

*JBS: The Life and Work of J. B. S. Haldane*  
Intersections with C. S. Lewis  
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This essay combines book report, book review, and biographical sketch, based on the following book: Ronald Clark, *JBS: The Life and Work of J. B. S. Haldane*, Oxford: Oxford University Press, 1984, 268 pages. It includes intersections between the lives of J.B.S. Haldane and C. S. Lewis by adding information from articles that each wrote about the other, “Auld Hornie, F.R.S.” by Haldane and “A Reply to Professor Haldane” by Lewis. Ronald Clark also wrote biographies of Sigmund Freud, Vladimir Lenin, Bertrand Russell, and others.

The scientist whom Lewis especially pilloried in the Ransom Trilogy, John Burdon Sanderson Haldane, was born on November 5, 1892. The two men, Englishmen and contemporaries, were similar in many ways. Both were atheists at one time, Lewis for a few years in his youth and Haldane for most of his life. Both were very intelligent men with excellent memories<sup>1</sup>, both were precocious in their early years, and both carried the nickname Jack. Both studied Greats at Oxford, a course of study in ancient history and classical philosophy, and both earned First Class Honours (Haldane twice and Lewis three times) in their exams. Both were part of the Oxford University Officers’ Training Corps early in the twentieth century, and both subsequently fought in World War One.

Born to John Scott Haldane and Louisa Kathleen Trotter, J.B.S. had a scientist for a father. After six years at Eton, he matriculated at New College, Oxford University, in 1911 on a mathematical scholarship. After Eton, Clark wrote perceptively, “Haldane was against—against authority and against the Government, any authority and any Government; if possible in the cause of reason, if not as a matter of principle” (*JBS*, 23). Although he earned his reputation in mathematics and biology, Haldane never earned a degree in any field of science.

In January 1915, Haldane entered the war in France, becoming the Bombing Officer of the First Battalion. He took to the task with such enthusiasm that he was nicknamed Bombo. Later in the war he ran the Nigg Bombing School with such effectiveness that the school had no serious accident or fatal casualty. His background in science, especially under his father’s tutelage, enabled him to provide advice on defensive measures against a gas attack and to do initial study of the effects of chlorine gas on the soldier with and without a respirator. His service throughout the war demonstrated an outspoken showmanship and fearlessness that would characterize his entire life and led him to embrace socialism. He would even conduct many of his scientific experiments on himself. Throughout his life Haldane’s showmanship would turn into rudeness and a hot temper at times, but it also showed itself in a sense of humor, wit, and originality. He completed his war service in January 1919.

Before the end of the war Haldane accepted a fellowship at New College, Oxford, where he determined that he would teach physiology, even without the appropriate academic training for that task. In 1923, he left Oxford to accept a Readership in Biochemistry at Trinity College, Cambridge. During his nine years at Cambridge, Haldane worked on enzymes and genetics, particularly the mathematical side of genetics. After he developed Haldane’s Law, a mathematical understanding of passing on genetic characteristics, he wrote what many considered his most important work, ten papers on “Mathematical Contributions to the Theory of Natural Selection.” These were published between 1924 and 1934 in the *Proceedings* and *Transactions* of the Cambridge Philosophical Society. During the teens and twenties, Haldane wrote many popular essays on science that were eventually collected and published in 1927 in a volume entitled *Possible Worlds*.

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<sup>1</sup> Sir Peter Medawar, the Oxford professor who wrote the Preface, called Haldane “the cleverest man I ever knew”; Medawar was Lewis’s colleague at Magdalen College, Oxford from 1938 to 1944 and Haldane’s colleague at University College, London from 1951 to 1957.

Other significant publications by Haldane included *Daedalus, or Science and the Future*, a booklet of scientific prediction of the future that C. S. Lewis called “a diabolical little book,” books such as *Callinicus: A Defense of Chemical Warfare*; *Biology in Everyday Life*; *The Inequality of Man*; *The Causes of Evolution*; *The Man with Two Memories*; and literally hundreds of articles.

In 1924, Haldane met Charlotte Franken, a young reporter for the *Daily Express*. Franken was working on a novel, had read *Daedalus*, and therefore sought out an interview with Haldane, whose knowledge and expertise, she thought, might help her. As an eventual result of their meeting, Charlotte divorced her husband and married Haldane in 1925. Haldane was almost dismissed from Cambridge for the way he handled this meeting and caused the divorce.

In 1930 he switched fields from biochemistry to genetics. He left Cambridge in August, 1932, resigning his Readership at Trinity College. In the spring he took up the post of Professor of Genetics at University College, London. He would administer a department, teach, and conduct research. Four years later he became the first Weldon Professor of Biometry at University College, London. One year after that, in 1937, Haldane had become a Marxist, and an open supporter of the Communist Party, but not yet a member of the Party. He would join the Party in 1942 and become a member of their Executive Committee two years later, involving himself in British-Soviet rallies. Several visits to Spain during the thirties confirmed Haldane in his belief that the Communists were the only ones who would stand up to dictators.

By 1937, he had become the science correspondent of the *Daily Worker*, the official publication of the Communist Party in England. He would eventually Chair its Editorial Board. He wrote nearly three hundred and fifty articles for that publication over the next thirteen years. When the *Daily Worker* became pro-Moscow in September 1939, it gathered the attention of Herbert Morrison, the Home Secretary. On January 21, 1941, the paper was suppressed by police action and ceased to publish. It was allowed to start publication less than a year later.

During this time Haldane continued to support his country in a variety of ways, including campaigning for adequate air raid protection and assisting in the war effort. By the end of September 1939, he was working for the Directorate of Home Publicity at the Ministry of Information. Various experiments on oxygen deprivation, exposure to excess carbon dioxide, and related issues helped him write reports about the use of miniature submarines and submarine escape. He and his future spouse Helen Spurway also did statistical investigations for the R.A.F., the Army, and the Ministry of Aircraft Production to determine which tactics offered the best chances of shooting down enemy planes. When his wife Charlotte defected to the Soviet Union as a war correspondent, the marriage foundered. In spring of 1945, she divorced him, and he quietly married Helen Spurway.

In the late 1940s, Haldane’s Marxist beliefs led him to support the Ukrainian scientist Lysenko, who held that acquired characteristics could be inherited. While cautious about this position, since he had not seen the documented research, Haldane supported Lysenko. This would change, however, by the end of 1949 because of the way in which the Russian government was controlling science and limiting free scientific research. As late as 1962, however, he would describe Joseph Stalin as “a very great man who did a very good job” (*JBS*, 248). His connections with Communism would cost him membership in the Medical Research Council.

By this time, Haldane was well known around the world for his research, speaking, and writing. In 1932, JBS had been elected a Fellow of the Royal Society. He gave many speeches over the decades, including the Princeton Centennial in the U.S., the Herbert Spencer lecture at Oxford, and at international Congresses. In 1952, he received the Darwin Medal from the Royal Society. In 1956, he was awarded the Huxley Memorial Medal of the Royal Anthropological Institute. Among other awards, he received the Feltrinelli Prize, an Honorary Doctorate of Science, an Honorary Fellowship at New College, and the Kimber Award of the U.S. National Academy of Sciences.

Unhappiness with British authorities, particularly at University College, eventually led Haldane to emigrate to India in 1957. While he claimed his emigration to be the result of Anglo-French

aggression in Suez, he was attracted by the Hindu non-violent philosophy of life, pessimistic about what he perceived as the increasingly anti-socialistic tendencies of Europe, and unhappy with working conditions at University College. He and Helen left London Airport on July 24, 1957, bound for India, where he would spend the rest of his life.

Haldane held positions at the Indian Statistical Institute in Calcutta, a Genetics and Biometry Research Unit in Calcutta, and a Genetics and Biometry Laboratory in Bhubaneswar. He died of cancer in India on Dec. 1, 1964. His contributions to science came in physiology, biochemistry, and genetics, but his work on the mathematical theory of natural selection ranks highest among his accomplishments.

### C. S. Lewis and J. B. S. Haldane

The greatest impact that Haldane had on Lewis was in his scientific views of life, the purpose of humanity, and the nature and purpose of science. In *Possible Worlds*, for example, J. B. S. Haldane wrote about “the silence of interstellar space,” the very opposite of what Lewis proposed in his book, *Out of the Silent Planet*.<sup>2</sup> In *Possible Worlds*, Haldane also expressed his scientific, evolutionary, and anti-Christian sentiment, writing, “On a planet more than a thousand million years old it is hard to believe—as do Christians, Jews, Mohammedans, and Buddhists—that the most important event has occurred within the last few thousand years.”<sup>3</sup> Lewis wrote in 1943, “If the universe is teeming with life, this, we are told, reduces to absurdity the Christian claim—or what is thought to be the Christian claim—that man is unique, and the Christian doctrine that to this one planet God came down and was incarnate for us men and our salvation.”<sup>4</sup> Here Lewis was referring to Haldane, whose understanding of the vastness of the universe led him, illogically, to conclude that the Incarnation could not be true.

C. S. Lewis referred to *Possible Worlds* several more times in his writings and correspondence. Lewis’s opposition to eugenics, including the views of Haldane on that subject, can be explained by Haldane’s comment about certain people in an essay in that work, “It is on the whole undesirable that they should beget their like.”<sup>5</sup>

In December 1938, shortly after the publication of *Out of the Silent Planet*, Lewis wrote to Roger Lancelyn Green, “What immediately spurred me to write was Olaf Stapledon’s *Last and First Men* . . . and an essay in J. B. S. Haldane’s *Possible Worlds* both of wh. seemed to take the idea of such travel seriously and to have the desperately immoral outlook wh. I try to pillory in *Weston*. I like the whole interplanetary idea as a *mythology* and simply wished to conquer for my own (Christian) pt. of view what has always hitherto been used by the opposite side.”<sup>6</sup>

On March 21, 1939, Lewis wrote to Mrs. Mary Neylan, “Please tell my youthful critics that tho’ *Weston* is a caricature, *Westonism* is v. nearly as silly as I have made out. The crowning idiocy on p. 224 (‘It is enough for me that there is a Beyond’) is the last words of Lilith in Shaw’s *Back to Methuselah*. Most of the other nonsense derives from the last essay in J. B. S. Haldane’s ‘Possible Worlds.’”<sup>7</sup>

Haldane was one of those, along with Olaf Stapledon, Charles Kay Ogden, I. A. Richards, and H. G. Wells, whom Lewis accused of scientism, “the belief that the supreme moral end is the perpetuation of our own species, and that this is to be pursued even if, in the process of being fitted for survival, our species has to be stripped of all those things for which we value it—of pity, of happiness,

<sup>2</sup> Haldane, “On Scales,” *Possible Worlds*, 1.

<sup>3</sup> Haldane, “Some Dates,” *Possible Worlds*, 17.

<sup>4</sup> Lewis, “Dogma and the Universe,” *God in the Dock*, 40.

<sup>5</sup> Haldane, “Eugenics and Social Reform,” *Possible Worlds*, 191.

<sup>6</sup> Lewis, *Collected Letters*, II, 236f.

<sup>7</sup> Lewis, *Collected Letters*, II, 255f. The last essay is entitled “The Last Judgment,” 287–312. In “On Science Fiction,” *Of Other Worlds*, 66, Lewis called it “brilliant, though to my mind depraved, paper.”

and of freedom.”<sup>8</sup> *Out of the Silent Planet*, *Perelandra*, and *That Hideous Strength*, provide the novelistic embodiment of Lewis’s views of a place in society where science has attained a nearly omnipotent position, where ethics are relative, and where the secular aims of society and science take precedence over truth. Lewis’s *The Abolition of Man* would summarize much of his opposition to positions held by Haldane.

Shortly after the third book of the Ransom Trilogy appeared, J. B. S. Haldane criticized all three of them in an article entitled “Auld Hornie, F.R.S.”<sup>9</sup> The title reflects the sarcastic tone of the article, Auld Hornie being the pet name given to the devil by the Scots and F.R.S. standing for “Fellow of the Royal Society.” The Royal Society is an independent academy of science in the UK. Haldane used sarcasm in many more places in the article, such as when he compared the deaths of Frost and Wither in *That Hideous Strength* with “the bombardment of Sodom and Gomorrah” and when he stated of human babies that “Mr. Lewis is presumably more concerned with their baptism, which is alleged to have a large effect on their prospects after death.”<sup>10</sup> To his credit, Haldane balanced that sarcasm with compliments about Lewis’s “very great skill” and descriptions that were “often brilliant.”<sup>11</sup>

In the substance of the article, Haldane contended that Lewis’s science was wrong, that Lewis cast scientists in an unfavorable light, and that Lewis considered scientific planning to be a road to hell. Though he at least read the trilogy, as well as parts of *Mere Christianity* and *The Great Divorce*, Haldane would have done well to discuss his concerns with Lewis prior to publishing them, but skipping this step was in character for the flamboyant Haldane.

Haldane’s communist sympathies showed themselves in his article. First, he cited Marx in support of the idea that a “person fully adapted to his environment would have no religion.”<sup>12</sup> Secondly, as Lewis pointed out, Haldane saw the economic motive in places where Lewis did not, as when Haldane quoted the Epistle of James (4:4), “Whosoever therefore will be a friend of the world is the enemy of God.” For Haldane, the world is the capitalistic economic system, which communism sought to replace, whereas James (and Lewis) saw the world as one of the great spiritual enemies of God, goodness, and humanity. Thirdly, Haldane rejoiced at the end of his article that Mammon had been “cleared off a sixth of our planet’s surface” through Communism and that Europe was becoming progressively more socialistic.<sup>13</sup>

Lewis’s response, “A Reply to Professor Haldane,” never published during his lifetime and apparently never seen by Haldane, destroyed Haldane’s positions and demonstrated Haldane’s misunderstandings. By walking through each criticism, Lewis showed that he did not intend for all of his science to be totally accurate; after all, he was writing a romance. Then he indicated that he was attacking scientism, not scientists, by challenging the view of some that the supreme goal of our species is to perpetuate itself at any expense. Haldane was touchy on this point because he was guilty of scientism, even though at one point Lewis referred to Haldane as “a real scientist.”<sup>14</sup> Lewis offered Shaw’s *Back to Methuselah*, Stapledon, and Haldane’s own “Last Judgment” in *Possible Worlds* (1928) as examples of scientism. As to the suggestion that he was attacking science, Lewis once said, “Nothing I can say will prevent some people from describing this lecture as an attack on science. I deny the charge.”<sup>15</sup> Lewis actually cast science in a good light by putting a good scientist in *That Hideous Strength*, William Hingest, and by stating that the sciences were “good and innocent in

<sup>8</sup> Lewis, “A Reply to Professor Haldane,” 76f.

<sup>9</sup> Published in the Autumn 1946 issue of *The Modern Quarterly*.

<sup>10</sup> Haldane, “Auld Hornie, F.R.S.,” 34f.

<sup>11</sup> Haldane, “Auld Hornie, F.R.S.,” 33.

<sup>12</sup> Haldane, “Auld Hornie, F.R.S.,” 36.

<sup>13</sup> Haldane, “Auld Hornie, F.R.S.,” 40.

<sup>14</sup> Lewis, “The Funeral of a Great Myth,” *Christian Reflections*, 85.

<sup>15</sup> Lewis, *The Abolition of Man*, Chapter 3, 82.

themselves.”<sup>16</sup> Furthermore, Lewis’s portrayal of Mark Studdock as lacking a good scientific education helped to explain why he was so easily taken in by the N.I.C.E.<sup>17</sup> To his credit, Haldane recognized this.<sup>18</sup> Finally, Lewis stated that he did not see scientific planning as a road to hell, but the very opposite: that an invitation to hell would likely appear dressed up as scientific planning. In *That Hideous Strength*, Lewis wrote, Frost was the mouthpiece of the ethical theories of Professor Conrad Waddington (1905–1975), who once published a genetics paper with Haldane and taught that “an examination of the direction of evolution could provide us with the criteria from which we could judge whether any ethical system was fulfilling its function.”<sup>19</sup>

In *The Abolition of Man* (1943), published just two years before *That Hideous Strength*, Lewis worried that the triumphs of science (the twentieth century was a century of great triumph for many fields of science) might have come too quickly and have been purchased at too high a price, running ahead of corresponding ethical developments that could provide the knowledge, self-discipline, and virtue that science needed. Bacon and Marlowe had introduced the new era by valuing knowledge as a utilitarian mistress for pleasure rather than as an end in itself.<sup>20</sup> This is the book that Haldane should have tackled, Lewis wrote, stating that Haldane could have found the doctrines behind the romance of *That Hideous Strength* clearly articulated in *The Abolition of Man*.<sup>21</sup> He would have understood Lewis better if he had. That’s why Lewis wrote, “As a philosophical critic the Professor would have been formidable and therefore useful. As a literary critic . . . he keeps on missing the point.”<sup>22</sup>

Another issue that Haldane and Lewis had in common was vivisection, i.e. the experimentation on animals that many in the field of science supported and many outside that field opposed. Early in his life Haldane defended vivisection, stating, “All others who demand the prohibition of experiments on anaesthetized animals are quite definitely hypocrites.”<sup>23</sup> While Haldane later modified his views, early in his career he was opposed to those who overstated the anti-vivisection case such as by attempting to eliminate all use of animals in scientific experimentation. In the spring of 1927, for example, he offered £100 to the National Canine Defense League if they could produce the name of any demonstrator who had performed “a painful experiment on a dog before a class of students in Great Britain and Ireland within the last ten years” (*JBS*, 88). He further claimed that he had never seen an experiment that caused pain to an animal or one that he would not have performed on himself.

Lewis, an animal-lover, opposed vivisection, writing an essay on the topic for the New England Anti-Vivisection Society, including a chapter on animal pain in his book *The Problem of Pain*, and showing the triumph of the anti-vivisectionists at the end of *That Hideous Strength* when all the animals were released from their experimentation cages. In his article, “Vivisection,” Lewis correctly deplored the worst aspect about modern vivisection, i.e. the slippery slope which could lead to the preferring of one race over another, if we can argue for experiments on animals. He stated that experiments had already begun on people, that the Nazis had done so, and that British scientists may do so also. The reader of *That Hideous Strength* recalls the imprisonment of Ivy Maggs’ husband and the intent of the N.I.C.E. to use him for their experiments, an image that illustrates Lewis’s concern. His greatest concern, however, was the non-moral utilitarianism that was advanced by the triumph of vivisection, and he considered Dachau and Hiroshima as indications of such triumph.

<sup>16</sup> Lewis, *That Hideous Strength*, 203.

<sup>17</sup> Lewis, “A Reply to Professor Haldane,” 83. See also *That Hideous Strength*. New York: Macmillan, 1946, 185.

<sup>18</sup> Haldane, “Auld Hornie, F.R.S.,” 34.

<sup>19</sup> Robertson, “Waddington, Conrad Hal (1905–1975),” rev. L. Wolpert, *Oxford Dictionary of National Biography*, Oxford University Press, 2004 [<http://www.oxforddnb.com/view/article/31790>, accessed 4 June 2005].

<sup>20</sup> Lewis, *The Abolition of Man*, Chapter 3, 84f.

<sup>21</sup> Lewis, *The Abolition of Man*, Chapter 3, 75, 78.

<sup>22</sup> Lewis, *The Abolition of Man*, Chapter 3, 75.

<sup>23</sup> Haldane, “Some Enemies of Science,” *Possible Worlds*, 251.

Lewis did not always oppose the views of Haldane. In one instance, he quoted Haldane in favor of his argument in his book *Miracles* that Naturalism is self-refuting. Haldane had astutely written, “If my mental processes are determined wholly by the motions of atoms in my brain, I have no reason to suppose that my beliefs are true . . . and hence I have no reason for supposing my brain to be composed of atoms.”<sup>24</sup> In other instances, in opposition to the Myth of progress or improvement, he cited Haldane’s comment that degeneration, not progress, is the rule in evolution.<sup>25</sup>

These two brilliant men had much in common, but their attitude toward what Lewis called the Tao caused them to walk diametrically opposed paths through life. Both had a lasting impact, but Lewis’s impact carries an eternally lasting impact.

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<sup>24</sup> Haldane, *Possible Worlds*, 209, cited in *Collected Letters*, II, 715. See *Miracles: A Preliminary Study*. New York: Simon & Schuster, 1996, 24.

<sup>25</sup> Lewis, “De Futilitate” and “The Funeral of a Great Myth,” *Christian Reflections*, 58, 85.