



4

William James and His Darwinian Defense of Freewill

Matthew Crippen

If asked about the Darwinian influence on William James, some might mention his pragmatic position that ideas are "mental modes of adaptation,"¹ and that our stock of ideas evolves to meet our changing needs.² However, while this is not obviously wrong, it fails to capture what James deems most important about Darwinian theory: the notion that there are independent cycles of causation in nature. Versions of this idea undergird everything from his campaign against empiricist psychologies to his theories of mind and knowledge to his pluralistic worldview, and all of this together undergirds his attempts to challenge determinism and defend free will.

I begin this paper by arguing that James uses Darwinian thinking to bridge empiricism and rationalism, and that this merger undermines environmental determinism. I then discuss how Darwinism informs his concept of pluralism; how his concept challenges visions of a causally welded "block universe"; and how it also casts doubt on the project of reducing all reality to physical reality, and therewith the wisdom of dismissing consciousness as an inert by-product of physiology. I conclude by considering how Darwinism helps him justify the pragmatic grounds upon which he defends free will.

To founders of evolution by natural selection, Charles Darwin and Alfred Russell Wallace were not first to declare that organisms evolve—that idea dates to antiquity—nor, observes James, were they first to proclaim that the environment preserves adaptive variations, so that, for example, the long neck of "[t]he giraffe [...]"

¹ James, 1907, p. 5/11.

² James, 1907, pp. 5/12–14.

is preserved by the fact that there are in his environment tall trees whose leaves he can digest."³ What they were first to do was to realize the extent to which different forces are responsible for the production and preservation of variations.

On the pre-Darwinian view—by which James primarily means Jean Baptiste Lamarck filtered through Herbert Spencer—environmental pressures that preserve adaptive variations also elicit them: tall trees actually make necks "[...] long by the constant striving they [arouse] in [the animal] to reach up to them."⁴ On the Darwinian view, by contrast, the role of the trees "[...] is much more that of selecting forms [...] than producing [them]."⁵ Animals are, for reasons independent of the trees, born with varying neck lengths. Those who happen to have longer necks enjoy higher rates of survival and reproduction, and from a "strong principle of inheritance," as Darwin calls it, the variation propagates, thus increasing average length of neck. Comparing this process to the agricultural practice of selectively breeding for desired traits, Darwin remarks:

[...] when man is the selecting agent, we clearly see that the two elements of change are distinct; variability is in some manner excited, but it is the will of man which accumulates the variations in certain directions; and it is this latter agency which answers to the survival of the fittest under nature.⁶

Darwin thus discriminates "between causes which [produce a variation] and causes that maintain it after it is produced," an achievement James extols as his "triumphant originality."⁷

James does not offer this complement disinterestedly, however, for he wants to show that human cognition can fit the environment, and yet, like the neck of the giraffe, not be directly elicited by it. He proposes this on a phylogenetic level and, more innovatively, on an ontogenetic level. In doing so, he claims to challenge the empiricist view "[...] that the coupling of terms within the mind are simple copies of corresponding couplings im-

³ (James, 1880, p. 622).

⁴ (James, 1880, p. 622).

⁵ (James, 1890ii, p. 636, fn.).

⁶ (Darwin, 1872, pp. 129–30).

⁷ (James, 1880, p. 622).

pressed upon it by the environment."⁸ He claims even to side with the rationalistic psychology of "apriorists," a school he normally criticizes.⁹ In the end, however, James does not really champion one side over the other. Instead, he uses the concept of "selection" to bridge the two.

II

James draws—in fact, somewhat overdraws—the distinction between rationalist and empiricist psychologies much as commentators today do. By the former he means the view that the mind has native structure;¹⁰ that it grasps certain universal and necessary truths independently of sense experience;¹¹ and that it uses this a priori knowledge to actively structure the phenomenal world.¹² By the latter he means the view that simple ideas first enter the mind via sensation, and that these—like atoms bonding into molecules—mechanically adhere into complex ideas in configurations matching "[...] the order of combination in which [they] were originally awakened by impressions of the external world."¹³ James attributes this second view to any number of British empiricists, yet none more so than Herbert Spencer, whom he accuses of reducing the sentient organism to "absolutely passive clay" upon which the environment impresses its order.¹⁴

Spencer is not only a British empiricist, but also an evolutionist. He was friends with both Wallace and T. H. Huxley, "Darwin's bulldog," and it was Spencer who coined the phrase Darwin made famous: "survival of the fittest." Some of Spencer's evolutionary writings pre-date Darwin's and loosely anticipate natural selection. However, his thought—even his so-called "social Darwinism"—more closely resembles "neo-Lamarckism." That is to say, it allies with a reworking of Lamarck that overemphasizes his principle of "inheritance of acquired characters," and abandons

⁸ (James, 1890ii, p. 688).

⁹ (James, 1890ii, p. 618); also see (James, 1878a, p. 897, fn.).

¹⁰ (James, 1890ii, p. 618); also see (James, 1878a, p. 897, fn.).

¹¹ (James, 1890ii, p. 661).

¹² (James, 1890ii, p. 619).

¹³ (James, 1890ii, p. 619).

¹⁴ (James, 1878b, p. 929; James, 1890i, p. 403).

for objects often have so many aspects that "[...] the number of ways in which we may regard [and consequently relate] them is literally countless."²¹ Supposing, therefore, that experience were "equivalent to the mere presence to the senses of an outward or der," and supposing further that consciousness was arranged after this order, then, writes James, consciousness would be a "chaotic indiscriminateness."²² This not being so, he conjectures the mind must have means with which it attends to certain relations while ignoring others.

In pursuing this conjecture, however, James does not reject British empiricists' emphasis on experience, but rather their concept of it. Whereas British empiricists tend to conceive of experience as the world imposed through the senses, James regards it chiefly as that to which the mind consciously attends. "Millions of items," he writes, greet the senses, and yet do not "properly enter [...] experience."²³ They do not because "[...] consciousness is at all times primarily a selecting agency"; it chooses "[...] one out of several of the materials so presented to its notice, emphasizing and accentuating that and suppressing as far as possible all the rest."²⁴ James, in fact, agrees that experience of the world significantly shapes each mind, but with the proviso that each mind is empowered to select what it experiences. "My experience," he declares, "is what I agree to attend to. Only those items which I notice shape my mind [...]"²⁵

James thereby combines the empiricist claim that the world imposes form on the mind with the rationalist claim that the mind imposes form on the world—this, however, with another proviso. Whereas rationalists hold that innate knowledge of necessary relations is the template upon which cognition relates content into intelligible forms, James—while tentatively acknowledging a few such a priori rational principles²⁶—emphasizes another mechanism: selective interest, which he calls "the real a priori element in cognition."²⁷ Place different people in the same envi-

²¹ (James, 1878b, p. 922).

²² (James, 1878b, p. 929; James, 1890i, p. 403).

²³ (James, 1878b, p. 929; James, 1890i, p. 402).

²⁴ (James, 1890i, p. 139).

²⁵ (James, 1878b, pp. 929–30; James, 1890i, p. 402).

²⁶ (James, 1890ii, pp. 661–662).

²⁷ (James, 1878a, p. 397, fn.)

his "cardinal idea that evolution is an active, creative response by organisms to their felt needs," describing it instead as an outcome of "direct impositions by impressing environments on the passive organism."¹⁵ Recognizing the resonance between this vision of "direct adaptation" and stock empiricist accounts of cognition, Spencer mingles the two into what James calls "evolutionary empiricism."

Spencer maintains that it is not only the mind that is ordered in correspondence with the environment, but all living activities: a yeast cell reacts "in correspondence with the chemical changes of the elements bathing its surface,"¹⁶ a tree "in correspondence with [...] seasons."¹⁷ Thus, where earlier British empiricists hold that relations between ideas "in" the mind correspond to relations between objects of the "outer" world, Spencer characterizes all living activities in this way. Adopting the principle of inheritance of acquired characters, he argues further that organisms to varying degrees inherit traits that the environment impressed upon their ancestors. He thereby abandons the traditional empiricist position that each mind begins life as a "blank slate." Yet he does not, as James makes clear, therewith violate the essential empiricist tenet that each "mind owes its present shape to experience," but rather expands the proposition to include the experience of ancestors.¹⁸

James complains that evidence does not support inheritance of acquired characters, particularly its applicability to human psychology.¹⁹ He proposes, accordingly, that if humans do come pre-equipped with adaptive psychological endowments, it is almost certainly a legacy of "[...] congenital variations, 'accidental' in the first instance, but then transmitted as a fixed feature of the race."²⁰ Even more than inheritance of acquired characters, James protests direct adaptation and the analogue empiricist claim that experience—here understood as impositions of impressing environments—directly molds the mind. Impressions, he urges, cannot by themselves determine how the mind relates objects together,

¹⁵ (Gould, 1979, p. 77).

¹⁶ (Spencer, 1855, p. 385).

¹⁷ (Spencer, 1855, p. 385).

¹⁸ (James, 1890ii, p. 620).

¹⁹ (James, 1878b, p. 948; James, 1890ii, p. 688).

²⁰ (James, 1890ii, p. 618).

ronment, he writes, and each will have "selected, out of the same mass of presented objects, those which suited his private interest." Ask how each "proceeds rationally to connect [objects]," and once again "we find selection [...] to be omnipotent."²⁸ Interests "co-operate with the environment in moulding intelligence" and thus justify both the empiricist emphasis on the environment and the rationalist "refusal [...] to admit the mind [is] a pure, passive receptivity."²⁹

III

It is not simply by evoking the concept of "selection" that James appropriates natural selection into his account of consciousness. Rather, it is by using the concept to allow for a separation between that which generates content and that which makes it inhere—a separation he describes in two ways. First, he maintains that the environment generates different varieties of sensory content, which selective interests then occlude or reinforce, even "[...] as to give the least frequent [varieties] far more power to shape our forms of thought than the most frequent ones possess."³⁰ Second, he theorizes "that accidental out-births of spontaneous variation in [...] the excessively instable human brain" spawn new ideas, new mental ways of relating things.³¹ While many of these new ways "perish through their worthlessness,"³² some help us draw useful connections between things in the world and are therefore re-enforced. Here the observable world "[...] is the cause of their preservation, not that of their production."³³

James cites the two aforementioned cases as violations of Spencer's position that the "outer" world determines the whole of our "inner" life. In the first case, interests direct our attention to certain things, and influence how we relate one to another, all of which is to say: "interests precede the outer relations noticed."³⁴

²⁸ (James, 1879a, p. 12; James, 1890i, p. 287).

²⁹ Quoted in (Commager, 1950, p. 92).

³⁰ (James, 1878b, p. 930; James, 1890i, p. 403).

³¹ (James, 1880, p. 641; also see James, 1890ii, p. 636).

³² (James, 1890iii, p. 636).

³³ (James, 1890iii, p. 636).

³⁴ (James, 1878a, p. 897, fn.).

The second case is similar. New ideas are preserved because they help us draw connections between things in the "outer" world, so, once again, there is a sense in which "inner relations" are what engender experiences [or 'outer relations'] here.³⁵

This view has an analogue in both pre-Darwinian and Darwinian transactional ecology, according to which organisms are not only shaped by the "outer" environment, but are also shapers of it. It aligns, however, more intimately with the transactionalism of the latter than the former, a distinction the eminent evolutionist Stephen Jay Gould helps elucidate.³⁶ In a well-known case, he writes,

[...] several species of tits learned to pry the tops off English milk bottles to drink the cream within. One can well imagine a subsequent evolution of bill shape to make the pilferage easier [...]. Is this not Lamarckian in the sense that an active, nongenetic behavioral innovation sets the stage for reinforcing evolution? Doesn't Darwinism think of the environment as a refining fire and organisms as passive entities before it?³⁷

No, Gould answers. Though commentators "[...] praise Lamarck for emphasizing organisms as creators of their environment," the scenario with the tits is, in fact,

[...] thoroughly Darwinian. The tits, in learning to invade the milk bottles, established new selective pressures by altering their own environment. Bills of a different shape will now be favored by natural selection. The new environment does not provoke the tits to manufacture genetic variations directed towards the favored shape. This, and only this, would be Lamarckian.³⁸

That is to say, while Darwinism and Lamarckism both leave room for the organism and the environment to change one another, only Lamarckism emphasizes the environment's power to elicit—as opposed to reinforce—heritable, adaptive variations.

In his 1809 *Zoological Philosophy*, Lamarck proposes that simple organisms spontaneously come into being at regular inter-

³⁵ (James, 1890ii, p. 638).

³⁶ (Gould, 1979).

³⁷ (Gould, 1979, p. 81).

³⁸ (Gould, 1979, p. 81).

vals, and that each progressively evolves through an in-built "complexifying" force. Lamarck adds, however, that if this progressive tendency were the only factor influencing "[...] the shape [...] of animals, the growing complexity of organisation [in the taxonomic ladder] would everywhere be regular. But it is not."³⁹ So he proposes a secondary factor that neo-Lamarckians later make primary: environmental irregularity. Significant alterations in the environment alter the needs of organisms, and this, in turn, motivates new behaviors. This leads to the increased or decreased use of certain anatomical structures, and this to a corresponding augmentation or deterioration of structures. On the assumption of the heritability of acquired characters, future generations inherit these changes.

Here the environment exerts a "direct" influence, though not in the sense of being unmediated since behavioral responses stand between environmental and anatomical changes. Rather, the influence is direct—or "directed"—in the sense that anatomical variations are preferentially pushed in adaptive directions.⁴⁰ It is also direct in the sense that the altered environment belongs to the causal sequence leading to the production of anatomical changes. Darwinian evolution, by contrast, is "indirect." Variations arise "with no preferred orientation in adaptive directions,"⁴¹ for the environment does not cause and in that sense direct them. Instead, it reinforces or suppresses what has been produced independently of the pressures it exerts.

This Darwinian conception of organism-environment transactions informs a two-part argument that James fields against environmentally deterministic psychological theories. He begins the argument by stressing the world-making power of mind. On the basis of interests, ideas and functionally similar mechanisms, the mind works on sense data "very much as a sculptor works on [...] stone,"⁴² and thereby "makes experience" of the world.⁴³ Insofar as the aforesaid mechanisms influence action, and actions change the social and physical world, the world-making

³⁹ (Lamarck, 1809, p. 69).

⁴⁰ (Gould, 1979, p. 79).

⁴¹ (Gould, 1979, p. 79).

⁴² (James, 1890a, p. 288).

⁴³ (James, 1890a, p. 404); also see (James, 1879a, p. 17).

power of the mind extends to even the material conditions of life.⁴⁴ James insists, therefore, "[...] that the knower is not simply a mirror [...] passively reflecting an order that he comes upon [...] [already] existing. The knower is an actor," who registers "[that] which he helps to create."⁴⁵

However, this first part of James' two-part argument does not by itself align him with Darwinism, nor by itself does it threaten environmental determinism. After all, Spencer, too, argues that the mind changes conditions of life. He observes, for example, that the mind introduces technological and social complexities that transform the environment into one that increasingly favors "motor coordination," "intelligence," and moral "power of self-regulation" over brute prowess,⁴⁶ and despite this, Spencer's psychology remains environmentally deterministic. His neo-Lamarckian stance, which emphasizes the environment and downplays behavioral innovation, implies that environment-changing acts of mind are themselves determined by the actions of things outside the organism. The point James wants to advance, therefore, is not merely that the mind shapes its world, but that it does so using mechanisms that emerge independently of environmental stimuli. This he does by raising a couple of counterfactual objections. As already discussed, he protests that if the mind did not come to the world already equipped with mechanisms that narrow its attention, then experience would be chaos; he further protests that if the environment were the sole shaper of mind, then all sentient beings in a shared environment should eventually develop "an identical mental constitution."⁴⁷ Based on thinking that resembles Darwin's, he rejects this outcome as extremely unlikely.

In pondering variation, Darwin notes instances of the same variation arising "[...] under conditions of life as different as can well be conceived; and, on the other hand, of different varieties being produced [...] under the same conditions."⁴⁸ This defying what one would expect if environmental pressures directly elicit variations, he judges that the "[...] facts show how indirectly the

⁴⁴ (James, 1878a, p. 908).

⁴⁵ (James, 1878a, p. 908).

⁴⁶ (Spencer, 1852, pp. 496-97).

⁴⁷ (James, 1878a, p. 929; James, 1890a, p. 403).

⁴⁸ (Darwin, 1859, p. 143).

conditions of life must act."⁴⁹ Along similar lines, James argues that as necessary as the environment is for mental development, it is not sufficient. He notes, for example, that the ancient Greek mind is reversed for its versatile intelligence, and it may be "[...] that such commercial dealings with the world as the geographical Helas afforded [were] a necessary condition" of its development. "But if they [were] a sufficient condition, why did not the Phoenicians outstrip the Greeks in intelligence?" They did not, James answers, because an environment cannot "[...] produce a given type of mind. It can only foster and further certain types fortuitously produced, and thwart and frustrate others."⁵⁰ Just as milk bottles can only shape the earlier mentioned birds if a capacity and desire to open bottles has already been produced, an environmental stimulus can only influence the mind if the mind first possesses interests or similar mechanisms that allow it to notice the stimulus. For this reason, James rejects the environmental determinism of both empiricist and neo-Lamarckian psychologists.

IV

Darwinism often inspires a vision of flowing change. James does similarly. He famously characterizes consciousness as a "stream," and mocks British empiricists for suggesting it is built up from discrete "mental atoms." At the same time, however, James especially commends the Darwinian insistence that evolution involves discontinuous cycles of causation, and dislikes evolutionary accounts that stress continuity. This is why he praises William Bateson for speculating that variations might be "more abrupt and discontinuous than Wallace and Darwin have supposed."⁵¹ This is also why he excuses Charles Renouvier—the French neo-Kantian, who convinced him to believe in free will—for his tepid response to Darwinism. Renouvier, he says, was always "[...] more hospitable to 'Darwinism' than most Frenchmen. His only reserves bore on the attempts to treat evolution as a monistic philosophy of nature through the conception of continuity of change [...]"⁵² With Renouvier, James agrees that continuity implies monism, the anti-

⁴⁹ (Darwin, 1859, pp. 133–34).

⁵⁰ (James, 1880, p. 634).

⁵¹ (James, 1894, p. 498).

⁵² (James, 1893, p. 444).

pluralistic doctrine that "all is one," and James virtually equates monism with determinism. Somewhat against Renouvier, however, he suggests that Darwinism actually lends support to the pluralistic and potentially indeterministic view that certain parts of reality are disconnected and discontinuous.

According to James, determinism "professes that those parts of the universe already laid down absolutely appoint and decree what the other parts shall be."⁵³ Thus determinism fulfills the monistic formula that all is one, for it holds that "the part we call the present" is causally fused with all that has been and all that will be.⁵⁴ "The whole is in each and every part, and welds it with the rest into an absolute unity, an iron block [...]"⁵⁵ Indeterminism, by contrast, "[...] says that the parts have a certain amount of loose play on one another, so that the laying down of one of them does not necessarily determine what the others shall be,"⁵⁶ and James reckons this makes indeterminism pluralistic, for he defines pluralism as a condition in which there is "some separation among things, some tremor of independence, some free play of parts on one another,"⁵⁷ so that to engage with one "bit of reality [...]" is not by that very fact "to engage with all other bits."⁵⁸

Darwinian theory almost certainly informs these descriptions of pluralism and indeterminism. As James explains in a work pre-dating those just cited, Darwinism teaches us to discriminate between causes that produce variations and causes that preserve them, and to see "that these two sets of causes belong to two [...] irrelevant cycles."⁵⁹ It teaches us, more broadly, to recognize that "[t]here are [...] different cycles of operation in nature." There are "different departments, so to speak, relatively independent of one another, so that what goes on at any moment in one may be compatible with almost any condition of things at the same time in the next."⁶⁰

⁵³ (James, 1884, p. 569).

⁵⁴ (James, 1884, p. 570).

⁵⁵ (James, 1884, p. 570).

⁵⁶ (James, 1884, p. 570).

⁵⁷ (James, 1907, p. 556).

⁵⁸ (James, 1909, p. 777).

⁵⁹ (James, 1880, p. 622).

⁶⁰ (James, 1880, p. 621).

The idea that a given bit of reality is independent of and compatible with any number of other bits is central to James' argument that indeterminism is no less plausible than determinism.⁶¹ He begins the argument by asserting that the debate over determinism is metaphysical and insoluble on strictly evidential grounds. As with David Hume, he notes that we observe sequences of phenomena, but never an additional property of "causal connection" joining them. He claims, therefore, that the principle that everything has a cause and even the concept of causality are "al-tar[s] to an unknown god."⁶² James then asks us to compare a deterministic "block universe" with one that admits some free play, and to consider how, from our present standpoint, we might decide which we inhabit. Many, he writes, speak as if "the smallest modicum of independence" or "disconnectedness of one part with another" would "turn this goodly universe into a sort of insane sand-heap or nulliverse."⁶³ But such talk is wrong. When judged "after the fact"—which is to say, from the standpoint of the present—James claims either universe would, "[...] to our means of observation and understanding, appear just as rational as the other."⁶⁴

Darwinian theory illuminates the grounds upon which James maintains this position. An initial point to note is that James recognizes that when Darwinists speak of "accidental variations," they do not mean that variations are uncaused.⁶⁵ "Accidental" simply means "belonging to a cycle of causation inaccessible to [or independent of] the present order of research."⁶⁶ For James, however, this implies that the causes of variations are irrelevant to the outcomes Darwinian theory predicts. Thus, if some variations were free eruptions that occur without cause, natural selection would still operate in the manner that Darwin and Wallace describe. Judged from the standpoint of outcomes reached, a natural history that admits the occasional uncaused variation would not appear decisively different from one that does not.

⁶¹ James, 1884).

⁶² James, 1884, p. 567).

⁶³ James, 1884, p. 573).

⁶⁴ James, 1884, p. 574).

⁶⁵ James, 1880, p. 623).

⁶⁶ James, 1890a, p. 618, fn.).

By defining indeterminism as a pluralistic condition in which certain portions of reality are independent and disconnected from others, James stipulates that the disorder of one portion need not infect others—not that he thinks that an indeterministic portion must necessarily be disordered. From his vantage point, then, the fact that our universe is not an "insane nulliverse" does not undermine the plausibility of indeterminism.

V

The foregoing account does not affirm pluralism, but merely argues that evidence does not contradict it. When it comes finally to delivering a positive justification, James offers predominately pragmatic reasons.

James maintains, to begin with, that pragmatic thinkers must "[...] turn [their] back on absolute monism, and follow pluralism's more empirical path."⁶⁷ He admits that a day may come when "[...] total union, with one knower, one origin, and a universe consolidated in every conceivable way, [...] turn[s] out to be the most acceptable of all hypotheses."⁶⁸ However, "pending the final empirical ascertainment of just what the balance of union and disunion among things may be," pragmatists "must obviously range [themselves] upon the pluralistic side."⁶⁹

Although James characterizes consciousness as a flowing continuity, he regards the experienceable (i.e., empirically knowable) world as a many-pieced mosaic—hence, his claim that pluralism is the "more empirical path." His reasons for granting that the future may nevertheless vindicate monism are twofold. First, by selectively attending to the world, we may inadvertently break unity into disunity.⁷⁰ Second, as a self-described "radical empiricist," James rejects any position that excludes certain kinds of evidence ahead of time. He complains, for example, that some individuals uphold the monistic position that all reality is physical by presupposing that evidence for anything non-physical must always be flawed, which effectively means they maintain their position regardless of empirical evidence. He does not want to use this

⁶⁷ James, 1907, p. 557).

⁶⁸ James, 1907, p. 556).

⁶⁹ James, 1907, p. 556).

⁷⁰ See James, 1880, pp. 620–622; James, 1881, pp. 545, 547).

sort of "half-way" empiricism to secure his own pluralistic position.⁷¹ Despite these qualifications—and partly because of them—James still concludes that pluralism is more serviceable than monism. It is more flexible. Whereas monism asks us to deny disunity even if we observe it, pluralism "will allow you any amount, however great, of real union," so long as there is a modicum of free play.⁷² Pluralism also accords better with the fact that experience so far reveals a world less than unified. According to James, therefore, a pluralistic outlook is more likely to guide us unto fruitful interactions with the experienceable world. Thus, it is to be provisionally adopted as the more practical option.

James once again uses Darwinism as an illustration. He argues that Darwinian theory succeeds because its authors realize that production and selection of variations are independent processes; that each consequently requires a separate theory; and that attempts to collapse them into a single theoretical formula are apt to "utterly confuse and frustrate our hopes of science."⁷³ Here the point is not that we must never collapse the many into one, but rather that we should do so with caution. The proposition, for example, that everything can, in principle, be reduced to physical laws remains a statement of principle precisely because it is in practice inapplicable to uncounted numbers of facts. So long as we do not actually act on the proposition, this is not a serious problem. Yet if we try, say, to reduce Richard Nixon's decision to seek re-election to motions of atoms in his brain, we will explain little and likely generate confusion.⁷⁴

⁷¹ See (James, 1897, p. 447).

⁷² (James, 1897, p. 556).

⁷³ (James, 1880, p. 623).

⁷⁴ When I presented this paper at a symposium (Nov. 21, 2009, San Diego State University), I was asked the following question: "What would happen if James and Albert Einstein were put in the same room?" The questioner suggested that if Einstein maintains that nature is deterministic and monistic, then James must be dismissed. There are a number of problems with this suggestion. First, Einstein's stature as a physicist does not make him an authority on the metaphysical, psychological and biological issues that James tackles when he challenges determinism and defends free will. Second, Einstein desperately tried and failed to unify conflicting branches of physics. Given that Einstein could not even find unity in physics, he would have to agree that the principle that everything is reducible to one kind of reality has so far proved inapplicable to facts. He would thereby grant one of James' practical objections to monism and therewith one

James uses this sort of reasoning to question the explanatory power of theories that treat inorganic processes, biological activity, and consciousness as phases within an unbroken continuity of being. One such continuity theory posits that we might understand human consciousness by examining a succession of increasingly simpler organisms until we reach amoebae and ultimately motions of matter. Now James actually grants that the "demand for continuity" has proven useful within certain scientific domains.⁷⁵ Yet he adds that looking at creatures with progressively smaller quantities of consciousness does nothing to satisfy the demand, for

[t]he quantity [...] is quite immaterial. The girl in [the play] "Midshipman Easy" could not excuse the illegitimacy of her child by saying, "it was a very small one." And Consciousness, however small, is an illegitimate birth in any philosophy that starts without it, and yet professes to explain all facts by continuous evolution.⁷⁶

For James, the core problem "[...] is to understand why and how such disparate things [as consciousness and corporeal processes] are connected at all."⁷⁷ Since the disparity is, on the face of it, a difference in kind rather than degree, any amount of consciousness—however small—leaves the disparity and therewith the problem intact.

While James agrees that psychology must presuppose "a certain amount of brain-physiology,"⁷⁸ he is assuredly troubled by the prospect that consciousness can be completely traced to physiology, for this might make conscious volition an illusion. As T. H. Huxley famously expresses the thesis:

[...] [i]f all states of consciousness [...] are immediately caused by molecular changes of the brain-substance[,] [...] it follows that [...] the feeling we call volition is not the cause of a voluntary act, but the symbol of that state of the brain which is the

of the bases upon which James challenges determinism and defends the possibility of free will.

⁷⁵ (James, 1890i, p. 148).

⁷⁶ (James, 1890i, p. 149); also see (James, 1879b, p. 915).

⁷⁷ (James, 1890i, p. 177).

⁷⁸ (James, 1890i, p. 5).

immediate cause of that act. We are conscious automata[.] [...] [we are] parts of the great series of causes and effects which, in unbroken continuity, composes that which is, and has been, and shall be—the sum of existence.⁷⁹

Here consciousness is a by-product of physical processes. Like exhaust from an engine, it is unable to influence the behavior of the human machine and is, therefore, quite useless.

Since this theory considers consciousness superfluous, James maintains that discovering "the utility of consciousness" will "overthrow" it.⁸⁰ He initiates this venture by noting that highly complex nervous systems are associated with highly developed conscious capacities. However, whereas many conclude that well developed consciousness must, therefore, require a complex nervous system, James speculates the reverse may simultaneously hold: the nervous system may need consciousness in order to function. James next describes how "indeterminate and unforeseeable" the "performances" of the "cerebral hemispheres" are in comparison to other parts of the nervous system, and claims that this has an advantage and a potential cost.⁸¹ The advantage is flexibility and subtlety: it allows the brain to respond to a nearly "infinite variety" of "the minutest alterations" in the environment.⁸² The cost is that the enormous complexity and "hair-trigger" sensitivity of the brain means that it may perform in wildly erratic ways, "like dice thrown [...] on a table."⁸³ The fact that this expectation is not fulfilled leads James to hypothesize that consciousness may "load the dice" by exerting pressures that favor certain neural performances, while inhibiting others. His hypothesis supposes that consciousness interrupts the continuity of nature, introducing something that atoms and other non-conscious things do not supply. This something is interests, goals and ends, "[...] which, but for [consciousness], would have no status in the realm of being whatever."⁸⁴ His hypothesis also assumes that consciousness has causal efficacy, that it influences our

⁷⁹ (Huxley, 1874, p. 577).

⁸⁰ (James, 1879a, p. 4).

⁸¹ (James 1890i, 139); also see (James 1879a, 5).

⁸² (James, 1890i, pp. 139–40).

⁸³ (James, 1879a, p. 5; James, 1890i, p. 140).

⁸⁴ (James, 1890i, p. 140).

nervous system and behavior. One reason James considers this to be a warranted assumption is that if conscious experience has no effect whatever on our actions, then there is no adaptive advantage to feeling pain instead of pleasure upon injuring ourselves.⁸⁵

In advancing his hypothesis, however, James does not posit that consciousness directly controls the nervous system. Rather, it is almost as if consciousness is a stimulus or datum that the brain somehow registers. As with stimuli from the world, consciousness exerts sway, a pressure that increases the likelihood of certain actions. If the organization of that which is registered increases, so, too, does the organization of active responses, and this is where conscious interests become relevant. They bring order to what would otherwise be indiscriminate chaos. They thereby provide the brain with organized stimuli, and James theorizes that this has an ordering effect on its functionally unstable activity.⁸⁶

James suggests, furthermore, that the already indirect influence of consciousness is only intermittent. It is when we encounter obstacles or unexpected twists that cannot be handled by the rapid and largely reflexive workings of the nervous system that we become consciously reflective.⁸⁷ We also become reflective when we are interested in fighting ingrained habits, and James thinks this particularly challenges the materialistic view that consciousness is without causal efficacy. The materialist, he explains, claims that a consciously felt interest corresponds to "the strongest [nerve] vibration and does not cause it," and that the interest, therefore,

[...] is passive and at best a sign of strength of nerve-disturbance. But [the materialist] is immediately confronted by the notorious fact that the strongest tendencies to automatic activity in the nerves often run most counter to the selective pressure of consciousness.⁸⁸

Here and elsewhere James suggests that conscious volition is often a matter of inhibiting impulses rather than igniting them, a thesis that anticipates the more recent work of the neurophysiologist

⁸⁵ (James, 1879a, pp. 17–18; James, 1890i, p. 143–44).

⁸⁶ (James, 1879a, pp. 15–16; James, 1890i, pp. 139–41).

⁸⁷ (James, 1879a, p. 16; James, 1890i, p. 142).

⁸⁸ (James, 1879a, p. 20).

Benjamin Libet. Libet famously reports that neurological activity precedes our conscious awareness of having made a decision, and many take this to mean that conscious volition is an illusion. Libet concludes otherwise. He argues that while the nervous system initiates decisions, consciousness may still have the power to veto them, which means "free will" may actually be "free won't." For James, however, this conscious "veto" that blocks "otherwise seductive" impulses clears the way for alternative actions, so that conscious inhibitions indirectly influence what we ultimately do.⁸⁹

VI

I began this paper by stressing that it is not the utilitarian spirit of Darwinism that most impresses James, but the idea that nature has independent cycles of operation. I conclude by discussing how this idea relates to his rejection of correspondence theories of truth; how this rejection helps him justify his pragmatic outlook; and how he uses this outlook to defend his belief in free will.

James associates correspondence theories of truth with the empiricist and neo-Lamarckian view that beliefs are "inner relations" that the "outer" world impresses upon the mind. Against this, he asserts that "inner relations" must sometimes precede "outer relations." He asserts, more specifically, that we cannot register "outer relations" unless we are already disposed to draw certain connections between things. He adds that nascent beliefs occasionally emerge from spontaneous variations of thought or functional activity in the unstable brain. He maintains, in short, that beliefs are not invariably pressed upon us from without, and that it is inappropriate to evaluate them as if they were. In fact, he thinks it is hopeless. After all, his chief reason for stressing the importance of selective attention is that worldly phenomena relate in a confusing myriad of ways. He consequently holds that even relatively straightforward beliefs typically do not correspond to the world in any clear-cut way.

When it comes to weighty beliefs about determinism, indeterminism, and free will, this is even more the case, for the formulations of these beliefs are potentially more confusing than the world they allegedly describe. Determinism, for instance, must

⁸⁹ (James, 1890b, p. 559).

posit an infinite sequence of past causes, so as not to refute itself by admitting a first cause. Yet the terminus of an infinite sequence is, by definition, a point we are never meant to reach. Thus, while we can talk coherently about a sequence extending into an infinite future, it is incoherent to characterize each present moment as an end-point of a sequence reaching infinitely back. The concepts of indeterminism and free will are similarly unsatisfying, for they introduce the mystery of uncaused causes. The dilemma, therefore, is this: none of these positions satisfactorily corresponds to our sense of how the world is, yet there seems to be no alternative beyond them.

For James, the solution is to recognize that correspondence is not the only standard for evaluating beliefs. We have long employed additional criteria such as elegance, economy, sense-making power, fit with other accepted beliefs, and appeal to personal preference. These criteria are not evidential, for a belief can satisfy all of them without corresponding to facts. Rather, they are pragmatic. Beliefs that meet these criteria tend to be more workable than those that do not, and if all else is equal, we usually prefer workability. Since we cannot decide between determinism, indeterminism, and free will on the basis of strict correspondence, and since there appears to be no alternative beyond them, James thinks it is legitimate to choose what fits, works, and makes sense within our own lives. For him, this means choosing free will.

References

- Commager, Henry Steele. 1950. *The American Mind: An Interpretation of American Thought and Character Since the 1880's*. New Haven: Yale University Press.
- Darwin, Charles. 1859 [1964 reprint]. *On the Origin of Species*, first edition. Cambridge: Harvard University Press.
- 1872 [1958 reprint]. *The Origin of Species*, sixth edition. London: J. M. Dent & Sons LTD.
- Gould, Stephen Jay. 1979. "Shades of Lamarck", in S. J. Gould. 1980. *The Panda's Thumb*. New York: W. W. Norton & Company, pp. 76-84.
- Huxley, Thomas Henry. 1874. "On the Hypothesis that Animals Are Automata, and Its History." *Fortnightly Review*, 16, pp. 555-80.
- James, William. 1878a. "Remarks on Spencer's Definition of Mind as Correspondence." In G. E. Myers, ed. 1992. *William James: Writings 1878-1899*, pp. 893-909. New York: Library of America.

- . 1878b. "Brute and Human Intellect", in G. E. Myers, ed. 1992. *William James: Writings 1878-1899*, pp. 910-49. New York: Library of America.
- . 1879a. "Are We Automata?" *Mind*, 4, pp. 1-22.
- . 1879b. "The Sentiment of Rationality", in G. E. Myers, ed. 1992. *William James: Writings 1878-1899*, pp. 950-55. New York: Library of America.
- . 1880. "Great Men, Great Thoughts and Their Environment." [Reprinted as "Great Men and Their Environment" in *W. James*. 1897. *The Will to Believe and Other Essays in Popular Philosophy*] in G. E. Myers, ed. 1992. *William James: Writings 1878-1899*, pp. 618-46. New York: Library of America.
- . 1881. *Reflex Action and Theism*. [Reprinted in *W. James*. 1897. *The Will to Believe and Other Essays in Popular Philosophy*.] in G. E. Myers, ed. 1992. *William James: Writings 1878-1899*, pp. 540-65. New York: Library of America.
- . 1884. "The Dilemma of Determinism", [Reprinted in *W. James*. 1897. *The Will to Believe and Other Essays in Popular Philosophy*.] in G. E. Myers, ed. 1992. *William James: Writings 1878-1899*, pp. 566-94. New York: Library of America.
- . 1890i. *The Principles of Psychology*, vol. I. New York: Henry Holt and Company.
- . 1890ii. *The Principles of Psychology*, vol. II. New York: Henry Holt and Company.
- . 1893. "Les Principes de la nature," in Ignas K. Skrupskeles, ed. 1987. *Essays, Comments, and Reviews*, pp. 440-45. Cambridge: Harvard University Press.
- . 1894. "Materials for the Study of Variation," in Ignas K. Skrupskeles, ed. 1987. *Essays, Comments, and Reviews*, 497-500. Cambridge: Harvard University Press.
- . 1897. "Preface", [From *W. James*. 1897. *The Will to Believe and Other Essays in Popular Philosophy*.] in G. E. Myers, ed. 1992. *William James: Writings 1878-1899*, pp. 447-52. New York: Library of America.
- . 1907. "Pragmatism", in Bruce Kuklick, ed. 1987. *William James: Writings 1902-1910*, pp. 479-624. New York: Library of America.
- . 1909. "A Pluralistic Universe", in Bruce Kuklick, ed. 1987. *William James: Writings 1902-1910*, pp. 625-819. New York: Library of America.
- Lamarck, Jean Baptiste. 1809. *Zoological Philosophy*. H. Eliot, trans. 1963. New York: Hafner Publishing Company.
- Spencer, Herbert. 1852. "A Theory of Population, Deduced from the General Law of Animal Fertility." *Westminster Review*, 57, pp. 468-501. 1855 [1970 reprint]. *The Principles of Psychology*. Westmead, England: Gregg International.