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ARTICLE

The West German and Italian Left in the "Two Cultures" Debate: Trasnationalization and Localization (1964–1969)

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Abstract

This article delves into the transnational aspects of the "Two Cultures" debate initiated by the British chemist and writer C. P. Snow, and explores how Italian and West German intellectuals localized and translated aspects of the debate within their respective political landscapes. Snow described the relationship between science and the humanities, and attributed a unique social responsibility to science. Prominent leftist thinkers, including Gino Martinoli, Adriano Buzzati Traverso, Aldo Visalberghi, Giulio Preti, Pier Paolo Pasolini, Karl Steinbuch, Hans Mohr, Hilde Domin, Jürgen Habermas, and Robert Jungk, engaged Snow's ideas, each formulating their stance on the role of science. These intellectuals were divided in their response. Some concurred with Snow, viewing scientific advancement as a cornerstone of social progress and considering the scientific ethos as a model for political emulation. Others, however, were critical, questioning the very notions of scientific progress, rationality, and modernization. This intellectual discourse foreshadowed the New Left's critique of scientism in the 1970s, a movement that significantly challenged the longstanding marriage between socialism and science.

Keywords: C. P. Snow; Two cultures; social democracy; PCI; SPD; science and the humanities; transnational history

Introduction

In his May 1959 lecture, "The Two Cultures and the Scientific Revolution," scientist and novelist C. P. Snow started what came to be known as the "Two Cultures" debate. Snow had initially outlined his thoughts in a 1956 *New Statesman* article, but the lecture was published in *Encounter* in 1959, and then in book form, with responses to critics, in 1963, and these had a greater impact than the original publication. Commenting on the difference between literary intellectuals and scientists and their attitude toward the future, Snow started a discussion on science's social responsibility and its role in modern society.

Anglophone researchers have acknowledged that book's success abroad, yet few have delved into its actual impact. This article investigates the transnational resonance of the Two Cultures debate: which topics resonated across borders, how the debate adapted to fit local contexts, and especially how local actors repurposed the debate to their aims, particularly political ones. I will analyze the contribution of left-wing intellectuals in Italy and West Germany to the debate.

The focus on left-wing intellectuals is not just a research choice but inherent in the Two Cultures debate. Snow appealed to the political left, but many leftists did not recognize his ideas as properly left wing, with even a majority of historians reluctant to categorize his ideas that way. This article operates on the premise that Snow's views were in sync with

at least a segment of the European left and that the definition and borders of the left were politically controversial and integral to the debate.

Researchers disagree on the importance of the Two Cultures debate. Some commentators take it as representative of the recurring discussion over science and the humanities, citing such precedents as the nineteenth-century debate between T. H. Huxley and Matthew Arnold in Britain, and the debate over Naturwissenschaft and Geisteswissenschaft in Germany.[1] Snow's ideas gained renewed attention during the science wars of the 1990s.[2] John de la Mothe's analysis of Snow takes him as touchstone in broader debates about modernity.[3]

Other researchers, however, view the Two Cultures debate as a product of its time—the late 1950s and 1960s—using it to examine that era and its key figures. Historian David Edgerton sees Snow's only value as capturing the prevalent beliefs of his time, bringing to light views that many contemporaries had not fully articulated or analyzed.[4] Edgerton links Snow to the technocratic ethos of the British state and debates about national decline, with left-wing intellectuals and politicians—most famously Labour Party leader Harold Wilson—promoting a proscience attitude as a means to rejuvenate the country.[5]

Stefan Collini, Frank A. J. L. James, and especially Guy Ortolano have been pivotal in contextualizing Snow in contemporary debates.[6] Ortolano suggests that the Two Cultures debate was less about science and more actually about ideology and politics.[7] Ortolano argues that Snow expressed a particular vision of industrial modernity, one of whose pillars being mass prosperity enabled by technology, and the other a social order based on a meritocratic hierarchy that allowed the ascent of talented individuals. Supporters of Snow embraced his political vision—what Ortolano calls "technocratic liberalism." In turn, he was challenged by supporters of radical liberalism and egalitarian collectivism.

The aforementioned historians are correct in showing how Snow's ideas were illustrative of British politics and culture, but there is the risk of provincializing Snow, treating him as a purely British phenomenon. Other nations took interest in Snow's arguments and what they could tell about modernity, the relationship between scientific and social progress, and the nature of industrialization and capitalism.

A brief summary of the 1959 lecture reveals the political implications of Snow's thesis. Snow observed that literary intellectuals and scientists had diverged not only in their academic focus but also in their outlook on the future. Although the former dwelled on the tragic aspects of the human condition, scientists were optimistic about societal improvement. Literary intellectuals, Snow argued, were dismissive of science, viewing the humanities as the sole bastion of culture. Literary intellectuals were "natural Luddites" horrified by industry and modernity.[8] This perspective, he asserted, was elitist: the majority of poor people had chosen to migrate from agricultural to industrial jobs because life was better in modernity, not in the romanticized past.

[1] Stefan Collini, Introduction to *The Two Cultures* (Cambridge: Cambridge University Press, 2012), xiii–xv; H. Stuart Hughes, *Consciousness and Society* (New Brunswick, NJ: Transaction Publishers, 2002), 190–200.

[2] Frank A. J. L. James, "Introduction: Some Significances of the Two Cultures Debate," *Interdisciplinary Science Reviews* 41, no. 2–3 (2016): 114–15.

[3] John De la Mothe, *C. P. Snow and the Struggle of Modernity* (Austin: University of Texas Press, 1992).

[4] David Edgerton, *Warfare State: Britain, 1920–1970* (Cambridge and New York: Cambridge University Press, 2006), 201.

[5] Jim Tomlinson, "Thrice Denied: 'Declinism' as a Recurrent Theme in British History in the Long Twentieth Century," *Twentieth Century British History* 20, no. 2 (2009): 227–51; Peter F. Clarke and Clive Trebilcock, ed., *Understanding Decline: Perceptions and Realities of British Economic Performance* (Cambridge: Cambridge University Press, 1997).

[6] Collini, Introduction to *The Two Cultures*; Guy Ortolano, *The Two Cultures Controversy: Science, Literature and Cultural Politics in Postwar Britain* (Cambridge: Cambridge University Press, 2011); James, "Introduction: Some Significances of the Two Cultures Debate."

[7] Ortolano, *The Two Cultures Controversy*, 12.

[8] C. P. Snow, *The Two Cultures*, ed. Stefan Collini (Cambridge: Cambridge University Press, 2012).

Central in the debate was the interpretation of history.[9] Snow saw history as a linear progression, where scientific advancement and human progress were intertwined, an idea that mirrored the 1950s ethos equating economic growth with welfare.[10] He advocated for science-educated politicians to lead Britain in mastering new industries to reverse decline. He also felt a moral imperative for the West to assist the third world with technology and scientific education—they would have asked the Soviets or Chinese otherwise, he argued.

Snow's most prominent opponent, the literary critic F. R. Leavis, rejected Snow's vision as "the 'technologico-Benthamite' reduction of human experience to the quantifiable, the measurable, the manageable."[11] Leavis mourned the destruction of organic societies by science, rationality, and capitalism; modern Americans had a worse life than "primitive peoples."[12] Art's mission was to criticize the dominant values of modernity. Leavis's vision was elitist and culturally conservative, but he was appreciated by the British New Left in the 1950s.[13] Just a decade later, the New Left became a major political player and preached this criticism to the masses.

Analyzing the international Two Cultures debate combines the transnational approach of intellectual history with the national approach of political history, given that political battles mostly take place at the national level. Ideas don't cross borders effortlessly; they undergo transformations—processes of translation and localization.[14] Literally, the Two Cultures debate could start in Italy and West Germany only when the translated books hit the bookstores. Translators and commentators played with the semantic range of "science," some including social science in science, others including philologists and historians in the literary intellectuals to be condemned. In translation, Snow's thesis entered a new context in which notions of progress, science, and the left were different. This was not a neutral process; it involved the agency of people with a background and an agenda. Intellectuals embraced or rejected Snow to bolster their own intellectual and political arguments. Focusing on translation is the appropriate way to combine transnational and comparative approaches: the translation of Snow's book reveals both the potential of the original idea and the political and cultural features of the context in which it was adapted. This requires specific knowledge of the context in which the translation took place to evaluate impact and the contours of transformation.

Italy and West Germany were particularly receptive to the controversy, as they grappled with the rapid economic, cultural, and social shifts of the 1960s. These changes stirred deep anxieties and high hopes. In both countries, the specter of fascism lent urgency to discussions about the responsibility of intellectuals. The rise of left-wing forces, amid fears of communism and hopes for reform, challenged the established political order, particularly Christian Democracy. Italy's robust Italian Communist Party (PCI) and West Germany's proximity to communist East Germany exemplified this tension. These two intellectual milieux, in which philosophical idealism remained resonant, both found Snow's empirical approach to knowledge particularly provocative, igniting debates that weighed scientific method

[9] Ortolano, *The Two Cultures Controversy*, 9–11.

[10] Nils Gilman, *Mandarins of the Future: Modernization Theory in Cold War America* (Baltimore, MD: Johns Hopkins University Press, 2003), 162.

[11] Collini, Introduction *The Two Cultures*, xxxiii.

[12] Ortolano, *The Two Cultures Controversy*, 75–81; F. R. Leavis, *Two Cultures?: The Significance of C. P. Snow* (New York: Cambridge University Press, 2013), 72.

[13] Dennis L. Dworkin, *Cultural Marxism in Postwar Britain: History, the New Left, and the Origins of Cultural Studies* (Durham, NC: Duke University Press, 1997), 80–81.

[14] Samuel Moyn and Andrew Sartori, "Approaches to Global Intellectual History," in *Global Intellectual History*, ed. Samuel Moyn and Andrew Sartori (New York: Columbia University Press, 2013), 3–30; Cristopher L. Hill, "Conceptual Universalization in the Transnational Nineteenth Century," in *Global Intellectual History*, ed. Samuel Moyn and Andrew Sartori (New York: Columbia University Press, 2013), 134–58; Mats Andrén and Ettore Costa, "Introduction: Transnationalism in the 1950s Europe, Ideas, Debates and Politics," *History of European Ideas* 46, no. 1 (2020): 1–12.

against subjective understanding. Still, this comparison is not exhaustive of western Europe and other cases could be added—the Swedish case has been extensively covered.[15]

In Italy, the translation of Snow's book appeared in 1964 with an introduction by the historian of science and communist Ludovico Geymonat. Progressive intellectuals joined the debate—historian Pierpaolo Antonello gave an overview of the Italian debate.[16] This article narrows its focus to the discussions that unfolded in the left-wing newspaper *Paese Sera* and in the liberal *Corriere della Sera*, which published a series of articles where prominent intellectuals weighed in.[17] In 1965, a conference was dedicated to the Two Cultures debate.[18] In 1968, philosopher Giulio Preti published a comprehensive critique of Snow, *Retorica e Logica*.

In the Federal Republic of Germany, Snow's book was translated in 1967. Though coverage by major periodicals (*Frankfurter Allgemeine Zeitung, Die Zeit, Der Spiegel*) was limited,[19] two edited books articulated the German intellectual response. In 1969, literature professor Helmut Kreuzer invited intellectuals to reflect on Snow's ideas.[20] Biologist Wolfgang Laskowski curated a series of lectures at the Free University Berlin, later collected in a book.[21] Computer scientist Karl Steinbuch addressed the Two Cultures in his 1968 book, *Falsch Programmiert*.

The temporal lag is useful. Stefan Berger cautions against purely synchronic comparisons, as similar phenomena can emerge at a later date.[22] Because of the delay of translation, the Two Culture debate took place in English in the early 1960s, in Italy in the mid-1960s, and in West Germany in the late 1960s, reflecting not just national differences, but rapid changes over the course of the transformative 1960s.

The contributions of most intellectuals, with the notable exceptions of Preti and Steinbuch, were relatively brief. Consequently, this article aims to capture broader tendencies within Italian and West German left-wing intellectual circles rather than dissect the thoughts of individual thinkers.

The Real Debate: Modernization and the Left

In the Two Cultures debate within Italy and West Germany, the stakes were inherently political, encompassing themes of modernization, capitalism, science's societal role, and intellectual responsibility.

Snow's thesis should first be connected to a broader phenomenon, the hegemonic discourse around social modernism or modernization in the 1950s. According to Anthony Woodiwiss, social modernism was a political consensus that formed around the promise of a good life based on the dissolution of social conflicts through a welfare state and individual opportunities.[23] Nils Gilman suggests that modernization espoused gradual

[15] Emma Eldelin, *"De två kulturerna" flyttar hemifrån: C. P. Snows begrepp i svensk idédebatt 1959–2005* (Stockholm: Carlsson, 2006).

[16] Pierpaolo Antonello, *Contro il materialismo: le "due culture" in Italia: bilancio di un secolo* (Savigliano: N. Aragno, 2012), 249–71.

[17] All the articles published in *Paese Sera* collected in Armando Vitelli, ed., *La cultura dimezzata* (Milano: Giordano, 1965).

[18] *Le due culture, Atti del convegno organizzato dall'Associazione per la ricerca scientifica italiana (ARSI)* (Roma: Tumminelli, 1965), 25.

[19] On science topics in West German press, see Axel Schildt, *Medien-Intellektuelle in der Bundesrepublik* (Göttingen: Wallstein Verlag, 2020), 514–19.

[20] Helmut Kreuzer, ed., *Literarische und Naturwissenschaftliche Intelligenz. Dialog über die 2 Kulturen* (Stuttgart: Klett, 1969). References are to the 1987 reprint: Helmut Kreuzer, ed., *Die zwei Kulturen. Literarische und naturwissenschaftliche Intelligenz; C. P. Snows These in der Diskussion* (Munich: Dt. Taschenbuchverlag, 1987).

[21] Wolfgang Laskowski, ed., *Geisteswissenschaft und Naturwissenschaft. Ihre Bedeutung für den Menschen von Heute* (Berlin: De Gruyter, 1970).

[22] Stefan Berger, "Comparative History," in *Writing History: Theory and Practice*, ed. Stefan Berger, Heiko Feldner, and Kevin Passmore (London: Hodder Arnold, 2003), 166–69.

[23] Anthony Woodiwiss, *Postmodernity USA: The Crisis of Social Modernism in Postwar America* (London and Newbury Park, CA: Sage Publications, 1993), 1–14.

improvement via the benevolent intervention of a rational and technocratic state, one capable of addressing social issues with minimal conflict through economic growth and expertise.[24] This paradigm dovetailed with the notion of "scientification of politics"—the assumption that society was governed by clear, objective laws that could be manipulated toward any outcome, enabling "technically correct solutions to the social and economic problems."[25] The future could be predicted and planned according to objective assessment and shared goals, making ideology less relevant.[26] Daniel Bell's *End of Ideology* posited a convergence of political entities toward a mixed economy—marginalizing neoliberals and communists.

Modernization theory framed the debate on postcolonial development—a central concern for Snow. Détente was also framed by the theory of convergence, which saw the Soviet Union as a variation of Western modernity—a developed society managed by experts—bound to evolve peacefully. Conservatives and communists alike decried how Snow underplayed the political difference between East and West.

Although high modernism and scientism formed the basis of a consensus that also involved moderates and conservatives, Snow's arguments aligned science with left-wing ideals. This marriage of science and the left was not Snow's idiosyncrasy. He found enthusiastic supporters on the left or even people at least open to his ideas because faith in science was a pillar of 1950s European left-wing culture broadly. Faith in science enabled the promise of shaping society and the future according to a rational design through technical means.[27] The Enlightenment heritage shared by liberals, social democrats, and communists alike provided a strong association between social and scientific progress and a commitment to universalistic and rationalistic values.

The relationship of Marxism and science was complicated, as the term "scientific socialism" suggests.[28] This formula ambiguously vacillated between positivism, suggesting natural science as an aspirational model, and idealism, elevating understanding human society above understanding the material world. A current of Western Marxism, spearheaded by György Lukács, challenged the positivist deformation of Karl Marx by Friedrich Engels and Karl Kautsky, advocating dialectics and subjectivity. Antonio Gramsci rejected the scientific reductionism in social science without condemning science itself.[29] The Frankfurt School, including Max Horkheimer, Theodor Adorno, and Herbert Marcuse, cast a skeptical eye on the Enlightenment's legacy, asserting that rationalism had liquidated its own foundations, leaving behind only instrumental reason turned to nefarious purposes.[30] Thus, scientific rationality did not deliver liberation but mastery over nature and people. While Frankfurt School opinions of science could be ambiguous, they were most often negative.[31] For Marcuse, the subjective realm became subordinated to technological rationality, so

[24] Gilman, *Mandarins of the Future*, 6–16, 56–62.

[25] Gabriele Metzler, *Konzeptionen politischen Handelns von Adenauer bis Brandt. Politische Planung in der pluralistischen Gesellschaft* (Paderborn: F. Schöningh, 2005), 151; Glen O'Hara, *From Dreams to Disillusionment: Economic and Social Planning in 1960s Britain* (Houndmills: Palgrave Macmillan, 2007); Jan-Werner Müller, *Contesting Democracy: Political Ideas in Twentieth-Century Europe* (New Haven, CN: Yale University Press, 2013), 143.

[26] Jenny Andersson, *The Future of the World: Futurology, Futurists, and the Struggle for the Post Cold War Imagination* (Oxford and New York: Oxford University Press, 2018), 54–57.

[27] Ettore Costa, "Whoever Launches the Biggest Sputnik Has Solved the Problems of Society? Technology and Futurism for Western European Social Democrats and Communists in the 1950s," *History of European Ideas* 46, no. 1 (2020): 95–112.

[28] Paul Thomas, *Marxism and Scientific Socialism: From Engels to Althusser* (London and New York: Routledge, 2008); Helena Sheehan, *Marxism and the Philosophy of Science: A Critical History* (Atlantic Highlands, NJ: Humanities Press, 1985).

[29] Sheehan, *Marxism and the Philosophy of Science*, 294–301; Cristina Corradi, *Storia Dei Marxismi in Italia* (Roma: Manifestolibri, 2005), 69–72.

[30] Martin Jay, *Reason after Its Eclipse: On Late Critical Theory* (Madison, WI: The University of Wisconsin Press, 2016), 97–113.

[31] Sheehan, *Marxism and the Philosophy of Science*, 399–400.

liberation required a new form of technology under the control of the instinct for life.[32] The Frankfurt School philosophers critique of technological modernity, consumerism, and integrated workers resonated with the New Left in the 1960s. Conversely, an opposite current saw Marxism as the culmination of Enlightenment rationalism and advocated for a harmonious relationship with natural science. This perspective was championed by Antonio Banfi and his Italian followers, such as Giulio Preti, and in West Germany by Jürgen Habermas.[33] However, the critical view of scientific rationality within left-wing thought gained momentum in the late 1960s and 1970s.

By the 1970s, skepticism about scientism and experts' role in steering social developments intensified, while optimism surrounding progress began to falter. A growing awareness of resource limitations, environmental concerns, and health risks spurred a cultural paradigm shift.[34] A different conception of science called modernization and progress into question.[35] The old certainties of the traditional left were challenged, paving the way for the emergence of both the New Left and neoliberalism, each with a different conception of science.[36] The seeds for this ideological shift were sown in the 1950s and 1960s by intellectuals who questioned positivism and blind faith in progress. Many voices against Snow anticipated the criticism against science and progress that would fully bloom in the 1970s.

Many critics, now and then, have labeled Snow as a technocrat. Ortolano questions Snow's left-wing credentials, dismissing his self-professions of socialism and seeing his alliance to the Labour Party as merely opportunistic. Ortolano views Snow as a "liberal technocrat" who believed that political conflicts could be substituted by expert management and bureaucracy within closed institutions rather than elected politicians and public engagement.[37] Snow, he asserts, did not criticize social and political institutions, but wanted to make them serve social goals at home and in the third world. He was "liberal" because he supported not equality but a meritocratic social contract where power was allocated by talent, with the expectation that the elite would serve national interests.[38] It was an ethos—Snow saw scientific practice as "inherently moral, and … science even offered a model of the ideal society"[39]—but not a socialist one.

Nevertheless, aspects of Snow's worldview resonated with the left. He envisioned science as providing material gains for the poor—"health, food, education."[40] His proclaimed enemy was social conservatism, which defended the status quo's inbuilt inequalities and injustices. According to Snow, science fostered an attitude that framed social issues as problems to be solved rather than tragic fatalities, and thus demonstrated a preference for reforming

[32] Andrew Feenberg, "Heidegger and Marcuse: The Catastrophe and Redemption of Technology," in *Herbert Marcuse: A Critical Reader*, ed. John Abromeit and W. Mark Cobb (New York: Routledge, 2004), 67–80; Steven Vogel, "Marcuse and the 'New Science,'" in *Herbert Marcuse: A Critical Reader*, ed. John Abromeit and W. Mark Cobb (New York: Routledge, 2004), 240–45.

[33] Corradi, *Storia dei marxismi in Italia*, 105–09.

[34] Ulrich Beck, *Risk Society: Towards a New Modernity* (London: Sage Publications, 1992), 49; Konrad Jarausch, ed., *Das Ende der Zuversicht? Die siebziger Jahre als Geschichte* (Göttingen: Vandenhoeck & Ruprecht, 2008); Anselm Doering-Manteuffel and Lutz Raphael, *Nach dem Boom: Perspektiven auf die Zeitgeschichte seit 1970* (Göttingen: Vandenhoeck & Ruprecht, 2008), 43; Philippe Chassaigne, *Les années 1970. Une décennie révolutionnaire* (Paris: Armand Colin, 2018).

[35] Winfried Süß, "Der keynesianische Traum und sein langes Ende Sozioökonomischer Wandel und Sozialpolitik, in den siebziger Jahren," in *Das Ende der Zuversicht? Die siebziger Jahre als Geschichte*, 120–37; Helga Nowotny, Peter Scott, and Michael Gibbons, *Re-Thinking Science: Knowledge and the Public in an Age of Uncertainty* (Cambridge: Polity Press, 2011), 5.

[36] Ettore Costa, "The Western European Left and the First Moon Landing: The Fall of Scientific Enthusiasm and the Ebb of Socialism," *International History Review* 44, no. 6 (2022): 1347–68.

[37] Ortolano, *The Two Cultures Controversy*, 48–52.

[38] Ortolano, *The Two Cultures Controversy*, 18.

[39] Ortolano, *The Two Cultures Controversy*, 34.

[40] Snow, *The Two Cultures*, 27.

society to align it with fairer principles.[41] Moreover, Snow argued that science dismantled justifications for traditional hierarchy. This is why, he explained, that on the left there were more scientists than literary intellectuals or even engineers.[42]

Scientific education fostered principles that opposed tribalism and prejudices. Snow advocated for women's education, strongly rejected racism even in its paternalistic form, and supported massive development aid for the third world.[43] His ideas can be traced back to influential figures in 1930s Cambridge—J. D. Bernal, J. B. S. Haldane, Pyotr Kapitza, Ernest Rutherford, and particularly Lawrence Bragg.[44] Snow branded his enemies as reactionaries, associating them with Nazism,[45] and drawing a stark contrast to his openness toward the Soviet Union.

Ultimately, defining the left is inherently political. Snow proposed an ecumenical version of the left, stretching from progressive liberals to communists, as part of a community that he assumed shared his values. Conversely, many communists and New Left members did not recognize Snow as leftist because he assumed the continuation of capitalism. This article works under Snow's expansive definition of the left, analyzing the opinions of progressive liberals, social democrats, communists, and the New Left. Even if Snow was not strictly a leftist, many on the left found his ideas congruent with their principles.

We can classify reactions of progressive intellectuals to Snow's thesis into three groups: enthusiasts, who backed Snow's thesis and saw it as strengthening their arguments; moderates, who had reservations about the automatic identification of scientific and social progress but agreed on the beneficial potential of science; and radical critics, who, by attacking Snow, challenged technological rationality and the notion of progress.

Snow's Italian Devotees and the Ethos of Science

This section covers Snow's enthusiastic supporters in Italy. Their distinguishing feature is that they agreed that science was an ethos that could inspire left-wing morality and policies. It was not enough to consider science a tool of humanism; humanism itself needed to be informed by science.

Geymonat, despite finding Snow superficial, used his work to assert that true humanism required science. He believed that understanding the human condition necessitated knowledge of the environment in which one lived.[46] He also criticized literary intellectuals for fearing that progress would lead to uniformity[47] and social scientists for making shallow generalizations without specific expertise.[48]

Physicist and public intellectual Alessandro Alberigi Quaranta argued for the necessity of scientific engagement in democracy beyond technical solutions. Political issues demanded the direct involvement of scientists in public debate and decision-making.[49] He cautioned against a hierarchy of knowledge and a separation of means and ends, where humanists would set the values and goals while leaving the implementation to scientists and technicians. Reducing scientists to a servile position would prevent science from shaping social ends.[50] Alberigi Quaranta advocated for science's ethos to be brought into politics:

[41] Snow, *The Two Cultures*, 6–7.

[42] Snow, *The Two Cultures*, 10, 32.

[43] Snow, *The Two Cultures*, 48.

[44] Collini, Introduction *The Two Cultures*; Ortolano, *The Two Cultures Controversy*, 33–37; Rupert Cole, "A Tale of Two Train Journeys: Lawrence Bragg, C. P. Snow and The 'Two Cultures,'" *Interdisciplinary Science Reviews* 41, no. 2–3 (July 2, 2016): 133–47; Gary Werskey, *The Visible College* (London: Allen Lane, 1978).

[45] Snow, *The Two Cultures*, 7.

[46] Ludovico Geymonat, "Prefazione," in Armando Vitelli, *La cultura dimezzata* (Giordano, 1965), 21–22.

[47] Geymonat, Prefazione in *La cultura dimezzata*, 17.

[48] Associazione per la ricerca scientifica italiana, *Le due culture atti del convegno* (Tumminelli, 1965), 40.

[49] Associazione per la ricerca scientifica italiana, *Le due culture atti del convegno*, 17–19; Alessandro Alberigi Quaranta, "La scienza deve divenire popolare" in *La cultura dimezzata*, 151.

[50] Associazione per la ricerca scientifica italiana, *Le due culture atti del convegno*, 58–59.

coordinating large groups, attention to reality, critical spirit, and cooperation with people of different cultures. He worried, however, that scientists did not understand that human society had different rules than the natural world and that there was the risk of technocracy if scientists were not educated properly about the workings of society. In a democracy, scientists had to justify their funding those who funded it, the citizens.

Localization gave Snow's thesis a different significance. His claims might have sounded banal in Britain, but they were revolutionary in Italy, where he empowered critics of philosophical idealism. Idealism emphasized subjective knowledge over the scientific method and consciousness over empirical reality, challenging the Enlightenment and positivism. Italian idealism—Benedetto Croce and Giovanni Gentile—had hegemonized Italian culture in the first half of the twentieth century. Not only was idealism the dominant paradigm of fascism and traditional culture, but the leader of the PCI, Palmiro Togliatti, had married Marxism to idealism to root communism in national traditions. After World War II, thinkers such as Preti, Geymonat, Elio Vittorini, Eugenio Garin, and Norberto Bobbio challenged idealism, as they wanted Italian culture to open up to US and British ideas and influences from natural science, social science, and empiricism.[51] There were political implications: Snow bolstered a socially progressive vision culturally and politically alternative to idealism and Togliatti's Marxism. Unsurprisingly, most of these figures supported the deradicalization of the Italian Socialist Party (PSI), while others were dissident communists.

Snow's thesis was important for Gino Levi Martinoli, an organizer of the 1965 conference.[52] Martinoli embodied Snow's ideals: as an industrial engineer, he had introduced technological innovations to raise productivity. A staunch antifascist at the height of the Cold War, he had clashed with the anti-communist authorities without being a communist. Martinoli argued that technological progress with exponential change was the dominant factor in modern civilization, but the humanities had retreated into abstraction and nostalgia.[53] He blamed the Italian antiscience attitude on Croce, Gentile, and idealism.[54] Martinoli said that humanities and social sciences had failed to deal with modern problems, such as overpopulation, cultural change, and international connections, but they were nonetheless necessary to go beyond empirical solutions. Only adaptation and long-term scientific planning would make humankind the master of technological progress and not its slave. Unfortunately, lacking scientific education, bureaucrats and politicians were unable to understand social trends and problems.[55]

Adriano Buzzati Traverso, the pioneer of genetic research in Italy, also welcomed Snow.[56] Buzzati Traverso had worked as a science advocate since his fight against Lysenkoism in the 1940s, through successful books and a science column in Italy's main newspaper. He highlighted the disparity in scientific interest in Italian media and decision-makers compared to Britain.[57] He called for an improved scientific education and science popularization to keep up with rapid societal changes.[58] He also embraced science as a universal culture. Buzzati Traverso dismissed the idea of a humanism oppressed by technology. Buzzati Traverso, echoing Denis de Rougemont, contended that technology was not impersonal but rather a dynamic process that demanded active human stewardship. He insisted that

[51] Stephen Gundle, *Between Hollywood and Moscow: The Italian Communists and the Challenge of Mass Culture, 1943–1991* (Durham, NC: Duke University Press, 2000), 19–26; Antonello, *Contro il Materialismo*, 139–55.

[52] Fabio Lavista, "MARTINOLI, Gino in 'Dizionario Biografico,'" https://www.treccani.it/enciclopedia/gino-martinoli_(Dizionario-Biografico)/.

[53] Gino Martinoli, "Sterili lamentele di certi umanisti," *Corriere della Sera*, December 8, 1964; Gino Martinoli, "La tecnica non basta," *Corriere della Sera*, January 26, 1965.

[54] Associazione per la ricerca scientifica italiana, *Le due culture atti del convegno*, 49.

[55] Associazione per la ricerca scientifica italiana, *Le due culture atti del convegno*, 60–61.

[56] Bernardino Fantini, "BUZZATI TRAVERSO, Adriano in 'Dizionario Biografico,'" https://www.treccani.it/enciclopedia/adriano-buzzati-traverso_(Dizionario-Biografico)/.

[57] Adriano Buzzati Traverso, "Opinione pubblica e cultura scientifica," *Corriere della Sera*, June 16, 1964.

[58] Adriano Buzzati Traverso, "Il sapere scientifico e l'uomo della strada," *Corriere della Sera*, September 8, 1964.

science was inherently value-laden, not merely a set of tools for utilitarian purposes. It embodied a commitment to rationality in understanding the world, a critical stance toward unquestioned beliefs, an empirical approach to problem-solving, and a culture of openness to peer review. Buzzati Traverso believed that these scientific values had the potential to resolve societal challenges:

> Indeed, we can reasonably support the thesis that the great evils of the contemporary world, and the same abyss that seems to separate science from humanity, are the product of a failure to apply the scientific attitude to questions other than those commonly faced by the scientist and the naturalist.[59]

Aldo Visalberghi, a former partisan, pioneering pedagogue, and key figure in shaping the PSI's education policy, found Snow's thesis particularly resonant. He concurred with Snow's belief that "Only science and technology can solve the terrifying problems of the modern world and bring humane living conditions and peace and justice everywhere."[60] Yet, he stipulated that this positive outcome depended on science and technology being wielded not by mad scientists and dictators, but by individuals imbued with a democratic ethos. Visalberghi rejected the notion that humanists alone held the keys to democratic values and chastised them for viewing scientists merely as technicians without principles, in need of moral guidance.[61] Science did not need to receive values from the humanities because science itself embodied democratic values.

Visalberghi seized on Snow's ideas to validate scientific thinking within the humanities. He criticized Italian idealism for demoting science to a mere practical skill and lamented that scientists themselves had accepted this diminished view. The appreciation of science was in line with his interest to John Dewey—a key critic of Idealism—but also legitimized the new scientific tools of his research group, which in 1964 revealed the deeply classist character of Italian education.[62]

The most ardent advocate of Snow's perspective was Elio Vittorini, who, since the 1940s, had advocated for greater emphasis on scientific issues within Italian culture and had openly disagreed with Togliatti. Vittorini contended that since the scientific revolution, the humanities had clung to an outdated worldview steeped in prejudice, mysticism, and contempt for the material world.[63] This old humanistic worldview—still prevalent among the elite—was now antithetical to democracy, equating change and progress with decadence. He cautioned against scientists and technicians who, lacking a revolutionary spirit, adhered to the reactionary ethos fostered by philology, rhetoric, and moralism. The real dangerous divide was between science and technology reduced to instruments and the humanities setting the goals. "Scientists created the H bomb and put it in the hands of generals, who are humanists."[64] There was no point in reconciling the two cultures, the old humanism had to be crushed.

The Italian Suspicion for Apolitical Technocracy

After discussing Snow's ardent supporters, this section turns to those who took a more "moderate" stance, acknowledging the potential of science while critiquing Snow's binary view of forward-looking scientists and backward literary intellectuals. The "moderates"

[59] Adriano Buzzati Traverso, "Civiltà tecnica," *Corriere della Sera*, November 24, 1964. All translations from Italian and German mine, unless otherwise stated.

[60] Aldo Visalberghi, "Anima divisa," *Corriere della Sera*, August 12, 1964.

[61] Aldo Visalberghi, "Equazioni e romanzi," *Corriere della Sera*, September 23, 1964.

[62] Giuseppe Zanniello, "L'avvio della ricerca empirica in campo educativo in Italia: il contributo di Calonghi e Visalberghi," *ECPS—Educational, Cultural and Psychological Studies*, no. 9 (June 2014): 185–201.

[63] Elio Vittorini, "L'umanesimo tradizionale deve togliersi dalla scena," in *Cultura dimezzata*, 135–44.

[64] Vittorini, in *La cultura dimezzata*, 138.

worried that Snow's dichotomy promoted a reductionist, apolitical technocracy. Lionel Trilling was among the first to accuse Snow of reducing political issues to mere questions of calculation and administration, and treating scientists as philosopher kings.[65] Moderates argued that it was the task of the humanities to grapple with moral questions. This critique, that proscience intellectuals aimed to "banish politics," has been echoed by historians.[66]

In Italy, where communism held sway over the left, non-communists leveraged Snow's arguments to critique the PCI's approach, as seen previously. Marxist sympathizers labeled Snow not as a revolutionary but as a reformist, a term used pejoratively. Lucio Lombardo Radice, in the PCI's newspaper, patronizingly acknowledged that while Marxists had a superior historical vision, they could recognize the value in others arriving at similar conclusions via different routes.[67] Writer and director Pier Paolo Pasolini dismissed Snow's call for political engagement by writers as redundant in Italy and France, where literary culture was already Marxist and thus aligned with workers' interests and a scientific worldview. It was only useful in Britain, where the best the left could offer was a more humane version of neo-capitalism.[68] Communist pedagogue Dina Bertoni Jovine cautioned that technological advancement needed to be guided by political and philosophical thought to translate into human progress, which would arise from political struggle, not solely from scientific research.[69]

Angiola Massucco Costa, a psychologist and communist MP, made a systematic argument that the true divide was not between science and the humanities, but between democratic (communist) and bourgeois cultures.[70] She posited that both literary and technical work were subjugated to capitalist interests and could serve humanity only when aligned with workers' interests.[71] Her concern extended to trade schools that trained technicians merely to perform subordinate tasks. She felt that the education policies of the bourgeoisie assumed the continuation of capitalism, while trade students needed a critical education—combining the two cultures—to develop creativity and transcend subordinate roles.[72]

Alberto Moravia and Pasolini, two of Italy's leading writers, outright rejected Snow's historical philosophy. Moravia argued that science could not make political judgments: "Science is a-historical. It does not reflect the fact that Hitler or someone else is in power (you can build the same rockets at Peenemunde or Cape Kennedy), but literature criticizes (in a positive or negative way) the political reality in which it is born."[73] The pessimism of writers reflected the dire history of the past half century, marked by war, fear, and horrors. Since nuclear weapons had made human extinction a possibility, science needed to inspire humility and global cooperation instead of optimism. Pasolini viewed the notion of a progressive future not as a product of science but as prerational myth, arguing that science should challenge teleological visions of the future and embrace unpredictability.[74]

Even scientists such as physicist Carlo Castagnoli expressed reservations about Snow's perspective, noting that the application of science was determined by societal values, not the intrinsic values of science itself.[75] The real division cut across disciplines; the

[65] Lionel Trilling, "Science, Literature, and Culture: A Comment on the Leavis-Snow Controversy," *Commentary* (June 1962) 462–63.

[66] James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, CN: Yale University Press, 2008), 94.

[67] Lucio Lombardo Radice, "Ragione scientifica, pace, socialismo," *L'Unità*, September 16, 1964.

[68] Pier Paolo Pasolini, "Fare nostro il rischio della scienza," in *La cultura dimezzata, 73–76.*

[69] Dina Bertoni Jovine, "La distinzione di Snow è schematica," in *La cultura dimezzata*, 158–61.

[70] Angiola Massucco Costa, "Esiste una terza cultura," in *La cultura dimezzata*, 54–57.

[71] Associazione per la ricerca scientifica italiana, *Le due culture atti del convegno*, 25.

[72] Associazione per la ricerca scientifica italiana, *Le due culture atti del convegno*, 51–52.

[73] Alberto Moravia, "La scienza vuole un uomo umile," in *La cultura dimezzata, 45–47.*

[74] Pier Paolo Pasolini, "Fare nostro il rischio della scienza," in *La cultura dimezzata*, 76.

[75] Carlo Castagnoli, "La barbarie della specializzazione," in *La cultura dimezzata*, 103.

competition was over different types of futures. Public scientist Giulio Maccacaro advocated for science popularization to be a grassroots effort rather than a top-down dissemination of knowledge from experts to the public.[76]

The most comprehensive rebuttal of Snow emerged from Giulio Preti, a preeminent Italian philosopher and critic of Italian idealism. Preti, a heterodox leftist, melded Marxism, pragmatism, and neo-positivism into a philosophy that was ardently proscience and rationalist. He derided Snow's book as "bad, unsupported, superficial,"[77] so in response he produced a philosophical treatise on these issues with far superior insight and depth. His book mostly delved into the history of philosophy and epistemology, but it also addresses the political concerns Snow raised.

Preti was skeptical of the notion that technological innovations inherently benefited humanity since they appeared within the capitalist system.[78] He disputed the reformist view that scientific progress was the sole avenue for improvement under capitalism, challenging the preservation of the capitalist system itself. Snow, in Preti's eyes, erred in attributing blame to literary intellectuals rather than the political system, with the ultimate responsibility lying with capital.

Preti also contested the idea that scientists and technicians naturally embodied progressive values or critical thinking, arguing that modern science's demand for specialization turned scientific workers into "dumb researchers," working on small functions, unable to see the general picture, or to apply scientific reasoning to social issues.[79] Moreover, their status as wage earners compromised their intellectual and moral autonomy. Preti further critiqued Snow's simplistic conflation of science with technology, asserting that science was intellectual truth-seeking, not a mere practical instrument for those in power.[80] Young people's fascination with cybernetics concerned Preti because it suggested technical power devoid of scientific spirit, a phenomenon he saw mirrored in Nazi Germany and the United States.

Yet Preti concurred that technology, when appropriately harnessed, could address humanity's problems. He strongly condemned Leavis's aristocratic stance that material suffering was an inherent human condition and especially his paternalistic suggestion that the impoverished and "savages" led superior lives due to their detachment from modernity's tribulations. For Preti, the problem was not technology, but capitalistic exploitation: "Does one really have to choose between hunger and lice on one side and dehumanization on the other—as always because there are people who want to exploit other people?"[81] He acknowledged the potency of scientific thought in dismantling archaic beliefs and fostering a more rationalist worldview.

Preti's critique represents the prevalent reservations about Snow's thesis: while critics recognized the utility of science for practical applications and as a catalyst for critical thinking, they underscored the imperative for an external political and moral compass to direct its application.

Enlightened German Scientists: Karl Steinbuch and Hans Mohr

As Italy showed, the Two Cultures debate served as a pivot on which to promote cultural and political reforms. This section will show that the same happened in West Germany. Karl Steinbuch, a pioneer of informatics and a public intellectual of 1960s West Germany, seized the opportunity in his book *Falsch Programmiert* to advocate for comprehensive cultural reform. Echoing Snow, Steinbuch cautioned that West Germany risked lagging behind

[76] Giulio Maccacaro, "La scienza come creazione," *Corriere della Sera*, September 1, 1964.
[77] Giulio Preti, *Retorica e logica* (Torino: Einaudi, 1968), 10.
[78] Preti, *Retorica e logica*, 18–20, 25–27.
[79] Preti, *Retorica e logica*, 12.
[80] Preti, *Retorica e logica*, 18–22.
[81] Preti, *Retorica e logica*, 22.

other developed nations if it did not prioritize its scientific potential.[82] He emphasized that international competitiveness hinged on the quality of scientists and engineers, with technological advancement supplanting the military as a measure of power.[83]

Even more than in Italy, challenging philosophical idealism had political significance, as it was part of the process with which West German intelligentsia, aided by US intellectuals, dealt with the recent past. Postwar intellectuals attributed to vulgar idealism the fostering of a reactionary, illiberal and anti–Western German traditional culture (*Kultur*).[84] Borrowing locally from this tradition and transnationally from Snow, Steinbuch contended that the core issue was a cultural orthodoxy steeped in anti-scientific, dogmatic, and literary thinking. He coopted Nietzsche's term *Hinterwelt*—"the world behind" material reality, an attack to idealism—to criticize the preoccupation with abstract and metaphysical speculation and artistic emotion. Of course, it was a distorted interpretation of Nietzsche, who would have preferred art over rational science. Steinbuch argued that the prevailing view in Germany dismissed science as a merely practical endeavor, divorced from true culture; technology was widely seen as a perilous and dehumanizing force.[85]

Steinbuch argued that without scientific rationality, politicians and intellectuals were ill-equipped to critically assess social developments or effectively plan for the future.[86] "The German problem is the wrongly programmed intelligence [*Intelligenz*]"[87]—intelligence meaning both mental attitude and the intelligentsia. What the West German intelligentsia needed was a new computer program, that is, a cultural revolution. Steinbuch posited that scientific rationality, based on empirical evidence and open to critique, offered a more robust foundation for an ever-changing world than an entrenched traditional culture based on appeals to authority and pathos.[88] He relegated literary culture to the role of providing pleasure.[89] Like Snow, Steinbuch asserted that human history was marked by the rise of technology's power to transform the environment and improve human life.[90] In contrast to the dogmatic skepticism of technology, Steinbuch advocated for a scientific morality grounded in rationally evaluating consequences:

> In reality, technicians see the dangers of technology as well—or even better—but they see more clearly than those nebulous cultural pessimists that the dangers of technology are not due to inherent laws of technology, but rather through the power structures that use technology. In order to recognize and avert the dangers of future technologies, one must understand these technologies and analyze the future with rational tools.[91]

Karl Steinbuch's vision of humanism went beyond merely leveraging technology; he advocated for the application of scientific rationality across all aspects of life.[92] He identified the same critical areas as Snow: international competitiveness, education reform, and third world development. In a complex information society, he saw power as fundamentally tied to access to and selection of information, which enhanced problem-solving capacities and rational decision-making.[93]

[82] Karl Steinbuch, *Falsch Programmiert* (Stuttgart: Deutscher Taschenbuch, 1968), 7.
[83] Steinbuch, *Falsch Programmiert*, 163.
[84] Sean A. Forner, *German Intellectuals and the Challenge of Democratic Renewal: Culture and Politics after 1945* (Cambridge and New York: Cambridge University Press, 2014), 118–21.
[85] Steinbuch, *Falsch Programmiert*, 7–18, 21.
[86] Steinbuch, *Falsch Programmiert*, 20–24.
[87] Steinbuch, *Falsch Programmiert*, 18.
[88] Steinbuch, *Falsch Programmiert*, 44–45.
[89] Steinbuch, *Falsch Programmiert*, 73–74.
[90] Steinbuch, *Falsch Programmiert*, 99, 162.
[91] Steinbuch, *Falsch Programmiert*, 169–70.
[92] Steinbuch, *Falsch Programmiert*, 36–37.
[93] Steinbuch, *Falsch Programmiert*, 100–115.

As a founding figure in the field, Steinbuch championed futurology, the study of predicting future societal trends.[94] Not only a tool of analysis, Steinbuch believed that futorology[95] allowed human beings to design multiple alternative futures and discuss which one was more desirable.[96] Interestingly, Steinbuch himself rejected technocracy, arguing that while futurology could foresee infinite technically feasible social systems, it was the differing sets of values and goals that determined which system to realize. The danger was that technocrats could justify the decisions they made as being forced by external and objective circumstances while hiding their interests.[97] Steinbuch maintained that the selection of values and goals was the province of politics and democracy, highlighting the dangers of public opinion manipulation and the misuse of nuclear or biological technologies.[98]

Yet, science, in Steinbuch's view, was not just about achieving social values; it also played a role in shaping them. Scientific rationality favored meritocracy and nonviolence. Advancements such as nuclear power and computers had amplified human capabilities to such an extent that the perfect technology could produce unlimited consequences, including the destruction of humanity.[99] Steinbuch questioned which value system could manage such tremendous power, dismissing both Abrahamic religions and Marxism-Leninism as obsolete. He advocated for socialism, which he saw as the only viable option to place economic and technological power under societal control, away from the chaos of the market or unpredictable individuals. Socialism would also support universal health care and equal educational opportunities. For Steinbuch, the choice for socialism was not a matter of ideology, but simply facts.[100]

Steinbuch kept its distance from communism—also to avoid conservative backlash—while embracing democratic socialism. Like in Italy, Snow's scientism married best with reformism. Steinbuch would later align with the Christian Democrats and the New Right, but at the time of publication he was closely associated with the Social Democratic Party, or SPD and with Willy Brandt, and was being considered for government roles.[101] He even commended the student movement as a revolt against traditional culture.[102] On the other hand, Steinbuch challenged the New Left's and Marcuse's understanding of technology: the danger "did not depend on inherent laws of technology, but on power structures outside of technology."[103] The solution to the problems of scientific rationality was more scientific rationality.

Hans Mohr, another scientist embarking on a career as a public scientist, also contributed to the Two Cultures debate. He emphasized the essential role of science in shaping modern worldviews and modern human beings' self-understanding, as well as its fundamental capability to transform the environment through strategic planning.[104] Mohr endorsed Snow's arguments, dispelling the myth that science was amoral: "The foundations of scientific research, the ethos of science, is likely to be one of the most effective moral institutions that humanity has produced."[105] Individual scientists might be immoral, but the overarching aim of technological progress was human flourishing:

[94] Steinbuch, *Falsch Programmiert*, 128.
[95] Andersson, *The Future of the World*.
[96] Steinbuch, *Falsch Programmiert*, 150.
[97] Steinbuch, *Falsch Programmiert*, 152.
[98] Steinbuch, *Falsch Programmiert*, 117.
[99] Steinbuch, *Falsch Programmiert*, 59, 143–44.
[100] Steinbuch, *Falsch Programmiert*, 156.
[101] Achim Eberspächer, *Das Projekt Futurologie. Über Zukunft und Fortschritt in der Bundesrepublik 1952–1982* (Leiden and Boston: Ferdinand Schöningh, 2019); Anton F. Guhl, "Kurskorrekturen eines Technokraten. Die politische Rechtswendung des Nachrichtentechnikers und Zukunftsforschers Karl Steinbuch nach 1970," *Technikgeschichte* 87, no. 4 (2020): 315–34.
[102] Steinbuch, *Falsch Programmiert*, 36–37.
[103] Steinbuch, *Falsch Programmiert*, 70.
[104] Hans Mohr, "Wissenschaft und Bildung—Stellungnahme eines Naturwissenschaftlers zu den Thesen von C.P. Snow," in *Die zwei Kulturen*, 229–53.
[105] Mohr, Wissenschaft und Bildung—Stellungnahme eines Naturwissenschaftlers zu den Thesen von C.P. Snow," 244.

> Technology, on the other hand, serves human existence. Its job is to make life worth living. A technology that is not suitable for serving human life is nonsensical. A technology that endangers or destroys human life is absurd. You can misuse technology. Man has always misused it.[106]

The immense power of modern technology had to be regulated to prevent misuse. Mohr advocated for political leaders to adopt a longer-term perspective, beyond the immediate, self-serving interests of various social groups. Science, in Mohr's view, offered the necessary criteria and foresight to assess whether technological advances genuinely contributed to human progress. He shared the concern that traditional political processes were riddled with irrationality and would benefit from the rational, empirical approach inherent in the scientific ethos, which he saw as the only truly universal framework. Mohr criticized West German literary intellectuals for being willfully ignorant of science, while reaping its advantages. A scientifically illiterate political class was unfit to rule, so a general educational reform was urgent.

Human Rationality and Scientific Rationality in West Germany

This section covers those who were moderately critical of Snow's thesis in West Germany. Moderate critics echoed the prevailing Italian sentiment that while science provided the means for action, it was the humanities that needed to impart moral judgments and establish goals. Scientists could be "inventive gnomes, that can be hired for anything,"[107] as Kreuzer said quoting Brecht, who in *Life of Galileo* criticized scientists for failing to commit to social responsibilities. Yet, like Brecht, figures such as Kreuzer recognized the potential to direct scientific progress toward human welfare, advocating for a critical but constructive approach to scientific developments.

Kreuzer argued against the notion that the root issue was science itself; instead, he pointed to the specialization and social division of labor, which had cleaved beauty from utility. He posited that while material prosperity alone could not fulfill all human aspirations, it created the material preconditions for artistic expression and the reunification of society around aesthetics.[108]

Wolfgang Laskowski cautioned against overestimating scientists' ability to foresee the outcomes of their discoveries and noted that the scientific method did not yield straightforward directives for action. However, science had to make people aware that personal choice and responsibility were unavoidable. Nonetheless, he believed science's true value lay in fostering rational thought and a deeper comprehension of the world, not just in its power to alter the environment.[109]

Physicist Helmut Glubrecht, later a prominent figure in the peace and anti-nuclear movements in the 1980s, contended that the traits often associated with scientific inquiry—such as reliability, lack of prejudices, and moderation—were not exclusive to science. Human values rather than a scientific ethos ultimately determined the application of technology:

> The electromagnetic waves spread the hate speech of a fascist leader in the same way as the words of Albert Schweitzer … Where human action should turn from case to case between the poles of destruction and construction cannot be deduced from Maxwell's equations, nor from organic chemistry, nor from nuclear physics.[110]

Hilde Domin, a poet influential among the New Left and the Greens, had a clear stance on the roles of scientists and humanists. She believed scientists should check whether the buttons

[106] Mohr, Wissenschaft und Bildung—Stellungnahme eines Naturwissenschaftlers zu den Thesen von C.P. Snow," 242.
[107] Helmut Kreuzer, "Literarische und szientifische Intelligenz," in *Die zwei Kulturen*, 206.
[108] Kreuzer, "Literarische und szientifische Intelligenz," 215.
[109] Wolfgang Laskowski, "Zusammenschau und Perspektiven," in *Geisteswissenschaft und Naturwissenschaft*, 186–87.
[110] Helmut Glubrecht, "Ist unsere Kultur gespalten?," in *Die zwei Kulturen*, 271.

worked, while humanists should check that the person pushing the buttons was more informed than an ape.[111] Domin also challenged Snow's linear perspective of history for silencing the voices of discomfort and dissent. Simply increasing material consumption was not a sign of progress because it could make humans conformist and passive.[112]

Historian August Nitschke maintained that while engineers could construct the tools, it was the responsibility of politicians and social scientists to define their purpose. He voiced skepticism about futurology, believing that disciplines such as sociology and psychology could only make limited predictions based on the assumption that the future would be a direct extension of present society.[113] Only historians could account for radical changes between societies. He critiqued theorists such as Marx and Oswald Spengler for their belief in historical patterns, arguing instead that the only constant in history was that the key to success was the ability to adapt.[114]

Finally, reflections on the Two Cultures debate informed Jürgen Habermas's conceptualization of science and technology.[115] His comments on Snow are the starting point for the essay "Technischer Fortschritt und soziale Lebenswelt," which would be included in Kreuzer's collection. "Our problem can then be stated as one of the relation of technology and democracy: how can the power of technical control be brought within the range of the consensus of acting and transacting citizens?"[116] This 1966 essay was a milestone in the reflections that would culminate in the more famous 1968 essay "Technik und Wissenschaft als 'Ideologie,'" a commentary on Marcuse's ideas.

Habermas disagreed with Marcuse's pessimistic opposition between technological progress and political emancipation and with the traditional left-wing characterization of technology as a liberating force.[117] As one scholar has written, "Habermas is committed to pursuing an agenda of critical social theory and socioeconomic justice while aiming to preserve technical, scientific, and economic progress."[118] Habermas acknowledged a division akin to the two cultures model but further developed it into two "quasi-transcendental" categories that differentiated between spheres of society governed each by communicative-normative rationalities (*Lebenswelt*) and by technical-scientific rationalities (*System*). Unlike Adorno and Horkheimer, Habermas ascribed both dignity and validity to scientific rationality. He diverged from Marcuse as well by not advocating for a new science. Habermas's critique was particularly focused on instances where scientific rationality overstepped into the realms of political, cultural, and emancipatory activities, which he believed should operate under communicative-normative rationality.

Habermas's main concern was with technocracy, which he viewed as the surreptitious encroachment of one type of rationality into the domain of the other. He saw technological progress as inherently a social process that was influenced by underlying, often unarticulated interests and entrenched ideologies. Technocracy, in his view, misrepresented this process as being autonomous to circumvent meaningful debate, thereby simplifying complex political issues into mere technical issues:

[111] Hilde Domin, "Eine Kultur oder keine Kultur—Die Zwei-Kulturen-Streit als Schienkonflikt," in *Die zwei Kulturen*, 181–94.

[112] Domin, "Eine Kultur oder keine Kultur—Die Zwei-Kulturen-Streit als Schienkonflikt," 184.

[113] August Nitschke, "Ein Plädoyer für die andere Kultur," in *Die zwei Kulturen*, 275–88.

[114] Nitschke, "Ein Plädoyer für die andere Kultur," 287.

[115] Jürgen Habermas, "Technischer Fortschritt und soziale Lebenswelt," in *Die zwei Kulturen*, 313–27.

[116] Jürgen Habermas, *Toward a Rational Society: Student Protest, Science and Politics*, trans. Jeremy J. Shapiro (London: Heinemann Educational, 1971), 57. Quotations from the English edition.

[117] Robin Celikates and Rahel Jaeggi, "Technology and Reification," in *The Habermas Handbook*, ed. Hauke Brunkhorst, Regina Kreide, and Cristina Lafont (New York: Columbia University Press, 2018); Habermas, *Toward a Rational Society*, 60, 86–90; Jay, *Reason after Its Eclipse*, 121.

[118] Adelheid Voskuhl, "Emancipation in the Industrial Age: Technology, Rationality, and the Cold War in Habermas's Early Epistemology and Social Theory," *Modern Intellectual History* 13, no. 2 (August 2016): 486.

> The assertion that politically consequential decisions are reduced to carrying out the immanent exigencies of disposable techniques and that therefore they can no longer be made the theme of practical considerations, serves in the end merely to conceal pre-existing, unreflected social interests and prescientific decisions.[119]

The answer was the politicization of technological issues, not just developing the scientific potential, but choosing how to use it—a point fully developed in the 1968 essay.[120] These choices required democratic public discourse:

> For the scientific control of natural and social processes—in a word, technology—does not release men from action. Just as before, conflicts must be decided, interests realized, interpretations found—through both action and transaction structured by ordinary language. Today, however, these practical problems are themselves in large measure determined by the system of our technical achievements.[121]

Despite employing a more nuanced philosophical framework than Snow, Habermas felt an affinity for Snow's dualism. As Voskuhl noted, this dualism allowed Habermas to preserve the autonomy of the human-social rationality without the apocalyptic condemnation of scientific rationality by Adorno or Marcuse.[122]

The Anti-Snows and the Paradigm Shift

Besides enthusiasts and moderate critics of Snow, there were radical critics who saw in Snow the exemplification of scientism in Western society, one which needed a harsh corrective. Already in Britain, these critics contested Snow, where Leavis was a notable detractor. Leavis saw Snow's success as evidence of a public opinion steeped in clichés and platitudes.[123] Contemporary researchers often view Snow as emblematic of a mainstream consensus, whereas Leavis is recognized as a significant cultural critic who challenged prevailing orthodoxy.[124]

Ortolano contends that Leavis criticized key elements of modern society such as industrialization, mass civilization, and material prosperity that would be central to the criticism of the New Left by the decade's end.[125] Leavis not only anticipated this shift but also influenced it. Despite his elitism and disdain for egalitarianism and minority rights, Leavis provided a comprehensive critique of modern society's fragmentation and the loss of organic unity, a critique later adopted by New Left figures such as Stuart Hall, Richard Hoggart, and Raymond Williams, who were foundational in the development of cultural studies.[126] Following Thomas Kuhn's acknowledgment of social influences in determining scientific knowledge, the radical science movement emerged in that period to deconstruct the alleged neutrality and objectivity of science.[127]

It could be argued that Leavis contributed to the evolution of the New Left from class-based economic issues—wage negotiation and redistributive policies—to wider concerns of cultural identity and post-materialist critique. The 1970s witnessed a realignment in the

[119] Habermas, *Toward a Rational Society*, 59.
[120] Habermas, *Toward a Rational Society*, 118–19.
[121] Habermas, *Toward a Rational Society*, 56.
[122] Voskuhl, "Emancipation in the Industrial Age."
[123] Leavis, *Two Cultures?*, 54.
[124] Stefan Collini, Introduction to *Two Cultures?*, 2–9.
[125] Ortolano, *The Two Cultures Controversy*, 218.
[126] Dworkin, *Cultural Marxism in Postwar Britain*, 80.
[127] Dworkin, *Cultural Marxism in Postwar Britain*, 227.

political orientation of criticism of science.[128] David Hollinger, as quoted by Ortolano, commented on the literary critics attacked by Snow:

> Some of this literary cohort withdrew, one might say, and regrouped, and came out some years later under the cover of Michel Foucault and postmodernism to attack science as itself cryptofascist and to claim for literature the badge of democracy and equality and human decency.[129]

This article has uncovered considerable evidence of a paradigm shift, magnified by the delay in translating Snow's work, resulting in louder and more numerous dissenting voices in Italy and even more so in West Germany. Contemporary observers were attuned to this cultural shift. Walter Pedullà, a prominent historian of Italian literature and literary critic for the newspaper of the PSI, detected a new trend in European culture—a backlash against science, reason, and historicism, with a burgeoning interest in fantasy, a return to nature, and a longing for the past.[130] Pedullà made this comment in response to criticism from the English poet Stephen Spender, who argued that Snow failed to recognize the real threat posed by science: its capacity to create weapons capable of destroying the world. In West Germany, Laskowski observed that the youth, disenchanted with rigid technology, were in pursuit of new goals.[131] He blamed an ideology of instant gratification and a lack of understanding of technology, compounded by anti-Enlightenment currents:

> In all of them we can find the accusation that technology reduces people to tools. It is not man and his dignity and fulfilment, but the preservation of an un-human technical-economic-political system, that, according to this view, becomes the ultimate purpose of society ... The critics differ only in their solution ideas: a romantic return to pre-scientific, simple societies or a utopian longing for a new symbiosis of man and nature and for a "humane" form of science and technology.[132]

The transnational exchange of ideas significantly influenced the paradigm shift. Kuhn became an obligatory reference to justify the new attitude toward science. An early adopter was Franco Ferrarotti, independent socialist and the first professor of sociology in Italy. He used Kuhn's framework to challenge the linear vision of progress based on science. Science was open to any use, including nuclear suicide or social oppression. The urgent problem was critical consciousness at global level:

> The religion of automatic progress is an unbearable tyranny; it separates man from his instruments; cancels history by taking it for granted in advance. The idea, so dear to today's enlightened people and technocrats, of smooth and gradual scientific progress is no longer tenable.[133]

Other voices in Italy were equally harsh. Alberto Parenti resisted equating development with mechanization and GDP growth.[134] The poet Edoardo Sanguineti outright dismissed Snow's work and the supposed rivalry between science and the humanities, seeing

[128] John Guillory, "The Sokal Affair and the History of Criticism," *Critical Inquiry* 28, no. 2 (2002): 470–508. Quoted in Ortolano, *The Two Cultures Controversy*, 218.

[129] David A. Hollinger, "Science as a Weapon in Kulturkampfe in the United States during and after World War II," *Isis* 86, no. 3 (1995): 449. Quoted in Ortolano, *The Two Cultures Controversy*, 218.

[130] Walter Pedullà, "Resa di un "moderno"," *Avanti!*, 21 October 1966.

[131] Wolfgang Laskowski, "Das Meschenbild des Naturwissenschaftlers," in *Geisteswissenschaft und Naturwissenschaft*, 180.

[132] Laskowski, "Zusammenschau und Perspektiven," 191.

[133] Franco Ferrarotti, "Non serve spiegare Shakespeare agli ingegneri," in *Cultura dimezzata*, 63.

[134] Associazione per la ricerca scientifica italiana, *Le due culture atti del convegno*, 32.

intellectuals from both domains as mere competitors for servile salaried jobs from the great technocratic powers.[135]

By the late 1960s, the ideological shift was more pronounced in West Germany. Besides the fact the debate started after 1967, the German New Left had benefited from the 1950s anti-nuclear movement developing the first criticism of scientism. Physicist Max Born gave a grim view of the trajectory of human history and science. Born suggested that while rationality had enabled the expansion of science and technology in the last three centuries, it could not control them.[136] Rationalization had destroyed the traditional ideals underpinning moral values; human life had been degraded by materialism and consumerism. This was in line with the New Left's critique. Despite professing his love for science, Born made apocalyptic predictions about future nuclear destruction and technologically enforced tyranny.

Nitschke, echoing Kuhn, argued against the notion of science advancing solely through incremental steps, stressing the necessity of significant paradigm shifts.[137] Nitschke pointed out that even experimental observation was influenced by preconceptions, necessitating that scientists critically evaluate and renew their frameworks, with art often providing the impetus for new perspectives. Pedagogue Klaus Schaller also critiqued the idea of a value-free, objective science, emphasizing how scientific inquiry was shaped by social, political, and ideological factors.[138]

Kuhn was not the only intellectual source for this kind of criticism. For example, inspired by Marcuse and Adorno, Domin came to the conclusions of Leavis: poetry and art were responsible for resisting conformity. In an industrial society, the actions of the majority were driven by external command, not the internal conscience: "Every day people 'die' and go on as puppets of themselves."[139]

Like Domin, Robert Jungk was an inspiration for the West German New Left, and since the 1950s he had portrayed the future as fraught with risks due to scientific excesses. He rejected Snow's progressive vision of science, highlighting the negative social impacts of scientific advancements, such as the atomic bomb, and the encouragement of scientific fields that promised destructive power and political domination.[140] Jungk warned of a backlash from the youth against the scientific establishment seen as complicit with state and economic power, with science itself appearing inhuman, abstract, and full of regulations, hostile to life, and functional to subjugate the nonwhite races. Scientists rejected this criticism as emotional and obscurantist, but Jungk cautioned that the discomfort was serious and there needed to be thoughtful discussions about social priorities.

Preti, though critical of Snow, rejected what would become the strong program of sociology of knowledge, the notion that scientific knowledge was the product of social factors and thus relative.[141] Preti acknowledged the Marxist truth that scientific knowledge developed under well-defined social and historical conditions, such as capitalism. He did not, however, give up on objectivity: truth was truth, regardless of its historical origins. If *The Elements* had been written not by Euclid, but by typewriting monkeys, geometry would still be true. In contrast, Jungk proposed a more radical epistemology where facts and data were subject

[135] Edoardo Sanguineti, "Le due politiche," in *Cultura dimezzata*, 187–92.

[136] Max Born, "Die Zerstörung der Ethik durch die Naturwissenschaft—Überlegungen eines Physikers," in *Die zwei Kulturen*, 254–61.

[137] Nitschke, "Ein Plädoyer für die andere Kultur," 279–84.

[138] Klaus Schaller, "Das Menschenbild des Geistwissenschaftlers," in *Geisteswissenschaft und Naturwissenschaft. Ihre Bedeutung für den Menschen von Heute*, ed. Wolfgang Laskowski (Berlin: De Gruyter, 1970), 132.

[139] Domin, "Eine Kultur oder keine Kultur—Die Zwei-Kulturen-Streit als Schienkonflikt," 184.

[140] Robert Jungk, "Der Einbruch der Naturwissenschaft und Technik in Unser Heutiges Leben," in *Geisteswissenschaft und Naturwissenschaft. Ihre Bedeutung für den Menschen von Heute*, ed. Wolfgang Laskowski (Berlin: De Gruyter, 1970), 117–18.

[141] Giulio Preti, *Retorica e Logica*, 56–58.

to different interpretations, leading to multiple sciences rather than a singular, unified body of knowledge, aligning with the intellectual climate of the 1970s.[142]

The *Frankfurter Allgemeine Zeitung* opined that the Two Cultures debate had come too late to the Federal Republic, remarking: "In this respect, Snow is only witness to an epoch that has been overcome."[143] When Kreuzer reissued his book in 1987, he noted that by 1969 the Two Cultures debate had run its course.[144] The era's defining issues had shifted to the student movement, anti-authoritarianism, and later the self and feminism. The oil crisis and the Club of Rome signaled the end of unlimited growth. The political battleground had moved from socialism versus capitalism to a tension between economy and ecology. Belief in progress waned, partly due to medical and environmental disasters, such as thalidomide and Three Mile Island. Opinion polls showed a steep decline in the number of people expecting a perpetually brighter future, from 60 percent in 1972 to 31 percent in 1980. "Not everything that is technically possible should be realized—this formula found almost universal consensus as an imperative for future action."[145]

In West Germany there was a noticeable shift; the left began advocating for the preservation of values, while the right championed economic growth and technological advancement. Kreuzer contended that a culture steeped in individualism was veering toward solipsism and irrationalism. Industrial civilization was no longer deemed essential for a high quality of life; rather, it was seen as a detriment. Nature emerged as the ideal countersociety: spiritual contemplation versus dynamism; autarkic communes versus gigantic institutions; asceticism versus consumerism; deindustrialization and ruralization versus capitalism. The third world was no longer a place to be rescued by modern technology, but a pristine world to be protected from it.

The assertion that the political right and left had exchanged ideologies was not unprecedented. This perspective had been propagated by the New Right since the 1960s. Proponents of "technocratic conservatism" such as Armin Mohler and Helmut Schelsky had reconciled conservative thought with industrial and scientific modernity, upholding the principle of authority and the rejection of politics, with these views masquerading behind technical decisions and "objective necessities" (*Sachzwänge*).[146] This coopting of science explains why Steinbuch turned his back to the left, even though just like Habermas he had challenged technocracy and the exclusion of political choices. Had left and right completely switched sides?

Conclusion: Snow's Significance

Almost no one accepted Snow's claim without reservations. It was not difficult to find instances where science had served nefarious purposes. At the basest level, the debate degenerated into mutual recrimination about Auschwitz, with Snow and Steinbuch pointing fingers at writers, while the historian Rosario Romeo and the poet Domin pointed fingers at scientists.[147] The

[142] Helen Haste, "Pluralism, Perspective, Order and Organization: The Fault-Lines of 21st Century 'Cultures' and Epistemologies," *Interdisciplinary Science Reviews* 41, no. 2–3 (July 2, 2016): 176–82.

[143] Margret Boveri, "Zeuge einer Überwundenen Epoche," *Frankfurter Allgemeine Zeitung*, November 28, 1970.

[144] Helmut Kreuzer, "Vorwort zur Taschenbuchausgabe," in *Die zwei Kulturen*, 11–17.

[145] Kreuzer, "Vorwort zur Taschenbuchausgabe," 12.

[146] Patrick Wöhrle, "Das Denken und die Dinge. Intellektuelle Selbst- und Fremdverortungen in den 1960er und 1970er Jahren am Beispiel der 'Technokratie'-Debatte," in *Intellektuelle in der Bundesrepublik Deutschland. Verschiebungen im Politischen Feld der 1960er und 1970er Jahre*, ed. Thomas Kroll and Tilman Reitz (Göttingen: Vandenhoeck & Ruprecht, 2013), 57.

[147] Snow, *The Two Cultures*, 7; Steinbuch, *Falsch Programmiert*, 22–23; Rosario Romeo, "Letteratura e bombe atomiche," *Corriere della Sera*, October 4, 1964; Domin, "Eine Kultur oder keine Kultur—Die Zwei-Kulturen-Streit als Schienkonflikt," 182.

atomic bomb served as another counterpoint in Jungk's and novelist Elsa Morante's rebuttal of Snow's thesis.[148]

The most common qualification was that progress would not automatically result from technological innovation and a scientific ethos. Commentators maintained that science could either be used well or misused, depending on the morality and politics of its practitioners. In this instrumental view, science's failings arose not from the discipline itself, but from its users—mostly capitalists. Moreover, the potential of science to create and plan was generally seen as positive, contingent only on placing the right people in charge. It was a positive relationship, just not automatically so.

Was Snow seriously ignoring politics? Charges of technocracy may be justified, considering Snow's apparent preference for scientists and experts over popular participation. Nonetheless, accusations of technocracy can be instrumental. Indeed, it is possible that in their use of the term "technocracy," Snow's critics in the 1960s implied a different meaning than today. Ortolano appropriately labels Snow a "liberal technocrat," and it is crucial to differentiate the two terms. Many communists took issue with the "liberal" part, resenting Snow's lack of vision for overcoming capitalism and his belief in the possibility of advancing left-wing ideals—such as egalitarianism and wealth redistribution—within the current economic system through science-enhanced state intervention.

Communists did not view Snow as properly progressive due to his non-communist alignment and their refusal to subordinate Marxism to natural sciences. Yet, as Preti highlighted, communists had little sympathy for antiscientism in epistemology, anti-materialism in social policy, or Luddism. They had their narrative of teleological progress, convinced that communist modernity was better. They concurred with Snow that scientific advance could be translated into benefits for the working class, as evidenced in the Soviet Union—where technicians had more power than in the West. In 1966, PCI member Rossana Rossanda—who would later become a key figure in the extra-parliamentary left—perceived the Two Cultures debate as urgent.[149] Recognizing that even non-communist forces grasped the significance of the issue, she saw an opportunity for the PCI to ally with them and facilitate their political maturation. The 1966 PCI Congress set the goal of bridging the Two Cultures divide through cultural and educational reform.[150] Thus, Italian communists saw figures such as Snow as potential partners, though inferior in their approach because of a deficit of Marxism and the communist guidance required to become properly progressive.

The alignment with the reformist left confirms the "liberal" element of Snow's stance. Harold Wilson campaigned in 1964 on a manifesto of fostering growth and left-wing values through the "white heat" of the scientific revolution. The 1968 SPD Congress echoed many of Steinbuch's views, with future minister of technology Horst Ehmke directly referencing him.[151] Although social democrats and socialists might have been more radical on social issues than the "liberal" label suggests, in Italy and West Germany, they found Snow's arguments conducive to their agendas. The stance in favor of scientific progress united social democrats and communists.

The New Left's more strident criticism arose from the aforementioned paradigm shift. By the end of the 1960s, opposition to Snow's thesis grew not only louder, but also more substantial. The validity of scientific progress and practices was openly questioned. Jungk—who unsurprisingly clashed with Steinbuch[152]—argued that science was a social force, so it was not enough to say that science was misused by capitalism; capitalism had perverted science. Converting science to beneficial uses would require recasting science. Jungk aligned with Marcuse in advocating for the "humanization of technology," transforming machines from

[148] Jungk, "Der Einbruch der Naturwissenschaft und Technik in unser heutiges Leben," 114; Antonello, *Contro il materialismo*, 257–58.

[149] *XI Congresso del Partito Comunista Italiano: Atti e risoluzioni* (Roma: Editori riuniti, 1966), 386.

[150] *XI Congresso del Partito Comunista Italiano*, 727.

[151] *SPD Parteitag Nürnberg 1968 Protokoll* (Bonn: Vorstand der SPD, 1968), 518–19.

[152] Eberspächer, *Das Projekt Futurologie*, 243–55.

tools of domination into bridges between humanity and nature.[153] The logic of technological progress clashed with the logic of humanism, as evidenced by alienation, materialism, and stress. Although figures such as Leavis and the British New Left had raised such objections in the early 1960s, by the late 1960s figures of the Continental New Left such as Domin and Jungk had joined the chorus. Thinkers such as Habermas, although not as pessimistic, also refused to accept the neutrality of science.

Kreuzer hypothesized that by the 1980s, proscience positions had shifted to the political right. Many scholars critique the mid-century alliance of the left with modernization and science as an acquiescence to the capitalist order, prefiguring neoliberalism. Ortolano suggests that Snow would have leaned rightward, similar to US neo-conservatives, had he lived longer, as radicalism threatened his cherished elites and institutions.[154] There might be something to it, as Snow's most faithful adherent in West Germany, Steinbuch, eventually aligned with the New Right, which in West Germany had adopted technocracy. Others argue that turning from neo-humanist to technical education paved the way for the commodification of culture, reducing education to a mere tool for enhancing productivity.[155] There is, however, no straightforward narrative. For every Karl Steinbuch, who endorsed Snow, venerated scientists, and switched from social democracy to the New Right, there was an Armando Plebe, who criticized Snow, belittled scientists, and switched from communism to neofascism.[156] Other supporters of Snow, such as Buzzati Traverso and Visalberghi, continued to champion left-wing causes.

More interesting is Ortonlano's suggestion that radical egalitarianism and neoliberalism undermined technocratic meritocracy from two flanks: the former rejecting it as a covert form of hierarchy, the latter dismissing the notion that power needed to be justified by merit and social responsibility rather than market forces.[157] Left-wing journalist Armando Vitelli observed that Jungk shared views with Wilhelm Röpke—one of neoliberalim's intellectual progenitors—whom conservative critics of Snow often cited for his stance against the blind arrogance of science, which eroded the human factor.[158] In the 1970s, scientism was under attack alongside social modernism, universalism, and statism. "The result of these various crises was the emergence in the decade around 1970 of a deep sense of cynicism and pessimism about the future, the obverse of the paranoid optimism that prevailed in the 1950s."[159] Progressive liberalism and communism, both sons of the Enlightenment, found themselves twins in crisis. There was a consensus among left-wing and right-wing opponents of communism that it was impossible to plan the future and direct society from above, a notion that would ultimately benefit neoliberals the most.[160]

The true significance of the Two Cultures debate lies in its exposure of key political and intellectual actors openly discussing the relationship between science and the left. This article has argued that this was not an isolated episode in British intellectual history, but part of a broader, long-term process visible in two other major western European countries: the paradigm shift in left-wing culture that would fundamentally alter the foundations of its political thought and action. Only by connecting the Two Cultures debate to other social, cultural, and political events can we fully appreciate its worth.

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[153] Jungk, "Der Einbruch der Naturwissenschaft und Technik in Unser Heutiges Leben," 122.

[154] Ortolano, *The Two Cultures Controversy*, 233–37.

[155] Hans-Otto Dill, "Globalisierte Wirtschaft und Multikulturelle Welt," *Sitzungsberichte der Leibniz-Sozietät* 83 (2006): 107–31.

[156] Armando Plebe, "Snow manca di obiettività," in *Cultura dimezzata*, 39.

[157] Ortolano, *The Two Cultures Controversy*, 249–53.

[158] Armando Vitelli, "La cultura e la bomba," in *Cultura dimezzata*, 33.

[159] Gilman, *Mandarins of the Future*, 250.

[160] Scott, *Seeing Like a State*, 344; Doering-Manteuffel and Raphael, *Nach dem Boom*, 50–52.

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