Making Science Public:

The Today and Tomorrow Series and the Place of Science in Early 20th Century Britain

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> *"Has mankind released from the womb of matter a Demogorgon which is already beginning to turn against him, and may at any moment hurl him into the bottomless void? Or is Samuel Butler's even more horrible vision correct, in which man becomes a mere parasite of machinery, an appendage of the reproductive system of huge and complicated engines which will successively usurp his activities, and end by ousting him from the mastery of this planet? Is the machine-minder engaged on repetition-work the goal and ideal to which humanity is tending? Perhaps a survey of the present trend of science may throw some light on these questions."*
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> -JBS Haldane, "Daedalus, or Science and the Future"[1]

> *"We may sum up this discussion in a few words. Science has not given men more self-control, more kindliness, or more power of discounting their passions in deciding upon a course of action. It has given communities more power to indulge their collective passions, but, by making society more organic, it has diminished the part played by private passions."*
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> -Bertrand Russell, *Icarus, or the Future of Science*[2]

The modern world is full of communication technologies and access to information is often as easy as the touch of a button or the swipe of a screen. However, less than a century ago, the landscape was drastically different. In the early 20th century, people were worried less about the dangers of too much information than about the challenges of effective communication. In Britain in the

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[1] JBS Haldane, *Daedalus, or Science and the Future* (1923; Berkeley: Shalizi, 1993), http://vserver1.cscs.lsa.umich.edu/~crshalizi/Daedalus.html.

[2] Bertrand Russell, *Icarus, or the Future of Science* (1924; Berkeley: Shalizi, 1994), http://vserver1.cscs.lsa.umich.edu/~crshalizi/Icarus.html.

1920s, science was not understood by the vast majority of those who benefited from its advances, despite becoming an increasingly important part of the structure of society. Scientists had carved out their own sphere that was not only isolated from the layperson, but also often from the government official. While attempts to integrate scientific knowledge into society can be found a half century earlier, the fumbling of several scientific issues during World War One brought to the fore the importance of scientific knowledge and the need for it to spread beyond the walls of the university. Led by an increasingly networked generation of intellectuals who wanted to use scientific thoughts and methods to advance their own ideas of the world, science was shared with the public in the form of popular writings that, despite their scientific topics, were designed to be accessible to a broader audience.

During the 1920s and early 30s, a common way of disseminating this information was in the form of editor's series, which would often contain entries by a number of different authors. One such series was called "Today and Tomorrow." Written by 102 distinct authors who ran the gamut from academics and researchers to radio hosts, the series tackled issues from across all disciplines in an attempt to introduce a scientific outlook to all aspects of life. Books on biology and transportation technologies were juxtaposed with books on poetry, art, and law. Designed in a pamphlet style and averaging about 100 pages, the little maroon books of the Today and Tomorrow series reflect the efforts of a diverse set of individuals to spread scientific knowledge to the public and to break down the divides between the academic scientist and the rest of the world.

A close examination of this series illuminates the extent to which science and a scientific viewpoint mattered during the interwar period. The authors of the series held vastly different opinions on a variety of issues, but all of them believed that presenting those views to the world in a scientific way was the best route forward. Even those who sought to keep science isolated were drawn into the public discussion at the time and, in doing so, practically voided their own position. The impacts of this spread in scientific discourse included, among other things, a rise in science fiction and an increase in systematic attempts to predict the future. On the less positive side, in attacking the science/humanities divide, series like Today and Tomorrow made it difficult to interpret later debates in any other way. In an ironic twist of fate, by attempting to close the divide, the series helped to create it anew. An analysis of the Today and Tomorrow Series, therefore, can help contextualize much of the discourse on science that would arise in the decades to follow.

Part I: The Origins

The origins of the Today and Tomorrow series are complex, but they offer insight into the nature of the interwar generation of intellectuals and the issues they cared about. Of particular importance to that story is Charles Kay Ogden. Born on June 1st, 1889, Ogden enrolled in Magdalene College, Cambridge on a classical scholarship in 1908.[3] Described by his friends as tall and slender, with a baby face and a prominent chin,[4] Ogden took an early interest in the role of language, deciding that his area of study would be the effect of Greek language on Greek thought.[5] This decision would shape much of his future career. In his sophomore year, Ogden became one of twelve individuals involved in the founding of the Cambridge Heretics Society,[6] which arose to confront the issue of mandatory worship and emphasized a right to discuss religion freely and without judgment.

The group met for the first time in October 1909, in the rooms above the Pepys Library in Magdalene College. After some deliberation, they settled on the name Heretics, with the intent that "rejection of authority on religious truths [be] the touchstone of membership."[7] Pittiotto, the chairman of the meeting, was elected as president and Ogden took on the mantle of secretary. According to P. Sargant

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[3] Terrence W. Gordon, *C.K. Ogden: A Bio-Bibliographic Study* (Metuchen NJ: The Scarecrow Press, Inc., 1990), 4-5.
[4] P. Sargant Florence and JRL Anderson, ed., *C.K. Ogden: A Collective Memoir* (London: Elek Books Ltd, 1977), 84.
[5] Gordon, *C.K. Ogden*, 5.
[6] AJ Ayer, *The Humanist Outlook* (London: Rationalist Press Association Ltd, 1968) 126.
[7] Ibid.

Florence, one of the twelve founders and a future president of the Society, Ogden was the "moving spirit" of the meeting, so his election to secretary was unsurprising.[8] As secretary, Ogden was primarily tasked with organizational work, such as recruiting speakers and honorary members, and planning events.[9]

The first public meeting of the Heretics was held on December 8th, 1909,[10] and subsequent meetings were divided into two types: public meetings held four or five times a term in various lecture halls, and private meetings held every Sunday in Ogden's rooms. At the time, Ogden lived in "Top Hole," which was over the fish shop in Petty Cury. At these private meetings, every member of the society was encouraged to speak. When, after two years, Pittiotto converted to mysticism and left the Heretics, Ogden was promoted to president, a position he then held from 1911 until 1924. During his time as secretary and as president, Ogden played a prominent role in expanding the importance of the society; by 1913, it had over 200 members.[11]

In addition to enlarging the size of the Society, Ogden was also responsible for recruiting its network of speakers and honorary members. These included J.B. Bury, Sir Francis Darwin, Patrick Geddes, E.W. Hobson, A.C. Seward, W. McDougall, G.H. Hardy, J.T. Sheppard, G. Lowes Dickenson, J.M. Keynes, F.M. Cornford, G.E. Moore, George Bernard Shaw, G.M. Trevelyan, and Bertrand Russell.[12] Russell, in particular, was a close friend of Ogden. Admired by many in Cambridge for his

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[8] Florence, *A Collective Memoir*, 13.
[9] Gordon, *C.K. Ogden,* 6.
[10] Ibid.
[11] Ayer, *Humanist Outlook*, 226-227.
[12] Ibid.; Gordon, *C.K. Ogden*, 6.

antiwar stance, Russell was initially recruited by Ogden to write in the *Cambridge Magazine*. Their relationship would expand into the Heretics Society, and Ogden was partially responsible for introducing Russell to his wife, Dora, who was an early member of the Society.[13]

Shortly after becoming President of the Society, Ogden also found himself serving as the founder and lead editor of the *Cambridge Magazine*. A London publishing firm, Stephen Swift, approached Ogden with an opportunity to take on the editorship of a university weekly. After some trepidation, Ogden accepted, and the first issue appeared on January 20th, 1912. However, within a year, Stephen Swift broke apart and all funding for the magazine was dropped. On the advice of his friends David Leacock and P. Sargant Florence, Ogden decided to raise the money to continue the magazine on his own by appealing to his friends and professors for donations and advertisements. In order to keep the price at a penny apiece, the magazine did not turn a profit until 1914.[14]

Despite having a small editorial board that met weekly in "Top Hole", Ogden made all editorial decisions himself. He also contributed a great deal of the content of the magazine under one of his pseudonyms, the most popular of which was Adelyne More, a pun of which he was quite proud.[15] In the time before the start of the war, Ogden managed to garner contributions from people such as William Archer, A.C. Benson, Rupert Brooke, Gilbert Cannan, Gordon Craig, G.H. Hardy, Frank Harris, Jane Harrison, Jack Hulbert, Henry Arthur Jones, Vernon Lee, Sir Oliver

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[13] Florence, *A Collective Memoir*, 26, 83-86.
[14] Ibid., 16-17.
[15] Ibid.

Lodge, Harold Monro, Gilbert Murray, Arthur Quiller-Couch, Field Marshal Roberts, Bertrand Russell, Owen Seamon, and Father Waggett. Once the finances had stabilized and the readership was secure, Ogden used the magazine to explore some issues of his own choosing, such as feminism, trade-unionism, educational reform, atheism, and birth-control. These issues were ones that he deemed important, though some were quite controversial.[16]

When World War One began, Ogden used his editorship of the *Cambridge Magazine* to publish "Notes from the Foreign Press," (later renamed "Foreign Opinion"), which attempted to tell news of the war in a balanced and humanistic way. In particular, the magazine published extracts from other countries, both neutral and warring, along with opposing views.[17] This aspect of the magazine lasted from 1916 until Armistice Day, when rioters, angered by what they viewed as the pacifist nature of the reports, ransacked Ogden's premises. Ogden sought out the help of one of his tenants, IA Richards, in identifying the culprits. Instead of talking about the attack, they soon found themselves discussing what would eventually become the basis for their joint work on language, *The Meaning of Meaning*. This work would appear in parts in the Cambridge Magazine over the next four years and would form much of the foundation for Ogden's later thought.[18]

Upon conclusion of *The Meaning of Meaning* in 1921, the Cambridge Magazine ceased publication.[19] Ogden was moving on to his next venture, working as an editor at the publishing firm of Kegan Paul, Trench, Trübner and Co, a branch

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[16] Ibid., 21-2.
[17] Ibid., 56-8.
[18] Ibid., 99.; Gordon, *C.K. Ogden*, 18-20, 24.
[19] Florence, *A Collective Memoir*, 17.

of Routledge. He got in contact with the company through his work as business manager of yet another journal, *Psyche*, which he helped to found.[20] According to Fredric Warburg, one of Ogden's primary contacts at Kegan Paul, "the value of Ogden to Kegan Paul was immense."[21] During his time there he oversaw the production of five separate series, consisting of hundreds of titles.[22] The first of these was the International Library of Psychology, Philosophy, and Scientific Method. Early volumes in this series included *Philosophical Studies*, by G.E. Moore, *Tractatus Logico-Philosophicus*, by Ludwig Wittgenstein, and his very own *Meaning of Meaning*. Between 1921 and 1934, 114 titles were released as part of the International Library.[23]

Ogden also initiated[24] and oversaw the production of The History of Civilization series, the Science for You series, and the Psyche Miniatures. The History of Civilization series exceeded 50 volumes, and the Psyche Miniatures, based off his journal *Psyche*, reached almost 100.[25] To all of these series, Ogden brought the massive network of people he had accumulated during his time in the Heretics and as editor of the *Cambridge Magazine*. In Warburg's words, "his activity was immense and his range of friends prodigious."[26] Lord Zuckerman elaborates: "as editor of the *Cambridge Magazine* and as founder of the Heretics, Ogden knew almost everybody who was interested in either a critical or novel way in matters

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[20] Gordon, *C.K. Ogden*, 28.
[21] Fredric Warburg, *An Occupation for Gentlemen* (Cambridge, Massachusetts: Houghton Mifflin, 1960), 93.
[22] Gordon, *C.K. Ogden*, 28.
[23] Warburg, *An Occupation*, 93-4.
[24] Florence, *A Collective Memoir*, 125.
[25] Gordon, *C.K. Ogden*, 28-29.
[26] Warburg, *An Occupation*, 92.

religious, philosophical, artistic, and anthropological."[27] He brought this network with him to Kegan Paul and exploited those connections whenever possible. Nowhere is this more evident than in one of his greatest achievements, the Today and Tomorrow Series.

In 1912, while still an undergraduate, future biologist and scholar JBS Haldane wrote an essay discussing the future of science. He refurbished it for a talk at the New College Essay Society in 1921, and then again for the Heretics Society in 1924.[28] The latest version of the paper was titled *Daedalus, or Science and the Future*, and it dealt with such issues as ectogenesis, alternative power sources, invasive species, and transhumanism. In general, Haldane trumpeted the potentialities of science for the future of humanity, introducing to a skeptical audience many ideas reminiscent of Wellsian science fiction, but with a more practical and serious mood. Unlike science fiction, which was inevitably fictional, *Daedulus* presented its predictions as truths. The future envisioned by Haldane was not a fantasy world, where science did something impossible, but our very own world, with our very own science.[29]

Sitting in the audience for Haldane's talk was none other than CK Ogden, back for a visit to his old stomping grounds. Ogden immediately recognized the potential in the paper and convinced Haldane that it ought to be published.[30] Upon getting Haldane's permission, Ogden brought *Daedalus* to William Swan Stallybrass, his

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[27] Florence, *A Collective Memoir*, 125.
[28] Ronald Clark, *JBS: The Life and Work of JBS Haldane* (Oxford: Oxford University Press, 1968), 70.
[29] Haldane, *Daedalus*.
[30] Clark, *JBS*, 70.

supervisor at Kegan Paul, and suggested that it might be printed as a cheap pamphlet. Ogden's colleague, Fredric Warburg, had another idea. Instead, he suggested that it appear as a slim, approximately 100 page book, priced at the more expensive half-a-crown. Stallybrass agreed and the first 2,000 copies were printed. To their great surprise, the book sold rapidly, and more printings were ordered. In the end, over 20,000 copies were sold. Ogden and Kegan Paul had tapped into a shockingly hungry market, and they determined that a sequel to *Daedalus* was necessary.[31]

To find one, Ogden turned to his long time associate and friend, Bertrand Russell. Titled *Icarus, or the Future of Science*, Russell's paper was a direct response to the optimism expressed by Haldane. Russell's vision of the future of science was much darker, emphasizing the ways in which powerful parties could exploit science to maintain their power.[32] In his words, "men sometimes speak as though the progress of science must necessarily be a boon to mankind, but that, I fear, is one of the comfortable nineteenth-century delusions which our more disillusioned age must discard." For Russell, science can only lead us to further indulge our collective desires, which are both distasteful and destructive.[33] *Icarus*, too, sold incredibly well, prompting Ogden, Warburg, and Stallybrass to discuss the potential creation of a series, with these two works as the jumping off point.[34]

After some discussion, the three agreed on a name, The Today and Tomorrow Series, and they moved forward on recruiting authors and book subjects.

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[31] Warburg, *An Occupation*, 109-113.
[32] Ibid., 113.
[33] Russell, *Icarus*.
[34] Warburg, *An Occupation*, 113.

The authors ran the gamut from older generation, well-known names, to newer intellectuals just making their debut. Regardless of who they were, it was Ogden who chose them to write for the series,[35] which would end up lasting for 7 years. While not all of the books were as successful as the first two, Today and Tomorrow was on the whole a tremendous success and a tribute to the powerful network that Ogden had accumulated since his time at Cambridge. Some popular and influential titles included *What I Believe*, by Bertrand Russell; *Lysistrata, or Woman's Future and Future Woman*, by Anthony Ludovici; *Proteus, or the Future of Intelligence*, by Vernon Lee; *Pegasus, or Problems of Transport*, by JFC Fuller; *Narcissus, or an Anatomy of Clothes*, by Gerald Heard; *The World, the Flesh, and the Devil*, by JD Bernal; and *Eleutheros, or the Future of Public Schools*, by JF Roxburgh.[36] This is only a small sampling of what the series had to offer.

During its 7-year reign, the series was not only published in England, but also in the Americas, through the publishing house of EP Dutton. John Macrae, the head of EP Dutton, had an almost ritualistic procedure with Stallybrass, in which Macrae came to Kegan Paul and perused the available books. "Macrae would rifle through the pages, sometimes pausing to read a few sentences here and there, then turn to Mr. Stallybrass. 'How many of this one, d'you think, Stallybrass."[37] They would then negotiate a quantity and a price, and the deal would be struck.[38] In this way, the

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[35] Florence, *A Collective Memoir*, 128.
[36] Warburg, *An Occupation*, 113-114.
[37] Ibid., 105.
[38] Ibid., 103-106.

small books in the Today and Tomorrow series, with their distinctive maroon covers,[39] made their way across the Atlantic to be read by an American audience.

According to Warburg, "the Today and Tomorrow Series was the most lively, most successful and most enjoyable publishing experience with which I have ever been connected."[40] It was truly a landmark series for everyone involved, and Ogden was there at its center. However, the series did more than just satisfy its creators and earn Kegan Paul some money. It was also a way for an entire generation of intellectuals to share their visions of the world with an eager public. Though the series covers a wide range of topics, many of the books have thematic similarities that reflect the ideas and values of those who wrote them.

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[39] Peter J Bowler, *Science For All* (Chicago: University of Chicago Press, 2009), 139.
[40] Warburg, *An Occupation*, 117.

Part II: The Content

Although it began as a commentary on science, the Today and Tomorrow Series rapidly expanded to include works on almost any subject imaginable (see endnotes for a complete compilation of the series). Though never officially enforced, the classical theme was more or less carried throughout the entirety of the series, with nearly every book being prefaced with a name or a saying in Greek or Roman. According to Vernon Lee,[41] the classical title was added into the works of most authors out of respect for the origins of the series, though some of the books, such as JFC Fuller's *Atlantis*, made heavy use of mythological terms throughout. In order to fairly assess the content of the series, then, special attention must be given to its first two installments, namely *Daedalus* and *Icarus*, which together set the tone for all the works to follow.

As mentioned above, *Daedalus* was initially given as a speech to the Heretics Society and was only later adopted into book form, at the request of Ogden. In its final version, Haldane begins by addressing the possibility that science may have downsides, before promptly dismissing it as irrelevant, since science will continue its forward march regardless of the consequences. Although Haldane's focus is on the effects of biology, he first discusses both physics and chemistry, addressing the potential solutions to the energy crisis through the adoption of wind and solar energy sources and the effects of artificial foods on the role of agriculture in human society.

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[41] Vernon Lee, *Proteus, or the Future of Intelligence* (New York: E. P. Dutton & Company, 1926).

Importantly, Haldane takes a moment to discuss the shift in theoretical physics from the material to the ideal as a result of the work of Albert Einstein. Although materialism had dominated human thought and behavior since Newton, Haldane believes Kantian idealism, or subjectivism, will now control the way that humanity views and interacts with the world. This idea of a changing scientific outlook will be a recurring theme in the series. Haldane also argues for the merging of the artist and the scientist, at least to some extent, so that the artist will be better able to understand his subject and to pass that knowledge on to the viewer. In his words, "I am absolutely convinced that science is vastly more stimulating to the imagination than are the classics, but the products of this stimulus do not normally see the light because scientific men as a class are devoid of any perception of literary form."[42] This idea of creating a more popular way of disseminating science is one of the foundational notions of the series.

Haldane then switches gears to focus on his main topic, biology. He identifies six major turning points in the history of biology: the domestication of animals, plants, and fungi, a shift in ideas of beauty that altered sexual selection, bactericide, and artificial control of conception. He uses these as a springboard to argue that developments in biology tend to have profound ethical effects and, more importantly, that biological invention often begins as a perversion and ends as a ritual. As an example, the use of cow milk was initially a perversion of the intimate relationship between milk and a child, but has now become habitual. In reference to

[42] Haldane, *Daedalus*.

this perversion, Haldane identifies Daedalus as the first scientist, since he was willing and able to pervert the gods' will and avoid repercussions.

As he concludes his piece, Haldane adopts the view of a writer from the future and discusses the next 50 years of biological development. Specifically, he discusses the end of disease, the de-ritualization of death, the use of wind power, the end of deserts, the introduction of artificial food sources, the rise of ectogenesis[43] and a corresponding eugenics, and the artificial engineering of the human race. All of these developments, he believes, are immediately and practicably attainable. Finally, he briefly discusses the budding internationalism evidenced by the League of Nations and warns not to take traditional morals too seriously in the face of scientific progress. Both of these themes would resurface in later works in the series.

Icarus, the second book in the series, is a direct response to *Daedalus*, commissioned by Ogden in order to encourage dialectic discourse. In it, Bertrand Russell takes a much more cautious approach to the issue of scientific progress, fearful that Haldane's general sense of optimism is misplaced. Russell's overarching thesis is that, in practice, science is applied by those in political power, resulting in a skewing of the scientist's initial goals. In other words, the main effect of scientific progress is to give more power to those already in command. In his argument, Russell focuses specifically on science's ability to gratify desires, dividing it into three broad categories: physical, biological, and anthropological.

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[43] This term, coined by Haldane in *Daedalus*, is used to describe the growth of an organism outside of its traditional environment. In this case, it is the growth of a human embryo outside of the womb.

For the physical sciences, Russell focuses on the rise of industrialism and the resulting increase in the productivity of labor. Industrialism, he argues, has led to an increase in the value of natural resources and military strength to those seeking power. He relates this argument to the role of organizations in promoting nationalism and competition, which is further spurred by technological development. Just as football teams thrive on competition, so too do nations, making Russell believe that any attempt at a functioning world state would result in something cruel and despotic. On a more "positive" note, though, the world state's brutality would eventually fade due to lack of competition and it would abandon manipulation and control in favor of stagnation and indifference.

In the realms of anthropology and biology, Russell advocates for birth control and discusses how it reflects a victory of individual desires (to not have a child) over collective pressures (to reproduce). This fits with his philosophy that men who do what is best for themselves, even unintentionally, do less damage to society than those who act out of collective passions such as nationalism. In the realm of eugenics, Russell is noticeably more cautious than Haldane, returning to his belief that scientific developments like eugenics only give more power to the powerful. He argues that, in reality, eugenics will be implemented in such a way as to favor political administrators, not necessarily those with more intelligence. Furthermore, the artificial control of emotions induced by eugenics may in fact cement the power dynamic by pacifying those in lower castes. Thus, Russell presents a much darker view of the future of science than Haldane.

With these two books, Haldane and Russell set the tone for the rest of the Today and Tomorrow Series. The key themes that surface in many of the later works originate with the topics of *Daedalus*, *Icarus*, or both. The first and foremost of these themes is an emphasis on science. A sizeable portion of volumes speak about science on both the practical and theoretical levels, debating the merits, pitfalls, possibilities, and assumptions of specific disciplines or of science as a whole. Some of these works focus on applied science and discuss the practical potential of current trends. Others debate the morality of certain scientific practices while still others question the very foundations of science itself, creating a diverse examination of the role of science in society in the 1920s.

The work that is most in line with the discussion begun by Haldane and Russell is JD Bernal's *The World, the Flesh, and the Devil* (1929). Bernal begins with a brief talk on the dangers of prediction and the complex combination of chance and determinism that creates the future. He then breaks up his discussion of the future into three broad topics: the world (physical), the flesh (biological), and the devil (psychological). In his discussion of the world, he focuses on the role of space travel and the development of planet-like spheres, with life surviving on the hollowed-out interior. This idea would later be developed by Freeman Dyson and is now popularly referred to as a Dyson Sphere. In his next section, Bernal takes the ideas of Daedalus a step further, discussing the eventual breaking away of brains from bodies and the potential formation of linked minds and a super intelligence. These notions undoubtedly inspired aspects of Olaf Stapledon's *Last and First Men*, published just a year later.

In a turn from Haldane, Bernal argues that psychology and its associated arts will likely be as important as the "hard" sciences to the future of the human race, specifically mentioning the potential unification of the "mechanists" and the "humanists." The collapse of this distinction was also mentioned by Haldane and reflects one of the major discussion points of the series as a whole. In his synthesis section, Bernal argues for the importance of emotions and psychological instincts in shaping future humanity, before concluding with an argument for the separation of the future specialist scientist from the rest of humanity. Bernal's contribution to the Today and Tomorrow Series would go on to be one of the more influential installments, and one of the few to remain recognizable outside of the context of the series.

Not all of the science-focused books were so broadly targeted at the future however. In fact, several focused in on one aspect of technology and its potential advancements in the immediate future. AM Low's *Wireless Possibilities* (1924) discusses the future of wireless communication and its inevitable advance due to technological breakthroughs, while Oliver Stewart's *Aeolus, or the Future of the Flying Machine* (1927) focuses in on the future of flying technology. Low argues for the future use of specialized wavelengths to target specific audiences, the advent of "radio television" and color television, wireless control of planes, the transference of power inductively over wireless, and the use of wireless to read people's thoughts. Though not all of these visions have come to pass, Low's focus on a short time scale allows him to make reasonably accurate predications. For his part, Stewart focuses on the budding competition between fixed-wing planes, moving-wing planes, and

airships, arguing that moving-wing planes will dominate local transportation, while fixed-wing planes will grow larger and become like cruise ships for long-distance travel. He predicts that airships will die out due to explosions, an eerily accurate forecast of the effect of the Hindenburg disaster. Whereas Low is incredibly optimistic about science and technology, even going so far as to say that the wireless reading of minds would benefit society, Stewart is less sure. In fact, Stewart believes that unnecessary government regulations will hamper technological progress, a belief likely originating from his time in the Royal Flying Corps during WWI.[44] His anti-authoritarian attitude, evidenced by his argument that even speed limits are unsafe, reflects another recurring theme in the series.

While some works stuck to practicality, others dealt with the morality of science and offered programs for moving forward. In *Prometheus or Biology and the Advancement of Man* (1925), HS Jennings discusses the role of both the environment and genetics in determining characteristics, arguing that Mendelianism has caused us to erroneously dismiss the environment as less important. Despite this, he goes on to argue for the potential benefits of eugenics, while still acknowledging the inherent randomness of gene combinations. In a more philosophical turn, CJ Patten's *The Passing of the Phantoms: A Study of Evolutionary Psychology and Morals* (1924) begins with a scientific account of evolutionary theory, but then transitions into the ways in which it can be applied to superstition, morality, and religion. He argues that morality and religious ideas of duality owe their origins to our dreams and our evolution from lower life forms, concluding that we ought to dismiss

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[44] "Oliver Stewart," The Aerodrome, accessed December 17, 2014. http://www.theaerodrome.com/aces/england/stewart2.php.

imposed moral doctrine as nonsense, since real morals come from within. Despite its abstract bent, Patten's work is an apt microcosm of the series in that it manages to straddle both traditionally scientific topics and traditionally non-scientific topics and draw connections between them.

Both Haldane and Russell return to the series in 1925 with *Callinicus*, *A Defence of Chemical Warfare* and *What I Believe,* respectively. In *Callinicus*, Haldane argues that the current taboo against the use of chemical weapons is ill-founded and that, in fact, death by most chemicals is far more humane than the tearing to bits induced by cannons or mortars. This supplements his arguments in *Daedalus* about the initial perversion brought about by new technologies, making them seem immoral despite their eventual benefits to humanity. Russell's *What I Believe*, despite its broader aims, also echoes his earlier work. In it, he introduces his views on the "good life," which is centered on increasing knowledge and love. As with *Icarus*, he argues that religion and morality force people to do things that are actually not beneficial to themselves or society. Instead, he argues, we should look to science as the key to the good life. He also argues that artificial separations, such as nations, impede the good life as well, although he avoids presenting an international organization as the solution.

One of the most interesting takes on science in the series can be found in JWN Sullivan's *Gallio, or the Tyranny of Science* (1927). Unlike the works mentioned above, Sullivan doesn't work within the confines of science, but steps outside of it and offers criticism. He argues that previous theories of physics have led people to adopt a materialistic, almost nihilistic, worldview, even as Einsteinian physics

introduces idealism in its place. Furthermore, this materialistic worldview has been harmfully applied to other subjects, such as psychology, which may not actually conform to the same philosophy. Finally, he argues that science, because it is an enclosed system that defines moral and aesthetic values as beyond its bounds, can never hope to address them. However, that does not mean that these values are not as real as science is – science is only focused on one half of the universe, by its very definition. This can be solved either by acknowledging the inherent boundaries of science or by reevaluating science's foundation to include morals and aesthetics within its bounds. In this way, science and the arts can finally be brought together instead of being forced to clash, allowing for the merging of the scientists and the artist that Haldane envisioned in *Daedalus*.

Although the Today and Tomorrow Series began with a focus on science, some of the themes introduced in *Daedalus* and *Icarus* find their way into later works that did not deal directly with science or technology. One of these themes is a liberal worldview, often combined with a dismissal of both authority and the status quo. CP Harvey, in his *Solon, or the Price of Justice* (1931), discusses the history and future of law, with an eye toward reducing the cost of litigation and allowing for more equal access to the courts. He argues that the justice system disproportionately favors the wealthy, since it is easier for a rich man to retrieve a stolen jewel than it is for a poor man to reclaim a stolen shovel, despite the later being more valuable to the individual. As a solution to this problem, he offers a number of somewhat radical options, such as the reformulating of official's roles,

introduction of hearsay as admissible evidence, and the elimination of the House of Lords altogether.

This challenging of standard practices takes on a social bent in *Hypatia, or Women and Knowledge* (1925), written by Dora Russell, Bertrand Russell's wife and a good friend of CK Ogden. Much like her husband's *Icarus*, Russell's *Hypatia* is a response to another work in the series, *Lysistrata, or Woman's Future and Future Woman* (1924) by Anthony M Ludovici. Russell argues that the feminism movement is a good thing, and that women are entitled to make decisions and possess individual liberties. Specifically, she advocates for a very liberal sexual ideology, supporting polygamy, birth control, and sexual education. Sexuality, she argues, is central to the feminist mission and feminism needs to embrace that fact in order to advance. Related to this argument is Ralph de Pomerai's, *Aprodite, or the Future of Sexual Relationships* (1931). De Pomerai strives to strip sexual relations of their moral baggage and free humanity from sexual repression, which he argues is the greatest menace of the age. In order for humanity to reach its full potential, the taboos and traditions which limit sex should be removed, something he believes is already starting to happen.

Along similar lines, in *Kalki, or the Future of Civilization* (1929), S Radhakrishnan argues for the elimination of all current standards for marriage in the hopes of creating a better balance among the mind, body, and spirit. However, this is just part of a larger argument for something akin to Russell's "good life." Preventing us from reaching this goal are such things as irrelevant religious beliefs, the impossibility of democracy, the greyness of morality, and the increasing

unimportance of the home life. However, like Russell, Radhakrishnan believes that the path to a better future involves abandoning national distinctions in favor of unifying international ideologies. This goal of world unity owes its origins to a combination of the effects of the First World War and the literature of HG Wells, and it is another recurrent theme in the series. In fact, André Maurois' *The Next Chapter: the War Against the Moon* (1927) offers a fictional account of what that world unity might look like. When war threatens due to an energy crisis, the newspapers, which have monopolized information distribution, decide to fake an attack on the Earth from the moon, rallying every nation together to fight the common foe. When a scientist takes it upon himself to fire back, it is discovered that the moon isn't uninhabited after all, and an unintentional interstellar war begins. In part a lesson on the dangers of toying with the unknown, *The Next Chapter* also offers a vision of what global unity might look like, and what it might cost to achieve.

Even in works on topics far from this discussion, ideas of world unity can still be found. In *Apella, or the Future of the Jews* (1925), Laurie Magnus argues for the future failure of Zionism and the formation of a sovereign Jewish state in the face of the stronger desire for nationalization and assimilation. This belief in the power of assimilation is directly related to a Wellsian idea of world unity. In Edinger and Neep's, *Pons Asinorum, or the Future of Nonsense* (1929), they discuss the history of nonsense, or humor without aim, its origin in old rituals that lose their meaning, and its contemporary internationalization. They envision nonsense as a unifying language, applicable to every human, and therefore a powerful force for global unity. Finally, in *Nuntius, or Advertising and its Future* (1926), Gilbert Russell argues,

among other things, that advertising can be used on a national scale to prevent war and promote international sentiment.

If world unity is to be achieved, it will have to become the mantra of the next generation, or at least that is what 21-year old Julian Hall argues in *Alma Mater, or the Future of Oxford and Cambridge* (1928). Hall believes that the students at Oxford and Cambridge represent the next wave of intellectual thought and, as such, are worthy of study. He divides them up into conspirators, who are inspired by HG Well's *Open Conspiracy*, and as such advocate for world unity and scientific progress, and skeptics, who focus on the present and do not question the way things are. Hall further divides the conspirators into two camps: the open conspirators, who want to give self-sufficiency to the community through social reform, and the Daedalus, who want to give self-sufficiency to the individual through internal, biological, advancements. The conspirators have what it takes to change the world for the better, but they are too few in number to actually effect change, and the skeptics refuse conversion. Hall argues that the solution lies in remodeling the education system across the globe in order to motivate the next generation of students to become more active.

Hall is not the only one who wants to pin his hopes on the next generation. In *Atlantis, or America and the Future* (1925), JFC Fuller believes that the youth will provide the solution to the many problems with American society, such as an ineffective criminal system, the dominance of materialism and a profit-oriented work ethic, and the inaccuracy of news reporting. This idea that the next generation will be better than the present reflects the larger theme of optimism that runs

throughout the series. Nearly every entry, even those that offer cautionary tales about the past or the present such as *Icarus*, leaves open the possibility of a better future, provided we choose our path wisely.

In conclusion, the Today and Tomorrow series tackles a broad range of issues and presents a very diverse set of viewpoints, some of which are in direct competition with one another. However, there are also several important themes that can be found throughout the series, tying even the most diverse entries together. Following the example set by *Daedalus* and *Icarus*, many of the books focus on science and its potential effects and consequences in the future. Others encourage the reader to think beyond the confines of contemporary society and to challenge the status quo. Still others put forth a doctrine of world unity, with an emphasis on the role of the youth in bringing about a better future. These themes recur throughout the series not only because of their importance to the arguments of its progenitors, *Daedalus* and *Icarus*, but also because intellectuals at the time believed that they were issues worth sharing with the public.

Part III: The Context

The First World War revealed to the population the diverse applications of science. With chemicals and explosives, scientific research sprung from behind the walls of the University and became important to a wider audience. At the time, science identified itself in many ways by what it was not. Divides such as pure and applied, sciences and humanities, and public and private were invoked, often in contradictory ways, to identify the true place of science in relation to the rest of the world. In the interwar years, however, young academics like Ogden began to see the value in ignoring those dichotomies in the interest of sharing knowledge with others. These academics saw their liberalized ideas about society and their vision of the future as intimately connected with a scientific outlook, an outlook that they believed ought to be shared. Meanwhile, in the wake of its effects during World War One, scientific knowledge began to be seen by the layperson as a gateway to self-improvement. These two desires met in the rise of popular science.

The belief that scientific knowledge ought to be spread further became an important subject of debate during and immediately following World War One and tied into ongoing discussions on the nature of science as either pure or applied. At the start of the war, Britain initiated several embargos on exports to Germany, including one on lard. Lard, unbeknownst to many higher-ranking British officials, could be chemically altered to make explosives, so it was imperative that the embargo be executed immediately. However, in ignorance, British officials delayed the embargo. When the scientific community discovered this slip, the result was outrage; the British ministers of state clearly did not have the requisite scientific

knowledge to make competent decisions.[45] This belief was fortified by the failures of the wartime-created British Dyes Limited, whose leadership was deliberately designed so as to avoid the appointment of experts.[46] To express their anger and to motivate change, a group of 36 eminent scientists, including E Ray Lankester,[47] Lord Rayleigh, and Sir Arthur Shipley, [48] signed a manifesto arguing that wartime setbacks were directly correlated with a failure to properly educate British youth on the benefits of science.[49]

The manifesto was entitled "Neglect of Science: A cause of failures in war," and it sparked a media debate on the issue right in the middle of World War One. Debates occurred in the national press from the release of the manifesto in 1916 until the end of the war in 1918. The main goals of the instigators were to make science education a mandatory part of British secondary education[50] and to give scientific knowledge more weight on university and government entrance examinations. In so doing, they argued, Britain would be better prepared to handle future conflicts effectively and intelligently.[51] Thus, the authors of the manifesto argued that science deserved a role in education precisely because of its practical benefits. Opposing them were those who believed that education was designed to

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[45] Anna-K Mayer, "Reluctant Technocrats: Science Promotion in the Neglect-of-Science Debate of 1916-1918," *History of Science*, vol. 43, 141.
[46] Zuoyue Wang, "The First World War, Academic Science, and the "Two Cultures": Educational Reforms at the University of Cambridge," *Minerva* 33 (1995): 111, http://www.cpp.edu/~zywang/cambridge.pdf.
[47] Bowler, *Science For All*, 19.
[48] Wang, "The First World War," 109.
[49] Anna-K Mayer, "Reluctant Technocrats: Science Promotion in the Neglect-of-Science Debate of 1916-1918," *History of Science*, vol. 43, 141, http://articles.adsabs.harvard.edu/full/seri/HisSc/0043//0000139.000.html.
[50] Ibid.
[51] Wang, "The First World War," 109-110.

give the student a broad set of critical thinking tools, a belief that did not cohere well with the image of science as specifically practical knowledge. They believed that scientific education, because of its specific applications and perceived lack of general educational benefit, did not belong in a traditional humanities education, which valued well roundedness.[52]

As Anna K Mayer argues, this debate can be put into historical perspective as a manifestation of the traditional antithesis between morality and progress.[53] Interestingly, the dialogue between *Daedalus* and *Icarus* also reflects this discussion. Haldane believed that morality would adapt to progress, allowing us to put our faith in the future of science, whereas Russell was concerned that scientific progress would outstrip morality, leaving us with a corrupt and broken society.[54] Mayer connects this debate back to education: "the antithesis between progress and morality was so deeply entrenched that the defence of traditional liberal education could easily concede science's utility and efficiency; and it was for the same reason that it could simply dismiss the demands for compulsory scientific education, on the grounds that scientific training provided no genuine education, no `training of human beings in mind and character, as citizens of a free country.'"[55]

Complicating this picture was the growth of science in the universities; specifically the rise of what Gary Werskey calls "High Science." Werskey defines

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[52] Mayer, "Reluctant Technocrats," 143.
[53] Ana-K Mayer, "Moralizing science: the uses of science's past in national education in the 1920s," The British Journal for the History of Science, 30 (1997): 51-52, doi:10.1017/S0007087496002890.
[54] Charles T Rubin, "Daedalus and Icarus Revisited," *The New Atlantis* No. 8 (Spring 2005): 73-91. http://www.thenewatlantis.com/publications/daedalus-and-icarus-revisited.
[55] Mayer, "Moralizing Science," 51-52.

"'High Science' [as] research which academic scientists hold in the greatest esteem […] It is 'pure', i.e. undertaken for purely intellectual as opposed to utilitarian reasons. It is 'hard' and 'experimental': which means, among other things, a bias towards the techniques and problems of the physical sciences and an aversion to speculative theorizing [… It] is also 'fashionable', 'hot' science, a research area of outstanding promise or continuing excitement."[56] "High Science," as practiced at Cambridge, was an elitist endeavor, focusing on the pure and intellectually stimulating nature of scientific study while deliberately avoiding any investigation of its practical applications. The rise of this view enhanced the already prevalent idea that applied science had nothing to do with pure science. The physicist William Bragg even went so far as to say that "there is no applied science distinct from pure science. There are applications of pure science, that is all."[57]

This mindset is especially interesting, given the argument outlined by Mayer. On the one hand, there were a group of individuals arguing that science could not provide the broad intellectual base that the humanities could and, for that reason, did not deserve a place in British education. On the other hand, the Cambridge academics were studying science precisely because of its broad and intellectual nature, and they deliberately shunned any attempts to apply it to the world in a practical way. In other words, in the "High Scientist" described by Werskey we have exactly the counterexample necessary to prove the opponents of the Neglect of Science Manifesto wrong. However, there is a reason why the opponents of the

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[56] Gary Werskey, *The Visible College* (New York: Holt, Rinehart and Winston, 1979), 20.
[57] Sabine Clarke, "Pure Science with a Practical Aim: The Meanings of Fundamental Research in Britain, circa 1916-1950," *Isis*, Vol. 101, No. 2 (June 2010): 291, http://www.jstor.org/stable/10.1086/653094.

Manifesto were still able to hold their ground. The Neglect of Science authors emphasized science's practical benefits, since that was the entire reason for the Manifesto in the first place. Unfortunately, this allowed their opponents to dismiss these benefits as incoherent with standard education. Had the authors instead argued that science's real goal was a broad educational underpinning, their opponent's position would have become completely untenable in light of the Cambridge ethos, which clearly shows that science can and was being pursued for purely intellectual reasons.

All of this confusion demonstrates how science was far from defined as a professional field in the early 1900s. Different factions had different ideas about what science was and what science could or should be. Even as Cambridge academics dismissed applied science as unimportant, those researchers associated with industry shunned ideas of pure science, claiming that it was only being studied to satisfy the intellectual curiosity of a self-centered elite. The pure-applied divide was actually so powerful that the British Department of Scientific and Industrial Research (DSIR) had to invent an entirely new term that was flexible enough to reach both audiences. Instead of funding pure or applied science, the DSIR chose to fund what they called "fundamental research," a term they applied to work that was "both scientifically important and practically useful." By adopting this new, loosely defined, expression, the DSIR was able to convince each faction that what it was funding was relevant to their interests.[58]

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[58] Ibid., 288.

In addition to shunning applied research, the Cambridge academics were also carving out a distinct culture, one that was highly competitive, elitist, and generally closed off from the outside world. Those who spent time researching for non-academic reasons were labeled as social outcasts and, since at Cambridge the social life of the scientist consisted almost exclusively of discussions with other researchers on scientific topics, social exile brought with it intellectual banishment as well.[59] To add to this already elitist atmosphere, "high science" practitioners were almost exclusively wealthy white males, enhancing the sense of superiority through homogeneity.[60] Finally, there was a distinct and noticeable divide between the arts and the sciences, creating a cultural and intellectual rift almost as strong as the one between pure and applied science.[61] Even within their own ranks, those who were not viewed as competent enough were cast out. For example, Lancelot Law Whyte, the author of *Archimedes, or the Future of Physics* (1924) abandoned his career at Cambridge in 1923 out of fear that he was not good enough to compete with his compatriots.[62] This highly competitive environment heightened the sense of elitism already described.

Furthermore, a desire to remain within the community created a very conservative attitude among "high scientists," who were unwilling to push the boundaries lest they be ostracized. The key issue that demonstrates this conservatism was the eugenics movement. Nearly all members of the Cambridge scientific circle were of the view (with the vehement support of Richard Gregory,

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[59] Werskey, *Visible College*, 24-25.
[60] Ibid., 22.
[61] Ibid., 25.
[62] Ibid., 23.

editor of *Nature Magazine*[63]) that the lower qualities found in men were the result of genetics, not environment. As such, they believed that the solution was to force down the birth rate of the working classes, maybe even through the use of mandatory sterilization. Even Julian Huxley, who is generally viewed as a moderate, was in favor of using the threat of cutting off unemployment relief to prevent the recipient from fathering any more children.[64]

Werskey argues that a core group of five intellectuals, namely Hymen Levy, JBS Haldane, Lancelot Hogben, JD Bernal, and Joseph Needham, stood out from the norm in that they turned away from the conservativeness of the traditional "high scientist."[65] Instead, by the end of the 20s they became social imperialists, who believed that social reform was the solution to the plight of the working classes, and that it could be achieved by increasing efficiency through the spread of scientific practices. The social imperialists argued that funding further scientific research, both pure and applied, would ultimately lead to developments that would improve the lives of citizens as a whole. Unlike many of their peers, they believed that pure science can and should be used for the benefit of society; that the "high scientist" ought to descend from his ivory tower and share his knowledge for the benefit of all.[66] Haldane's *Callinicus*, discussed earlier, is a prime example of this belief that a scientific outlook can be applied to social problems in order to provide the best possible solution.

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[63] Ibid., 32.
[64] Ibid., 42.
[65] Ibid., 13.
[66] Ibid., 28.

However, Peter Bowler argues that Werskey's image of the rebellious five is largely a myth. While those five academics did indeed stand out for many of their political views, there was a much larger number of academics that were interested in the broader social impacts of their work, and in sharing their knowledge with a larger audience.[67] Moreover, these academics were following in the footsteps of many who had come before. As early as the late 1870s, science writers were criticizing the government for inefficiency and saw a restructuring of the administration based on scientific principles as the solution.[68] At the turn of the century, Henry Armstrong and John Perry began advocating for more science education to better prepare students for life as productive citizens.[69] In 1905 RB Haldane, JBS Haldane's uncle, and J Norman Lockyer argued that science ought to have a larger role in government.[70] And in 1910, The Cambridge University Press published a series edited by AC Seward called the Cambridge Manuals of Science, which capitalized on the available expertise at Cambridge to spread scientific and technical knowledge beyond the university.[71]

HG Wells, one of the founders of modern science fiction, was also rallying calls for a broader distribution of scientific knowledge as early as 1901. For Wells, science and scientific practices were closely connected to a potential future world-state, an idea that was later adopted by many of the authors in the Today and Tomorrow Series. Starting with *Anticipations* in 1901 and stretching through to *The*

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[67] Bowler, *Science for All*, 6-7.
[68] Turner, "Public Science," 594.
[69] Ibid., 597.
[70] Bowler, *Science For All*, 19.
[71] Ibid., 126.

Shape of Things to Come in 1933, Wells released a series of works that outlined and shaped his vision of a cosmopolitan world order.[72] In *Anticipations*, Wells discusses how a scientifically educated class of people determined to change society for the better created a world-state out of smaller, regional unions.[73] This belief that world unity could only arise if smaller unions were formed first would remain prominent in the rest of his writings.[74] In 1905, Wells published *A Modern Utopia*, in which he describes the future leadership class as a scientific and technical elite, known as the Samurai. The equivalent of Plato's Guardians in *The Republic*, the Samurai are entrusted with rule because they have become experts at its practice through scientific training.[75] Thus, even in his early writings, Wells saw a close connection between spreading scientific knowledge and creating a world state.

Wells' ideas were quite influential in Cambridge at the turn of the century. *A Modern Utopia* was specifically written for a younger audience, and it encouraged a group of Cambridge students to form a society called the Utopians around 1906. Led by Amber Reeves, who would end up having an affair with Wells, the group unfortunately only lasted a few years. In another homage to Wells, Maurice Browne and Harold Monro, two other Cambridge students at the time, endeavored to create

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[72] John S Partington, "HG Wells and the World State: A Liberal Cosmopolitan in a Totalitarian Age," *International Relations* Vol 17(2) (2003): 233, http://www.academia.edu/400345/_H._G._Wells_and_the_World_State_A_Liberal_Cosmopolitan_in_a_Totalitarian_Age_.
[73] Frank M Turner, "Public Science in Britain, 1880-1919," *Isis*, Vol. 71, No. 4 (Dec., 1980): 602-603, http://www.jstor.org/stable/230502.
[74] HG Wells, *Anticipations of the Reaction of Mechanical and Scientific Progress Upon Human Life and Thought* (New York: Dover Publications, 1999).
[75] Robert Crossley, "The First Wellsians: A Modern Utopia and Its Early Disciples," *English Literature in Transition, 1880-1920*, Vol 54, no. 4 (2011): 445, http://muse.jhu.edu/journals/english_literature_in_transition/v054/54.4.crossley.pdf.

a publishing company called Samurai Press, even going so far as to attempt to form their own order of the Samurai.[76] Though their attempt was ultimately also a failure, both of these examples serve to demonstrate the influence that Wells' ideas of world unity and scientific knowledge had on the intellectual youth of the early 20th century.

Those ideas were further developed in some of Wells' later works. His *Outline of History*, published in 1920, looks back on the past and identifies a trend towards greater unity over time. Projecting this forward, he anticipates an eventual consensual union among similar factions for the betterment of humanity.[77] In his 1933 *The Shape of Things to Come*, Wells discusses the emergence of a benevolent dictatorship that unites the world through the suppression of divisive ideas, such as religion, and the promotion of scientific knowledge.[78] When the dictatorship peacefully collapses a century later, the citizens of the world all find themselves on equal intellectual footing. These books are just a small sampling of the kind of world-state Wells envisioned. Unlike Karl Marx, who put his faith in a revolution of the proletariat, Wells vehemently believed that the proper path to unity was not violence from below, but careful and controlled orchestration from above. This liberalized vision of the future is notable for its cosmopolitan standpoint. Wells did not believe that nations were a useful system of division, even within the framework of a world-state. Instead, he believed that every human could be brought to the

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[76] Crossley, "The First Wellsians," 447-449.
[77] Partington, "HG Wells," 234-235.
[78] Among other things, the dictatorship enforces the adoption of Ogden's Basic English

same intellectual level, at which point nations would no longer serve a purpose, and a consensual, mutually beneficial world system could be built.[79]

Wellsian ideas were brought into the spotlight with the Paris Peace Conference and the close of the First World War. Internationalism suddenly became a practical issue for world leaders, starting with the first formal attempt at world governance, the League of Nations. The international fervor that followed led to many of Britain's dominions gaining a bit more autonomy, the Kellogg-Briand Pact attempting to outlaw war, and the imperialist debate taking center stage.[80] Interestingly, however, HG Wells and his followers disapproved strongly of the League of Nations. Wells believed that it was destined to fail, as would any attempt to forcibly compel world cooperation. Wells firmly believed that world unity could only be accomplished consensually over time and, even then, it would only be successful if the participants were on equal standing in terms of science and technology.[81] In this way, making science a public endeavor was a prerequisite for Wells' world state. In fact, both his *The Outline of History* and *The Science of Life* (written in collaboration with Julian Huxley) were published in an effort to spread knowledge of science to a larger audience in an easy to consume format.

HG Wells and the Neglect of Science writers weren't the only ones arguing during the war years that science deserved a more prominent place in pubic education. Many popular science magazines, including *Nature*, *Chemical News*, and *Science Progress*, extolled the importance of science to the war effort and described

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[79] Partington, "HG Wells," 241-242.
[80] Daniel Gorman, *The Emergence of International Society in the 1920s* (New York: Cambridge University Press, 2012), 3, 17, 23.
[81] Partington, "HG Wells," 235.

the role that scientists should play in establishing peace following its conclusion.[82] In response to this movement, the prime minister established the "Committee on the Position of Natural Science in the Educational System of Great Britain" in 1916. Led by JJ Thomson, its report encouraged the abolition of the Greek requirement in universities, the establishment of the PhD for science, and the support by the government of university research centers, all of which happened within the next decade.[83] The creation of the DSIR also happened in 1916,[84] proving that not only did a public science campaign exist long before the social imperialists, but also that, by the time of World War One, it was quite successful.

Encouraged by the success of these initiatives, a rather large contingent of philosophers and scientists became actively engaged in writing for a broader audience in the years following the war.[85] There were almost 550 writers active in popular science between 1900 and 1945, representing about 10% of the scientific community. Of those involved, 58% held degrees or professional positions and, of those, about half were affiliated with either Oxford or Cambridge. While many of these writers were motivated by a desire to change the world for the better, others were simply looking for recognition, a boost to their academic careers, or a source of additional income.[86] Salaries for scientists involved in education or research were notoriously poor, and in many cases publishing a piece of popular science writing

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[82] Turner, "Public Science," 603-604.
[83] Wang, "The First World War," 113.
[84] Clarke, "Pure Science," 286.
[85] Bowler, *Science For All*, 90.
[86] Ibid., 218-219.

would increase a researcher's annual salary by a half.[87] Such scientists as J Arthur Thomson and Arthur Keith (author of *Ethnos*) were drawn to popular science writing for precisely this reason. Others saw it as an opportunity to increase their standing and advance their careers. Regardless of initial motivations however, those who began writing popular science rarely ever stopped. In fact, many, including Thomson, Huxley, and Oliver Lodge, for the most part abandoned their academic careers in favor of a life as a public proponent of science.[88]

Not all of the popular science writers began their careers as academics. Many were connected to technical or military colleges, research institutions, industry, or the media.[89] For example, Gerald Heard, author of *Narcissus*, became heavily involved in BBC's science broadcasts and garnered a name for himself as a science commentator, despite having no formal science training of his own.[90] Other examples of writers who followed this route include Ritchie Calder, JG Crowther, JWN Sullivan, and AM Low.[91] Low, the author of *Wireless Possibilities*, successfully carved out a role as a popular science proponent and futurist, despite only having technical training.[92] However, Low was also somewhat of a pariah among the academic community, as he embodied everything that was considered inappropriate for an academic engaged in popular writing to do. While it was generally acceptable for a researcher to write for the public, Low's works focused almost exclusively on hypothetical technological advances and he made heavy use of sensationalist

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[87] Ibid., 252-253.
[88] Ibid., 218-219.
[89] Ibid., 245-247.
[90] Ibid., 213.
[91] Ibid., 254-255.
[92] Ibid., 177.

imagery in his predictions,[93] two things that were seen as degrading to the nature of scientific pursuits. It was also frowned upon to actively prioritize writing over research or to engage in controversial issues. When Huxley did both of these things, he put his standing as an academic in jeopardy.[94] It was because of people like Low and, to a lesser extent, Huxley that popular science was seen as such a negative endeavor among the "high science" elitists.

Luckily, such stringent expectations only really applied to the big names in academic research. The vast majority of working scientists were able to freely involve themselves with popular science with little to no concern about the implications it would have on their academic careers.[95] While the handful of big names that wrote popular science were able to use their prestige to get works into series, the less well-known contributors were often approached personally by the editor of the series and encouraged to write.[96] For example, J Arthur Thomson, as editor of the Home University Library Series, would identify potential writers in the academic community and train them to become experts at reaching the public.[97] Undoubtedly Ogden did this as well, capitalizing on the many connections he made during his time at Cambridge to recognize and draw in new writing talent.

In fact, for the scientists who began to write popular science, the publishers became their bridge to the minds of the public. It was the publisher's job to predict what the audience wanted to know and to ensure that that knowledge was

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[93] Ibid., 205.
[94] Ibid., 242.
[95] Ibid.
[96] Ibid., 115.
[97] Ibid., 91, 237, 241.

communicated effectively, which often included tutoring a new writer on how best to reach the target audience that fell somewhere between the "highbrow debates of the intellectuals and the sensationalist journalism aimed at the masses."[98] In order to reach this market, academics had to translate their findings into ordinary language instead of the hyper-specific scientific jargon they were accustomed to using. Their works also had to be sufficiently exciting and interesting in order to maintain the attention of the reader, while still avoiding the sensationalization that authors such as Low embraced.[99] Most examples of extreme sensationalization come in the form of newspapers and lower-end magazines, which naturally prioritized sales over accuracy. Newspaper reports of the disintegration of the first atomic nucleus, which erroneously claimed the discovery of an unlimited energy source, are a perfect example of how the newspapers would distort or misrepresent the truth. It was for this reason that scientists, and even non-academic popular science writers, avoided writing for the general press.[100]

Publishing houses, on the other hand, had a long history of attempting to create series that could be interesting and colloquial while still being scientifically rigorous. The publishing firm of Kegan Paul, in particular, had tried its hand at doing so long before Ogden's arrival. In 1872, Edward Livingston Youmans initiated the International Scientific Series, or ISS, which was a deliberate attempt to encourage scientists to write for the general public.[101] With the support and guidance of such eminent scientists as TH Huxley, John Tyndall, and Herbert

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[98] Ibid., 78.
[99] Ibid., 90-95.
[100] Ibid., 199.
[101] Ibid., 5.

Spencer, Youmans reached out to Henry S. King to be the publisher for the London branch of the ISS. When King's health began failing in 1887, and Youmans' own poor health forced him to step away from the series by 1880, ISS was bought by Charles Kegan Paul, a manager and publisher's reader at King's firm who was instrumental in starting the series in the first place.[102] Paul renamed the publishing firm after himself and oversaw the production of the rest of the series, which totaled about one hundred books. Unfortunately, the trio of scientists overseeing the project drifted apart or passed away, and the series died out by the start of the First World War. However, this series shows how, even decades earlier, Kegan Paul (the firm) was dedicated to the idea of educating the public in the sciences. In fact, it is entirely possible that it was for this very reason that Ogden was drawn to work there in the first place.[103]

While it did have some success, the ISS did not capture the same readership as its successors would, as its entries came across as too serious and textbook like.[104] Today and Tomorrow, on the other hand, did a much better job of balancing informative content and an interesting mode of presentation. The market for this type of book existed because of a complicated relationship between the desire among a certain class of people for self-improvement and the growing understanding, kindled by the use of science in World War One and further fuelled by the books themselves, that scientific knowledge was the route to that self-

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[102] Bernard Lightman, "The International Scientific Series and the Communication of Darwinism," *Journal of Cambridge Studies* 5, no. 4: 29-30, 35-38, http://journal.acs-cam.org.uk/data/archive/2010/201004-article3.pdf.
[103] Florence, *A Collective Memoir*, 123-124.
[104] Bowler, *Science For All*, 79.

improvement. According to HG Wells, this "vast public eagerness for self-education"[105] was primarily responsible for the success of his *The Outline of History*. Though this belief did not affect the entire population, it was held by a significant enough percentage so as to catch the eye of the publishers. This readership consisted primarily of working and lower-middle class people who could not afford a university education, but who did earn enough to purchase the occasional piece of self-improvement literature. This market wanted "a cut-down version of what might be found in a textbook, presented in a manner that was easy and entertaining for the amateur student to read." It was this demand that encouraged publishers and editors to seek out authors who could "strike the right balance between education and entertainment."[106]

The range of readers that fell within this category was both very small and quite diverse. Even if a book sold 50,000 copies (recall that *Daedalus* only sold 20,000), this represented only 1 book for every 1000 people, or 0.1% of the population.[107] However, this portion of the population also consisted of people running the gamut from the socially conscious members of the working class to the more educated members of the lower middle class. The former could only afford to pay about 1 shilling on books, which was the going rate for both the Cambridge Manuals of Science and the Home University Library.[108] Today and Tomorrow deliberately targeted the latter with its higher price of a half a crown (two and half shillings). The idea that the audience for these publisher's series was interested in

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[105] Ibid., 103.
[106] Ibid., 76-78, 81.
[107] Ibid., 89.
[108] Ibid., 87.

achieving a kind of general well roundedness justified the inclusion of some of the more esoteric topics in the series. In a similar manner, it was also acceptable for some of the books to do less well profit-wise than others, since the damage was usually offset by the success of other entries.[109]

Thus, the Today and Tomorrow Series was a response to both a specific market for scientific knowledge and a desire among intellectuals to write for that market. With both demands identified, it was easy for publishing houses to step in and serve the role of connecting the two. The 1920s were a decade of hazy dualities, whether between pure and applied science, the humanities and the sciences, or the public and private spheres, that remained quite powerful for some even as they were collapsing for others. Today and Tomorrow played its part in addressing these dualities by presenting scientific information in a humanities format while simultaneously approaching subjects beyond the scope of science with a scientific outlook. Following in the footsteps of Wells and the Neglect of Science writers, and in anticipation of the social imperialists, Today and Tomorrow trumpeted the idea that scientific knowledge could be spread to the general public and applied to social problems in an effective way. The impacts of this message would go on to affect science fiction, futurology, future debates on the place of science, and even ideas about language itself.

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[109] Ibid., 115.

Part IV: The Future

The Today and Tomorrow series continued to see success throughout its career, with individual volumes receiving positive reviews in newspapers such as the *Morning Post*, the *Sunday Times*, and the *Observer*. James Douglas, a writer for the *Sunday Express*, would often rail against an entry for its immoral character, but these attacks only made the series as a whole more popular.[110] In America too, the volumes sold well, appealing to a similar demand for educational literature that was on the rise in the 1920s.[111] Generally published a year later than their British counterparts, entries in the EP Dutton-run American series saw positive reviews in a diverse selection of academic journals. In the words of *The Sewanee Review*, "From the end of the World War to the present, these tiny books of the Today and Tomorrow Series have been the only assailants of our complacency and sleep, the only things that have appeared to shock us, to surprise and to excite us."[112]

Despite their success in the 1920s though, almost every educational series ended production shortly following the conclusion of World War II. The Pelicans were one of the only ones to survive, but even they decreased in number before finally terminating in the early 1980s.[113] There were a number of reasons why this was the case. The rise of radio in the 30s and of television in the 50s marked shifts

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[110] Warburg, *An Occupation*, 115.
[111] Bowler, *Science For All*, 114.
[112] EMK, "*What I Believe* by Bertrand Russell; *Proteus or the Future of Intelligence* by Vernon Lee; *Thrasymachus or the Future of Morals* by C. E. M. Joad; *Hephaestus or the Soul of the Machine* by E. E. Fournier D'Albe; *Ouroboros or the Mechanical Extension of Mankind* by Garet Garrett," *The Sewanee Review*, Vol 34, No. 3 (Jul.-Sept., 1926): 359, http://www.jstor.org/stable/27534024.
[113] Bowler, *Science For All*, 275.

in medium that drew the public away from books.[114] Complementing this was a new culture of publishing and advertising, which emphasized large font and glaring images. As Warburg says, "amid all this clatter, how could the quiet whisper of a Routledge advertisement, the gentle nudge of a Routledge promotion, be heard or felt by an over-stimulated public."[115] While magazines were able to adapt to this new paradigm, educational series fell short.[116] There was also a shift in the availability of educational opportunities. Universities began to expand in the early 60s and newly implemented systems of financial aid meant that the people who used to purchase educational series could now acquire a formal education.[117] Without the demand from the market, educational series could no longer sell in the numbers necessary to sustain them.

As for Today and Tomorrow itself, the series ground to a halt in 1931, with a handful of titles seemingly left unpublished. In addition to the larger shifts mentioned above, a number of more practical considerations helped bring about the end of the series. Over time, the relationship between Routledge and EP Dutton faltered. EP Dutton's John Macrae bought fewer and fewer books each year and, with the stock market crash of 1929, nearly all bulk purchases by American publishers ceased. Without the additional profit coming from the American market, the series struggled to maintain itself. When, in January 1931, Stallybrass, the head of Routledge and one of the three individuals responsible for initiating the Today and Tomorrow series, passed away, much of the driving spirit behind the series was

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[114] Ibid., 271.
[115] Warburg, *An Occupation*, 119.
[116] Bowler, *Science For All*, 272.
[117] Ibid., 75-76.

lost.[118] The last published entry, *Solon*, was released later that year. Meanwhile, control of the company fell to an uneasy coalition between Warburg and Cecil Franklin, the son of the company's chairman. Differences in opinion eventually forced the relationship to the edge, and Warburg was let go in 1934.[119]

Ogden remained involved in editing for Kegan Paul up through World War II. However, during the Second World War, Ogden decided to retreat to his flat in Hove, and tensions between him and Cecil Franklin rose. The Psyche Miniatures series, which had already suffered from a drop in sales before the war, became a subject of contention between the two, resulting in the end of the series shortly after the end of the war. It also resulted in the distancing of Ogden from Routledge. Although Ogden would continue to scout books for the International Library series through the 1950s, his professional relationship with Kegan Paul was more or less finished.[120] Science for You, one of the other series Ogden oversaw, ended in 1941 when an air raid destroyed a Kegan Paul warehouse full of books from the series. 3800 books burned in the fire; all of them were Ogden's property.[121] Another, the History of Civilization series, appears to have continued on for at least several years following Ogden's falling out with Kegan Paul.

Even as his involvement with Kegan Paul diminished, Ogden was shifting his focus to a project he had begun with *The Meaning of Meaning*, namely the construction of Basic English. Basic English was a direct outgrowth of Ogden's fascination with language, as it was an attempt to simplify English into what he

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[118] Warburg, *An Occupation*., 121.
[119] Ibid., 144-145.
[120] Gordon, *C.K. Ogden*, 35-38.
[121] Ibid., 36.

hoped would become a universal language. In 1928, Ogden discovered the works of Jeremy Bentham, which inspired him to stop thinking merely of language analysis and to start thinking of language reform. If language could be simplified and controlled, it could be used to ensure communication, promote international understanding, and avoid war. Motivated by these considerations, Ogden produced a language of 850 words, only 18 of which were verbs, and used his now global network of connections to spread knowledge of his new system.[122] When, in 1943, Winston Churchill endorsed Basic English, Ogden became hopeful that his idea would finally receive the governmental support it needed. However, the committee formed as a result floundered, and nothing was accomplished.[123] In 1947, the Basic English Foundation was formed with Ogden at its head, but Ogden, tired of bureaucracy, resigned a year later, giving up his copyright in Basic English to the Foundation in the process.[124] Ogden would spend the last decade of his life musing on the topic that inspired his life's works, the power of words, until his death from cancer on March 21st, 1957.[125]

Interestingly, Ogden's Basic English would serve as the primary source of inspiration for George Orwell's Newspeak in the novel *1984*. Orwell was a proponent of Basic English in the early 1940s, before realizing its potential use as a tool for political manipulation in his 1946 essay, "Politics and the English

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[122] Ibid., 47-48.
[123] Ibid., 50-1.
[124] Ibid., 53.
[125] Ibid., 54.

Language."[126] In a similar vein, *Daedalus* and *Icarus* inspired portions of Aldous Huxley's *Brave New World*. Aldous, intrigued by the eugenicist ideas of his brother, Julian, took genetic engineering to the extreme, envisioning a society in which genetic modifications entirely determined class structure and in which social mobility was impossible. Ectogenesis, the term invented by Haldane to describe the production of fetuses outside of the womb, served a central role in the novel and the drug soma heavily echoes Haldane's "acid sodium phosphate."[127] However, like Russell, Huxley saw these applications of science being used for manipulation and control, not progress. Russell forewarned in *Icarus* that genetic engineering would be orchestrated by the powerful, and the consequences of this possibility are explored in Huxley's dystopian society.

Another entry in the series with ramifications on later discourse is JD Bernal's *The World, the Flesh, and the Devil*. Olaf Stapledon's *Last and First Men*, published just a year later, incorporates many of the same ideas about humanity's future. Stapledon tracks the future development of humanity through 18 distinct species, discussing the creation of superbrains and the idea of humanity migrating to other planets. These ideas are expanded on in Stapeldon's *Star Maker*, in which he describes a human whose mind is removed from his body and joined with the minds of other species from across all of time and space, creating one collective consciousness. This is very similar to Bernal's description of linked minds and

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[126] Ivan Illich, *The Alphabetization of the Popular Mind* (San Francisco: North Point Press, 1988), 108-109.
[127]Elizabeth Frankenfield, "On 'Daedalus, or, Science and the Future,'" *Genetics and Literature Blog*, *Vanderbilt University*. February 21, 2008, https://geneticsandliterature.wordpress.com/2008/02/21/on-daedalus-or-science-and-the-future/.

superintelligence, and is a precursor to similar ideas in the works of Arthur C Clarke, such as *Childhood's End* and *2001: A Space Odyssey*.

Bernal was also partly responsible for the genesis of what is now called a Dyson Sphere. In *The World, the Flesh, and the Devil*, Bernal discusses a sphere that future humanity constructs in space for habitation. In Bernal's vision, all life would exist on the inside of the sphere, which would be gravity free and compartmentalized, while the outside would consist exclusively of energy collecting devices. In *Star Maker*, Stapledon expands on this idea, describing among other things, "great hollow globes of artificial supermetals" inhabited by two symbiotic aquatic species. He describes how "the interior of these worlds was a system of concentric spheres supported by girders and arches," and the existence of a central ocean in which the intelligent species lived. Stapledon imagines these globe-worlds spreading to the point where entire star systems consisted only of artificial planets. Inspired by both of these works, Freeman Dyson imagines a future in which humanity might need to harness all of the energy from the sun. In his conception of the sphere, it is hollow and built so as to encase a star, with humanity living along the inside surface.[128] This concept would go on to inspire much science fiction, including aspects of the television show *Star Trek* and the video game series *Halo*.

Works such as Bernal's were influential on the science fiction genre because they offered predictions of the distant future. The further into the future one predicts, the more difficult it is to remain accurate and the more like science fiction

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[128] Ray Villard, "Dyson Spheres: The Ultimate Energy Shell Game," *Discovery News*, Sep 23, 2012, http://news.discovery.com/space/the-dyson-sphere-the-ultimate-shell-game-120923.htm.

are the results. However, there were many works in the Today and Tomorrow Series that attempted to forecast the more immediate future, and they serve as useful lessons in the dangers of prediction. Both AM Low and Oliver Stewart presented visions of the immediate future, focusing on wireless and flight, respectively. Stewart even makes it a point to say that he is restricting himself to limited, utilitarian predictions based on current trends. Interestingly, even with this limitation, Stewart makes several wrong forecasts, including declaring the helicopter obsolete in favor of the Cierva Autogiro and anticipating the rise of hydro-aeroplanes that are a hybrid of plane and cruise ship.

The predictions get even messier when they are more social in nature. In *Nuntius*, Gilbert Russell attempts to use current trends in the nature of advertising to predict its future, but his vision is skewed by an unjustified faith in the nobility of the advertising industry. He predicts that advertising will become vastly more effective, resulting in a decrease in the number of individual advertisements. He elaborates: "There will be less repetition. The catchphrases that advertisers call slogans will fall into disuse because they will be unnecessary. Advertisements will probably occupy smaller spaces in newspapers and magazines… Neither will they be accompanied by irrelevant pictures to the same extent that they are to-day… Pictures will cease to be used to procure attention and will be used only when they are more efficient than words in the explanation of a point in the text."[129] This is undoubtedly far different from how advertising is used today.

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[129] Gilbert Russell, *Nuntius, or Advertising and its Future* (New York: E. P. Dutton & Company, 1927), 71-72.

However, Russell's method of reaching this idea of the future was a logical one: to extrapolate forward based on current trends. He saw how past advertising was showier and more visual and identified a trend towards more educational and word-heavy alternatives. He expected the trend to continue forward, when in reality advertising reverted back to older more opulent styles. This is a powerful lesson in the dangers of predicting the future, especially when dealing with social technologies such as advertising. Even the most calculated and well-thought out forecast can err. Part of the problem comes with attempts to focus in on one specific topic and extrapolate forward, when in reality no social movement, piece of technology, or idea is ever truly independent of the rest of the world. As the Today and Tomorrow Series emphasized, all aspects of society, science, and culture are interwoven and any attempt to predict the future in one field is subject to unexpected changes in another.

Part V: Conclusion

In 1959, Charles Percy Snow stood before the Senate House in Cambridge and delivered a speech entitled *The Two Cultures and the Scientific Revolution*, in which he argued that intellectuals trained in the humanities had long stifled the progress of science and technology. Frank Raymond Leavis published a charged response in 1962 in which he slandered both Snow's argument and the man himself.[130] While the "two cultures" controversy that resulted from their debate became a popular topic of discussion among intellectuals of the 1960s, there is still disagreement over what exactly motivated the dispute in the first place.[131] The traditional interpretation singles out the arts and the sciences as the two cultures that are in conflict. However, the divide between these two disciplines was seemingly bridged in the interwar period, with the Neglect of Science campaigns leading to the realization of the importance of science education and the rise of popular science encouraging scientists to write for a general audience. Keeping these developments in mind, it is hard to believe that a dichotomy between the arts and sciences could still be so powerful an idea by the 1960s.

Perhaps unsurprisingly, the first people to interpret the debate in those terms were the people who had been involved in attempts to break through that divide decades earlier. Both JD Bernal and Aldous Huxley construed Leavis' response as confirmation of the persisting divide between the arts and the

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[130] Guy Ortolano, *The Two Cultures Controversy* (New York: Cambridge University Press, 2009), 2.
[131] Colleen Walsh, "Still 'two cultures' but who's on top?," *Harvard Gazette*, May 14, 2009, http://news.harvard.edu/gazette/story/2009/05/still-%E2%80%98two-cultures%E2%80%99-but-who%E2%80%99s-on-top/.

sciences.[132] Since for so much of their life, they had been embroiled in collapsing that distinction, it was undoubtedly hard for them to construe the debate in any other terms. In a recent symposium, Steven Shapin put forth the suggestion that Snow was merely arguing for more emphasis on science education in the universities, an argument that, given the expansion of the college system in the 1960s, is entirely plausible.[133] In this interpretation, Snow was arguing that the universities had to produce more scientists and engineers while, on the other side, Leavis believed that the university should be a center for the generation of pure creative thought.[134]

While this might have been a relevant consideration for Snow, the "two cultures" debate was in reality yet another rephrasing of the discussion surrounding the relationship between morality and progress. Guy Ortolano defines Snow as a "technocratic liberal" and Leavis as a "radical liberal." The former wanted to spread ideas of modern civilization while the latter thought that modern civilization oppressed creative thought.[135] Or, in other words, the former championed progress while the latter was concerned that progress would overshadow morality. To readers of *Daedalus* and *Icarus*, then, this debate is a very familiar one. In fact, the Today and Tomorrow Series was inspired by it. Unfortunately, this interpretation was not the one made by scholars at the time. Ever since the interwar period they had been discussing the duality of the sciences and the humanities so it was only natural for them to see this as an extension of that same debate. In a tremendous

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[132] Ortolano, *The Two Cultures*, 2.
[133] Walsh, "Still 'two cultures.'"
[134] Ortolano, *The Two Cultures*, 101.
[135] Ibid., 11.

irony, then, those same intellectuals who fought against the divide were in large part responsible for its extension.

The Today and Tomorrow Series was a landmark series for its time, with themes that continue to resonate today. Though it was only a part of a larger movement towards making science public, it is both representative and important. It is representative because it encapsulates the larger debates that were on the rise between the Wars on the place of science, the purpose of scientific knowledge, and the role of scientific thinking. It is important because it had lasting impacts and was intimately connected to some of the greatest thinkers of the time. Not only does it elucidate the early public science movement, but it also contextualizes an entire generation's approach to science, the effects of which we are still experiencing today.

Appendix: The Today and Tomorrow Series[136]

1924
Daedalus, or Science and the Future by J. B. S. Haldane
Icarus, or the Future of Science by Bertrand Russell
Tantalus, or the Future of Man by F. C. S. Schiller
Lysistrata, or Woman's Future and Future Woman by Anthony M. Ludovici
The Passing of the Phantoms: A Study of Evolutionary Psychology and Morals by C. J. Patten
The Mongol in our Midst: a Study of Man and his Three Faces by F. G. Crookshank
Narcissus: An Anatomy of Clothes by Gerald Heard
Wireless Possibilities by A. M. Low
Perseus: Of Dragons by H. F. Scott Stokes
Archimedes, or the Future of Physics by L. L. Whyte

1925
Callinicus, a Defence of Chemical Warfare by J. B. S. Haldane
What I Believe by Bertrand Russell
Quo Vadimus? Some Glimpses of the Future by E. E. Fournier d'Albe
Thrasymachus, or the Future of Morals by C. E. M. Joad
Hypatia, or Woman and Knowledge by Dora Russell
Hephæstus, or the Soul of the Machine by E. E. Fournier d'Albe
The Conquest of Cancer by H. W. S. Wright
Pygmalion, or the Doctor of the Future by R. McNair Wilson
Prometheus, or Biology and the Advancement of Man by H. S. Jennings
Thamyris, or Is There a Future for Poetry? by R. C. Trevelyan
Proteus, or the Future of Intelligence by Vernon Lee
Timotheus, the Future of the Theatre by Bonamy Dobrée
Paris, or the Future of War by B. H. Liddell Hart
Lycurgus, or the Future of Law by E. S. P. Haynes
Euterpe, or the Future of Art by Lionel R. McColvin
Pegasus, or Problems of Transport by J. F. C. Fuller
Atlantis, or America and the Future by J. F. C. Fuller
Apella, or the Future of the Jews by A Quarterly Reviewer [Laurie Magnus]

1926
Cassandra, or the Future of the British Empire by F. C. S. Schiller
Midas, or the United States and the Future by C. H. Bretherton
Nuntius, or Advertising and its Future by Gilbert Russell
Birth Control and the State: A Plea and a Forecast by C. P. Blacker
Ouroboros, or the Mechanical Extension of Mankind by Garet Garrett
Artifex, or the Future of Craftsmanship by John Gloag
Plato's American Republic by J. Douglas Woodruff
Orpheus, or the Music of the Future by W. J. Turner
Terpander, or Music and the Future by E. J. Dent

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[136] List courtesy of http://airminded.org/2010/01/10/to-day-and-to-morrow/

Sibylla, or the Revival of Prophecy by C. A. Mace
Lucullus, or the Food of the Future by Olga Hartley and Mrs C. F. Leyel
Procrustes, or the Future of English Education by M. Alderton Pink
The Future of Futurism by John Rodker
Pomona, or the Future of English by Basil de Sélincourt
Balbus, or the Future of Architecture by Christian Barman
The Future of Israel by James Waterman Wise
Hygieia, or Disease and Evolution by Burton P. Thom

1927
The Dance of Çiva, or Life's Unity and Rhythm by Collum [Vera Christina Chute Collum]
Lars Porsena, or the Future of Swearing and Improper Language by Robert Graves
Socrates, or the Emancipation of Mankind by H. F. Carlill
Delphos, or the Future of International Language by E. Sylvia Pankhurst
Gallio, or the Tyranny of Science by J. W. N. Sullivan
Apollonius, or the Future of Psychical Research by E. N. Bennett
Janus: the Conquest of War. A Psychological Inquiry by William McDougall
Rusticus, or the Future of the Countryside by Martin S. Briggs
Aeolus, or the Future of the Flying Machine by Oliver Stewart
Stentor, or the Future of the Press by David Ockham
Vulcan, or the Future of Labour by Cecil Chisholm
Hymen, or the Future of Marriage by Norman Haire
The Next Chapter: the War Against the Moon by André Maurois
Archon, or the Future of Government by Hamilton Fyfe
Scheherazade, or the Future of the English Novel by John Carruthers [J. Y. T. Greig]
Iconoclastes, or the Future of Shakespeare by Hubert Griffiths
Caledonia, or the Future of the Scots by G. M. Thomson
Albyn, or Scotland and the Future by C. M. Grieve
Bacchus, or the Future of Wine by P. Morton Shand
Galatea, or the Future of Darwinism by W. Russell Brain

1928
Hermes, or the Future of Chemistry by T. W. Jones
Atalanta, or the Future of Sport by G. S. Sandilands
Lares et Penates, or the Home of the Future by H. J. Birnsting
Breaking Priscian's Head, or English as She will be Spoke and Wrote by J. Y. T. Greig
Cain, or the Future of Crime, by George Godwin
Morpheus, or the Future of Sleep by David Fraser-Harris
Hibernia, or the Future of Ireland by Bolton C. Waller
Hanno, or the Future of Exploration by J. Leslie Mitchell
Metanthropos, or the Body of the Future by R. Campbell Macfie
Heraclitus, or the Future of Films by Ernest Betts
Eos, or the Wider Aspects of Cosmogony by Sir J. H. Jeans
Diogenes, or the Future of Leisure by C. E. M. Joad
Fortuna, or Chance and Design by Norwood Young

Autolycus, or the Future for Miscreant Youth by R. G. Gordon
Mrs Fisher, or the Future of Humour by Robert Graves
Eutychus, or the Future of the Pulpit by Winifred Holtby
Alma Mater, or the Future of Oxford and Cambridge by Julian Hall
Automaton, or the Future of the Mechanical Man by H. Stafford Hatfield
Columbia, or the Future of Canada by George Godwin

1929
Shiva, or the Future of India by R. J. Minney
Typhoeus, or the Future of Socialism by Arthur Shadwell
Romulus, or the Future of the Child by Robert T. Lewis
Kalki, or the Future of Civilization by S. Radhakrishnan
Vicisti, Galilæe? or Religion in England by Edward B. Powley
Achates, or the Future of Canada in the Empire by W. Eric Harris
Eurydice, or the Future of Opera by Dyneley Hussey
Pons Asinorum, or the Future of Nonsense by George Edinger and E. J. C. Neep
Halcyon, or the Future of Monogamy by Vera Brittain
The World, the Flesh, and the Devil: An Enquiry into the Future of the Three Enemies of the Rational Soul by J. D. Bernal
Democritus, or the Future of Laughter by Gerald Gould
Sisyphus, or the Limits of Psychology, by M. Jaeger
Isis, or the Future of Oxford by W. J. K. Diplock

1930
Deucalion, or the Future of Literary Criticism by Geoffrey West [Geoffrey H. Wells]
Cato, or the Future of Censorship by William Seagle
Saxo Grammaticus, or First Aid for the Best Seller by Ernest Weekley
Chronos, or the Future of the Family by Eden Paul
Sinon, or the Future of Politics by Edgar Ansel Mowrer
Eleutheros, or the Future of the Public Schools by J. F. Roxburgh
It Isn't Done, or the Future of Taboo Among the British Islanders by Archibald Lyall
Babel, or the Past, Present, and Future of Human Speech by Richard Paget

1931
Ethnos, or the Problem of Race by Arthur Keith
Aphrodite, or the Future of Sexual Relationships by Ralph de Pomerai
Chiron, or the Education of a Citizen of the World by M. Chaning Pearce
Solon, or the Price of Justice by C. P. Harvey

Unpublished
The Future of India by T. Earle Welby
Mercurius, or the World on Wings by C. Thompson Walker
The Future of our Magnates by Sir William Beach-Thomas
The Future of Sex by Rebecca West
The Evocation of Genius by Alan Porter
Aesculapius, or Disease and the Man by F. G. Crookshank

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