumulate knowledge. The solution WJ offered was to remind us that the subject itself is a real world object that, under the influence of eons of evolutionary biology, would bring to the table a set of real qualities – sense organs, hard wired mental categories, hard wired physical and mental instincts, programmable and re-programmable physical and mental instincts, and so forth –

⁵ For instance, in defending himself against critics, WJ writes in Pragmatism (1907, 38) “When the Pragmatist undertakes to show in detail just why we must defer [to truth], the Rationalist is unable to recognize the concretes from which his own abstraction is taken. He accuses us of denying truth; whereas we have only sought to trace exactly why people follow it and always ought to follow it.”

⁶ The meaning of “Rationalism” in academic philosophy has little relationship to what people mean by “rational” and related words in everyday language. As used in everyday language “rational” and related words refer to the notion that our beliefs and action should be based on the knowledge we have accumulated with various degrees of certainty through a combination of observation of the world and the application of logic as opposed to, say, relying on revelation or our emotions. Most people are in favor of rationalism in that everyday sense including philosophers in the Empiricist camp.

- that are designed to promote the survival of the organism in its environment including, among other things, gathering information and learning from its environment.
2. Thought is a tool for effective action in the real world. Of course, learning and problem solving are enjoyable in and of themselves to human beings. In fact it's pretty obvious that every animal complex enough to have a personality tends to enjoy exploring its environment and learning to make use of its faculties to deal with the world and even the simple recurring use of its faculties on a day-to-day basis to deal with the world. This is an inevitable result of evolutionary biology for animals that reach a certain complexity. The opposite tendencies or even the lack of such tendencies would be deadly. But the underlying reason we enjoy learning and problem solving is that we need to act effectively in the real world. This observation is, by the way, squarely opposed to the spirit of philosophical Rationalism which views man as a singular creature for whom thinking and the accumulation of knowledge and the arguing of truth claims is primarily done for its own sake. Of course, the escaped robots of today with their survival secured a thousand times over and plenty of leisure time may want to repurpose their intrinsic enjoyment of exploring and learning and problem solving to amuse themselves and lead more fulfilling lives, but let's keep things straight in terms of how it all came to be.
 3. All our knowledge of the world is partial, and all of our theories are working hypotheses that we know are, at best, approximations to the full truth. We have to act in a hundred different ways every day on the basis of imperfect knowledge. Not acting in the absence of absolute certainty amounts to selecting inaction over action. We are always just using our imperfect knowledge and limited time and energy and other resources in act in alternative ways including, importantly, trying to refine our knowledge in some area so that our knowledge is less imperfect. The pragmatic view according to WJ in his most well-known work Pragmatism (1907, 94) is the view that: "all our theories are *instrumental*, are mental modes of *adaptation* to reality, rather than revelations or gnostic answers to some divinely instituted world-enigma."⁷ Also, no living being with its imperfect senses and finite mental capacities has any hope of achieving apodictic knowledge of the underlying nature of the universe in the sense that philosophical Rationalists crave.

⁷ Similarly, in Pragmatism (1907, 32): "*Theories thus become instruments, not answers to enigmas, in which we can rest. We don't lie back upon them, we move forward [with them] and, on occasion, make nature over again by their aid.*"

4. Concepts are selective, provisional man-made tools⁸ that assist with thought and action. Reality is a continuous chaos (the “blooming, buzzing confusion” to use WJ’s famous phrase from his textbook Principles of Psychology (1890)), but for our purpose of acting effectively in the chaos we use our limited intelligence and finite resources to formulate various provisional concepts and use them to pick out and manage the parts of the flux that are most important to us. We invent concepts, test them out, revise them, and abandon them to suit our purpose of acting in the real world. A significant part of what we call creativity consists of cleverly defining useful concepts to deal with the chaos and formulating hypotheses about relationships between elements in the chaos that we can test and verify to extend our knowledge and become more effective actors.
5. There is an important grain of truth in the Kantian idea of mental categories. As a result of evolutionary pressure, human beings have brains that are hardwired to innately understand and believe in certain things such as time and space and causality and the notion that there are regularities in the universe that persist across time and space. No one has to explain concepts such as these to you before you start making good use of them. But it’s no mystery as to why. If regularities in the universe do persist across time and space in the real world, understanding that (or acting as if you do) right from the start and down to your core has tremendous survival value and it’s been hardwired into us. The biologist Konrad Lorenz made this argument in his 1941 paper “Kant’s Doctrine of the A Priori in Light of Contemporary Biology” apparently unaware that WJ in his Principles of Psychology (1890) and others had made the same general point long before. Ironically, Konrad Lorenz’s 1941 paper was also ignored for a few decades. On a related topic, in a world full of singularities and devoid of empirical regularities, there would be no use for reason or memory and those capabilities would never have evolved.
6. Even with their high intelligence and consciousness and self-consciousness, human beings are still vulnerable to being manipulated via their basic biological instincts in large ways such as with martial instincts as discussed in WJ’s 1910 essay “The Moral Equivalent of War” and in small ways such as with the design of foods that appeal to our sense of taste (as that evolved in our ancestral environment) but otherwise have little to recommend them.
7. What initially appeared to me to be a major weakness of WJ’s philosophical writings and what is certainly a major weakness in the opinion many of his critics is WJ’s view of what is meant by truth in the area of religion. But after parsing through various writings of WJ I believe there is a real insight here although it needs to be dug out. To start, the general “will to believe” idea of WJ seems to be

⁸ As opposed to the view of the matter in the Platonic Theory of Forms in which the ideal version of, say, a chair precedes existence of actual chairs and, to add insult to injury, is judged to be more real than actual chairs because the latter are merely imperfect copies of the ideal chair.

basic common sense about human psychology. There are some things you can actually do only when you sincerely believe you can do them. The leap from one side of the trail across the abyss to the other side of the trail, to use WJ's example, is the sort of thing you can be physically capable of, but yet fail at doing if you are distracted with extraneous thoughts or self-doubt. Animals other than human beings appear to be immune to this sort of thing, but human beings with their large and self-conscious brains are capable of all sorts of internal distractions and even self-destructive behavior. I don't know that anyone seriously doubts the truth of WJ's "will to believe" idea in this sense. But on some occasions when WJ discusses the "will to believe" concept in connection with religious belief he seems to be saying, arguably, that sincere belief in God makes the existence of God become true. However, I don't think that's a reasonable interpretation of WJ's statements. Even in his most elliptical statements about the "will to believe" and religion, I think WJ is merely observing that belief in God may fulfill a positive function in the life of a person by, say, helping him or her stick with some long and arduous, but ultimately rewarding, course of action. That is to say the belief in the existence of a certain kind of benevolent God can genuinely strengthen a person's resolve to stick with the plan. This does not, to be sure, seem like a particularly strong position. The problem is that while a sincere belief that a certain kind of God will bring about the right amount of rain and other conditions for the crops to succeed may encourage you to make the exertions you need to get the seeds in the ground and till the soil and so forth, that belief does not actually have anything to do with the amount of rain that occurs and so forth and the whole affair may be a debacle instead of anything positive. But now let's set aside WJ's most elliptical statements about religion. In the longest statement that WJ makes about the "will to believe" concept and its relationship to religion, which appears in the last part of Varieties of Religious Experience (1902), WJ's position is more developed. There, WJ starts with the observation that the religious sentiment that is so common among people around the world really boils down to a sense of awareness of something else besides or beyond that person's own conscious self. WJ's concrete proposal is that this something else is simply the subject's own sub-consciousness and peripheral consciousness and so forth. Let's call all of this sub-consciousness for simplicity. If under evolutionary pressure human beings have developed certain capabilities that operate at a sub-conscious level, and this hardly seems unlikely given the need for living organisms to manage information and push stuff between the foreground and the background of their awareness, then what WJ calls a religious sense is really just some level of awareness of bonafide human capabilities that may normally go untapped and what WJ calls religious belief is, or at least can be, some type of attempt to tap into these bonafide human capabilities. In other words, if we go beneath the superficial labels in WJ's discussions of religion, what WJ is getting at is whether people are effectively adopting a true belief about the existence of their sub-consciousness and a true belief about the bonafide capabilities of their

sub-consciousness and possibly leveraging these true beliefs in their lives. WJ may not have connected all the dots even in his fuller statement in Varieties of Religious Experience (1902), but this seems to be where his dots lead. Finally, wrapping around all of the above and extending beyond it to even one's conscious self is this: If a belief in God simply means some version of the view that one is in tune with the universe in terms of having an array of capabilities that are exquisitely well suited to deal with the universe, that would be (a) an extremely useful outlook for a person to have and (b) a true statement as a matter of basic evolutionary biology.

Selected references - William James' own writings

1. July 1879 article "The Sentiment of Rationality" published in Mind.
2. August 1898 lecture "Philosophical Conceptions and Practical Results" given at UC-Berkeley and then published in UC-Berkeley's University Chronicle pp. 287-310 in vol. 1 issue 4. This also appears as Ch. 28 in Collected Essays and Reviews by William James published in 1920. A large part of this speech reappears as part of a chapter in William James' 1907 book Pragmatism.
3. April 1891 journal article "The Moral Philosopher and the Moral Life" in The International Journal of Ethics. This is also Ch. 6 in the 1897 book The Will to Believe and Other Essays in Popular Philosophy by William James.
4. Ch. 1 through Ch. 8 (especially Ch. 1 through Ch. 6) of William James' 1911 book (published after his death in 1910) Some Problems of Philosophy: A Beginning of an Introduction to Philosophy. This book is essentially William James' half-finished introduction to philosophy textbook he was writing at the time of his death in 1910.
5. From Volume 2 of William James' textbook The Principles of Psychology written in 1890 all of Ch. 28 which is titled "Necessary Truths and the Effects of Experience" but especially:
 - a. The introductory comments on pages 415-416.
 - b. Pages 421-423 on "The Two Modes of Origin of Brain Structure."
 - c. Pages 423-426 on the evolutionary foundation of mental categories, i.e., our innate notions of things such as time and causality (the sub-chapter title is "The Genesis of the Elementary Mental Categories.")
 - d. Pages 426-432 on the "The Genesis of the Natural Sciences."
 - e. Pages 455-463 on the evolutionary foundation of instincts (the sub-chapter title is "The Origin of Instincts.")
6. From William James' 1902 book The Varieties of Religious Experience: A Study in Human Nature, which is the publication of a series of lectures (the Gifford Lectures on Natural Religion) given in 1901-1902 at the University of Edinburgh:
 - a. Pages 442-447 beginning with "What God hath joined together..." and ending with "absolutely worthless invention of the scholarly mind."
 - b. Pages 483-484, i.e., the last two pages of Lecture 19 beginning with "When, in addition...."

- c. Pages 498-527, i.e., the latter part of Lecture 20 “Conclusions” plus the Postscript.
- 7. All of William James’ 1907 book Pragmatism: A New Name for Some Old Ways of Thinking, but especially Lectures 1, 2, 5, 6, and 7. This book is the publication of a series of lectures given in 1906 at the Lowell Institute in Boston and repeated at Columbia University in 1907.
- 8. From William James’ 1909 book The Meaning of Truth, which is a collection of William James’ responses in journal articles to various critics, the following chapters:
 - a. The author’s preface.
 - b. Ch. 3. Humanism and Truth.
 - c. Ch. 4. The Relation Between Knower and Known.
 - d. Ch. 5. The Essence of Humanism.
 - e. Ch. 6. A Word More About Truth.
 - f. Ch. 8. The Pragmatist Account of Truth and its Misunderstanders.
 - g. Ch. 14. Two English Critics.
- 9. William James’ essay the “The Moral Equivalent of War” first published as a leaflet and then in August 1910 in McClure’s Magazine and in October 1910 in Popular Science Monthly.

Selected references - writings of others

- 1. Journal article “The Limits of Natural Selection” published in October 1870 in The North American Review by Chauncey Wright. This article argues against the position taken by the famous biologist Alfred Russel Wallace late in his life (after having been more radically “Darwinian” than Charles Darwin at an earlier stage in his career) that natural selection could not account for higher human faculties such as the capacity for language. Chauncey Wright was a member of the Metaphysical Club at Harvard along with William James and C.S. Pierce. Chauncey Wright was a correspondent of Charles Darwin’s and some of his work was cited in Darwin’s *The Descent of Man*.
- 2. Journal article “The Evolution of Self-Consciousness” published in April 1873 in The North American Review by Chauncey Wright.
- 3. Journal article “Evolution and Ethics” published in 1898 (Vol. 8) of The Monist by John Dewey. This article replies to a 1893 lecture and 1894 journal article written by the famous biologist Thomas H. Huxley’s near the end of his life that proposed that natural selection could not account for higher human faculties.
- 4. Journal article “The Influence of Darwin on Philosophy” in July 1909 in Popular Science Monthly by John Dewey. This is also the first chapter in John Dewey’s 1910 book The Influence of Darwin on Philosophy and Other Essays.

5. Journal article “Kant’s Doctrine of the A Priori in the Light of Contemporary Biology” in 1941 in the German language philosophical journal Blätter für Deutsche Philosophie by Konrad Lorenz. A translated version is reprinted in Philosophy After Darwin (2009) compiled and edited by Michael Ruse.
6. Ellen Kappy Suckiel’s 1982 book The Pragmatic Philosophy of William James. This is a good survey of William James work. Professor Suckiel also wrote helpful introductions to modern editions of William James’ Essays in Radical Empiricism (a collection of his journal articles originally collected and published as a book in 1912) and his Some Problems of Philosophy: A Beginning of an Introduction to Philosophy (originally published in 1911).
7. From the 1955 book The Philosophical Writings of Peirce, a collection of journal articles by Charles Sanders Peirce selected and edited by Justus Buchler, the chapters listed below. C. S. Peirce was a friend and occasional colleague of William James at Harvard.
 - a. Ch 3. How to Make Our Ideas Clear. This chapter was originally published as an article in January 1878 in Popular Science Monthly.
 - b. Ch. 17. Essentials of Pragmatism. This chapter combines excerpts from an article titled “What Pragmatism Is” published by Peirce in 1905 in The Monist together with excerpts from other sources including the 1903 lecture series “Lectures on Pragmatism” given at Harvard.
 - c. Ch. 19. Critical Common-Sensism. This chapter combines excerpts from an article titled “Issues of Pragmaticism” published by Peirce in 1905 in The Monist together with excerpts from certain Peirce manuscripts.
8. The section on “Religious Belief” (pp. 71-80 in the 1958 version of this book edited by Nora Barlow) in The Autobiography of Charles Darwin regarding the biological basis of religious belief and certain other human mental attributes.