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Pragmatism was also undergoing a revolution in scholarship in the 1970s and ‘80s: see John J. McDermott, “The Renascence of Classical American Philosophy,” Revue française

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The pragmatists were perhaps also unified by a focus on discovery (and not only justification) in experimental inquiry: see Alexander Klein, “In Defense of Wishful Thinking: James, Quine, Emotions, and the Web of Belief,” in *Pragmatism and the European Traditions: Encounters with Analytic Philosophy and Phenomenology before the Great Divide*, ed. Maria Baghramian and Sarin Marchetti (London: Routledge, 2018), 229.


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Lesley tended to sign his name “J. P. Lesley”—confusingly, since this was short for Peter Lesley, Jr. See William Morris Davis, “Biographical Memoir of Peter Lesley, 1819–1903,” *Biographical Memoirs* 8 (1915): 156–157.

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On Spencer’s general importance, see Hofstadter, Social Darwinism; Robert C. Bannister, Social Darwinism: Science and Myth in Anglo-American Social Thought (Philadelphia: Temple University Press, 1979); Werth, Banquet at Delmonico’s.


"External environment" versus "internal dynamic" as competing motors of organic change was one of three eternal antitheses identified in Stephen Jay Gould, "Eternal Metaphors of Palaeontology," in *Patterns of Evolution as Illustrated by the Fossil Record*, ed. A. Hallam (Amsterdam: Elsevier, 1977), 2.


Jeremy Dunham (personal communication) has suggested that James may also have been influenced by Renouvier’s discussions of interest and attention, although James does not reference these discussions: see Charles Renouvier, *Essais de critique générale: Deuxième essai* (Paris: Ladrange, 1859), 172–175, 214–218. Dunham notes that the importance of these concepts was well established in the French psychological tradition, tracing back at least to Étienne Bonnot de Condillac, *Essai sur l’origine des connoissances humaines: Ouvrage ou l’on réduit à un seul principe tout ce qui concerne l’entendement humain*, 2 vols. (Amsterdam: Pierre Mortier, 1746), 1:27–29.

James and Hodgson were attacking and Spencer was defending what is now called epiphenomenalism, i.e., the view that mental events are mere epiphenomena, having no effects on physical events. Hodgson attacked epiphenomenalism in 1865—in the text quoted here by James—but then defended it in 1870: see Hodgson, *Time and Space*, 273–283; Shadworth H. Hodgson, *The Theory of Practice: An Ethical Enquiry in Two Books*, 2 vols. (London: Longmans, Green, Reader, and Dyer, 1870), 1:416–436. Conversely, James seems to have had sympathy for epiphenomenalism only a few years before this explicit rejection of it: see James, "[Draft on Brain Processes and Feelings] 1872"; Perry, *Thought and Character of William James*, 1:615; Alexander Klein, "James on Consciousness," in *The Oxford Handbook of William James*, ed. Alexander Klein (Oxford: Oxford University Press, forthcoming).

On Helmholtz’s psychology of visual perception, see Gary Hatfield, *The Natural and the Normative: Theories of Spatial Perception from Kant to Helmholtz* (Cambridge: MIT Press, 1992), 165–234. Interestingly, Helmholtz placed much more emphasis on the active mind

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The image may have been inspired by G. W. Leibniz: "If the soul were like such a blank tablet then truths would be in us as the shape of Hercules is in a piece of marble when the marble is entirely neutral as to whether it assumes this shape or some other. However, if there were veins in the block which marked out the shape of Hercules rather than other shapes, then that block would be more determined to that shape and Hercules would be innate in it, in a way" (Gottfried Wilhelm Leibniz, *New Essays on Human Understanding*, trans. Peter Remnant and Jonathan Bennett (Cambridge: Cambridge University Press, 1996), 52.). This Leibniz passage was quoted in a *Critique Philosophique* article on Spencer that James probably read: see Pillon, "L’innéité selon M. Herbert Spencer," 210.

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Amphioxus is one of the primitive members of our own phylum, as noted in a song written in the early twentieth century (sung to *Tipperary*): “It’s a long way from Amphioxus / It’s a long way to us. / It’s a long way from Amphioxus / to the meanest human cuss. / It’s goodbye fins and gill slits, / Welcome skin and hair / It’s a long way from Amphioxus / But we came from there.” See Jane Maienschein, *100 Years Exploring Life, 1888–1988: The Marine Biological Laboratory at Woods Hole* (Boston: Jones & Bartlett, 1989), 165. For a recording, see https://www.youtube.com/watch?v=B0egWbwErRQ.

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Black Africans were traditionally considered descendants of Ham, although this view was contested at the time: see Alexander Winchell, *Preadamites: Or a Demonstration of the Existence of Men before Adam, Together with a Study of Their Condition, Antiquity, Racial Affinities, and Progressive Dispersion over the Earth* (Chicago: S. C. Griggs, 1880), iv.

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For more on Youmans, see Adrian Johns, *Piracy: The Intellectual Property Wars from Gutenberg to Gates* (Chicago: University of Chicago Press, 2009), chap. 11; Bernard Lightman, “Spencer’s American Disciples,” in *Global Spencerism: The Communication and Appropria-

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For more on Trendelenburg’s views in this area, see Beiser, *Late German Idealism*, 46–54.

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For more on Peirce and materialism, see Charles Sanders Peirce, “Ritchie’s *Darwin and Hegel*,” *Nation* 57 (1893); Reynolds, *Peirce’s Scientific Metaphysics*, 59–64.

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For more on British idealism see Frederick Philip Harris, The Neo-Idealist Political Theory (New York: King’s Crown, 1944); A. J. M. Milne, The Social Philosophy of English Idealism

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For more details, see Alexander Klein, ”The Rise of Empiricism: William James, Thomas Hill Green, and the Struggle over Psychology” (PhD diss., Indiana University, 2007).

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There are three more articles in Green’s series, one of which was published posthumously: Thomas Hill Green, ”Mr. Herbert Spencer and Mr. G. H. Lewes: Their Application of the Doctrine of Evolution to Thought. Part II. Mr. Spencer on the Independence of Matter,” *Contemporary Review* 31 (1878); Thomas Hill Green, ”Mr. Herbert Spencer and Mr. G. H. Lewes: Their Application of the Doctrine of Evolution to Thought. Part III. Mr. Lewes’ Account of Experience,” *Contemporary Review* 32 (1878); Thomas Hill Green, ”Mr. Herbert Spencer and Mr. G. H. Lewes: Their Application of the Doctrine of Evolution to Thought. Part IV. Mr. Lewes’ Account of the 'Social Medium,’” in *Works of Thomas Hill Green*, ed. R.L. Nettleship (London: Longmans, Green, 1885).

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For a nice discussion of the different kinds of work that fall under the headings “evolutionary ethics” and “evolutionary epistemology,” see Michael Bradie, *The Secret Chain: Evolution and Ethics* (Albany: State University of New York Press, 1994), 3–8.

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For more on the relationship between Ritchie and Alexander, see Application of S. Alexander . . . for the Professorship of Logic and Mental and Moral Philosophy at Owens College, Manchester (1893), p. 28, ALEX/A/1/2/4, Samuel Alexander Papers.

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See also Alexander’s small notebook on Hegel’s *Naturphilosophie*, dated 1883: ALEX/A/2/1/12, Samuel Alexander Papers. Alexander became friends in the mid-1880s with Haldane’s uncle, the Oxford physiologist John Burdon-Sanderson. See Application of S. Alexander . . . for the Professorship of Logic and Mental and Moral Philosophy at Owens College, Manchester (1893), p. 23, ALEX/A/1/2/4, Samuel Alexander Papers.
The Haldanes were an intellectual family: Elizabeth Sanderson Haldane, sister of John and Richard, translated Hegel's *Lectures on the History of Philosophy*; their uncle John Burdon-Sanderson became Waynflete Chair of Physiology at Oxford in 1882.


For an overview of early functional psychology, see John R. Shook, ed. *The Chicago School...

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There is one historical link, albeit indirect, between Engels and British Idealism: the preface and notes to the 1940 translation of *Dialectics* were written by the population geneticist John Burdon Sanderson Haldane, son of John Scott Haldane (cited above).

Chapter 5


On the origin of variation as "an important programme of research" in the late nineteenth century, see Thierry Hoquet, *Revisiting the "Origin of Species": The Other Darwins* (London: Routledge, 2018), 97–98.

Du Bois was assigned the *New Text-Book*, which omitted the phrase "by Hyatt and Cope." Dana was probably referring to Alpheus Hyatt, "On the Parallelism between the Different Stages of Life in the Individual and Those in the Entire Group of the Molluscos Order Tetrabranchiata," *Memoirs Read before the Boston Society of Natural History* 1 (1866); and Edward Drinker Cope, "On the Origin of Genera," *Proceedings of the Academy of Natural Sciences of Philadelphia* 20 (1868). See also Sanford, "Dana and Darwinism," *Journal of the History of Ideas* 26 (1965).

Time, and an Account of the Progress Made by the Discussions and Investigations of a Quarter of a Century (New York: G.P. Putnam’s Sons, 1887).

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‘Plasm’ (German Plasma), usually in combined form (germ-plasm, bioplasm, protoplasm, nucleoplasm, cytoplasm, etc.), referred to the various fluid or gel-like contents of biological cells. It derives from the Greek plasma, something formed/molded.

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Wallace called the book his “little volume on Popular Darwinism”: see Alfred Russel Wallace to Edward Bagnall Poulton, 26 September 1888, Wallace Letters Online, WCP4353.4576, https://www.nhm.ac.uk/research-curation/scientific-resources/collections/library-collections/wallace-letters-online/

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For more on Lankester’s role in these discussions, see Joseph Lester and Peter J. Bowler, E. Ray Lankester and the Making of Modern Biology (British Society for the History of Science, 1995), chap. 7.

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Hugo Münsterberg, a psychologist who would soon become James’s colleague at Harvard, was working in Freiburg at this time. James may also have heard about Weismann via Osborn’s April 6 contribution to a New York Times debate on Spencer’s philosophy. Although James declined to participate in this debate (initiated by Peirce and described in detail below), he may still have been following it: see James to Peirce, 16 March [1890], in James, Correspondence, 7:8.

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Spencer had already made a version of this argument in The Principles of Biology, vol. 1 (London: Williams and Norgate, 1864), 451.

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As noted by Houser et al., Peirce’s reply was placed directly after Spencer’s, although the latter was merely a report by Minot Judson Savage of a recent conversation with the English philosopher: see Peirce, Writings, 6:582.
Osborn described Spencer’s views “in 1866,” not naming Principles of Biology, but he was quoting from Spencer, The Principles of Biology, vol. 1 (London: Williams and Norgate, 1864), 409. The first volume of the American edition of Principles of Biology was published in 1866.


For another 1891 summary of his evolutionary cosmology, see Peirce to Christine Ladd-Franklin, 29 August 1891, L237, Peirce Papers; in Peirce, Collected Papers, 8:214–215. I will give paragraph numbers when citing the Collected Papers. For a recent interpretation of Peirce’s evolutionary cosmology, see Paul Forster, Peirce and the Threat of Nominalism (Cambridge: Cambridge University Press, 2011), chap. 9.


This footnote, along with MS 954B (1892) and MS 956 (1890), show that Peirce was also interested in Weismann’s theory of the relation between mortality and evolution, which had been described in Alfred Binet, “The Immortality of Infusoria,” Monist 1 (1890). For the theory itself, see Weismann, Essays upon Heredity and Kindred Biological Problems (Oxford: Clarendon Press, 1889), chaps. 1 and 3.

Surprisingly, Lamarck was not on the list of “Great Men of History” that Peirce made in 1892, even though it included such naturalists as Karl Ernst von Baer, Xavier Bichat, Georges Cuvier, Charles Darwin, Albrecht von Haller, François Huber, Alexander von Humboldt, and Carl Linnaeus: see MS 1120 (1892), in Peirce, Writings, 8:258–266.


It is sometimes claimed that whereas biological evolution is Darwinian, cultural evolution is Lamarckian: for example, Stephen Jay Gould, “Shades of Lamarck,” Natural History 88 (1979); see also Maria E. Kronfeldner, “Is Cultural Evolution Lamarckian?” Biology & Philosophy 22 (2007).

Herbert Spencer, "The Inadequacy of ‘Natural Selection,’” Eclectic Magazine of Foreign Literature, Science, and Art, n.s., 57 (1893); Herbert Spencer, "The Inadequacy of ‘Natural Selection,’” Littell’s Living Age 197 (1893); Herbert Spencer, "The Inadequacy of ‘Natural Selection,” Popular Science Monthly 42/43 (1893).


For Weismann’s changing views on the sources of variation, see Rasmus G. Winther, “August Weismann on Germ-Plasm Variation,” Journal of the History of Biology 34 (2001); Churchill, August Weismann, chap. 18.

For an overview of political responses to Neo-Darwinism, see Robert C. Bannister, So-

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For more on Kidd, see David Paul Crook, Benjamin Kidd: Portrait of a Social Darwinist (Cambridge: Cambridge University Press, 1984).

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Organic Analogy,” Journal of the History of Biology 38 (2005); Beck, La gauche évolutionniste. Spencer et ses lecteurs en France et en Italie. For the classic take on Spencer and laissez-faire, see Hofstadter, Social Darwinism, chap. 2; but see also Mark Francis, ”Herbert Spencer and the Myth of Laissez-Faire,” Journal of the History of Ideas 39 (1978); Bannister, Social Darwinism, chaps. 2–4; Rick Tilman, ”Herbert Spencer and the Political Economy of Mean-Spiritedness Revived,” Journal of the History of Economic Thought 21 (1999).

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For more on George, see Edward T. O’Donnell, Henry George and the Crisis of Inequality: Progress and Poverty in the Gilded Age (New York: Columbia University Press, 2015).

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Like Romanes and James, Morgan was sympathetic to Spencer’s co-adaptation argument, although he suggested that co-adaptation could be due to past selection for correlated variation: see “The Nature and Origin of Variations,” Proceedings of the Bristol Naturalists’ Society 6 (1891): 254–255.

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For more on social heredity and the related ”Baldwin Effect” as part of the context for Dewey’s work at this time, see David J. Depew, ”The Rhetoric of Agency in William James and John Dewey: Evolutionary Psychology at the Turn of the 20th Century,” unpublished manuscript (2015). I think Depew is right that Dewey, like Osborn, Baldwin, and Morgan, found a third way between the positions of Spencer and Weismann; however, Dewey’s view was already outlined in the 1894 review of Ward and Kidd, two years before Baldwin and the others presented the Baldwin Effect. For more on this effect and its historical context, see Richards, Darwin, 469–495; Weber and Depew, Evolution and Learning: The Baldwin Effect Reconsidered; Trevor Pearce, ”’A Perfect Chaos’: Organism-Environment Interaction and the Causal Factors of Evolution” (PhD diss., University of Chicago, 2010),


Chapter 6


Dewey would also have encountered the organicist picture of society in his Comparative Constitutional History class with Adams, who assigned Bluntschli’s *Theory of the Modern State* (Adams, like Ely, had studied at Heidelberg with Bluntschli): see “Enumeration of Classes, Second Half-Year, 1882–3,” 93; “Historical and Political Science,” *Johns Hopkins

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Although Dan Green and Edwin Driver speculate that Du Bois did not mention Cummings in any later writings because he was unimpressed with him, Du Bois did in fact remember him in 1954 (along with other “new instructors”) as having “mentioned Marx, but only in passing”: Dan S. Green and Edwin D. Driver, ”Introduction,” in On Sociology and the Black Community, ed. W. E. B. Du Bois (Chicago: University of Chicago Press, 1978), 6; Du Bois, ”Apologia,” 328.

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For more on this aspect of Mead’s work, see Mary Jo Deegan, “Introduction,” in *Play, School, and Society*, ed. George Herbert Mead (New York: Peter Lang, 1999).


Jane Addams attended several other congresses of the World’s Congress Auxiliary, all of which were held in the newly built Art Institute on Michigan Avenue: see Knight, *Citizen*, 269–274; David F. Burg, *Chicago’s White City of 1893* (Lexington: University Press of Kentucky, 1976), chap. 6.

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**Chapter 7**

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Williston Samuel Hough taught physiological psychology at Michigan in 1888–89, Dewey’s
year at Minnesota, but he taught it from George Trumbull Ladd’s textbook without a laboratory component: see Calendar of the University of Michigan for 1888–89 (Ann Arbor: University of Michigan, 1889), 53. Dewey’s various classes in “Empirical Psychology” and "Experimental Psychology" from 1884 to 1888 also consisted only of lectures, according to the Calendar.

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Lipson was an undergraduate at Michigan from 1889–93, graduating with an LLB in 1893 and an LLM in 1894: see Calendar of the University of Michigan for 1893–94 (Ann Arbor: University of Michigan, 1894), 188; Calendar of the University of Michigan for 1894–95 (Ann Arbor: University of Michigan, 1895), 202. The quoted letter implies that he met Dewey while a sophomore in 1890–91, took General Psychology with Lloyd in 1891–92, and took a laboratory class with Mead sometime between 1892 and 1894.

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For more on Dewey, biology, and education in the 1890s, see Fallace, Dewey and the Dilemma of Race, chaps. 1–2.

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For more on experimentation with diagrams, see Forster, Peirce and the Threat of Nominalism (Cambridge: Cambridge University Press, 2011), 36–40; Frederik Stjernfelt, “Peirce’s

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On Grace de Laguna’s later work, see Peter Olen, “Consequences of Behaviorism: Sellars

**Conclusion**

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