A Historical Bridge over the Troubled Water of Humanities and Sciences: Rethinking C.P. Snow's *The Two Cultures* Half-a-Century Later

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Abstract

In 1959 C.P. Snow published his widely influential *Two Cultures*, which set out to diagnose the then discernibly growing divide between the humanities and the sciences. Although Snow's recognition was prescient in light of today's capital-intensive domination of the sciences over the ever-fractured, underfunded humanities in the neoliberal university, his analysis was based on a one-dimensional faith in scientific progress. Contrary to Snow's condescending characterization of Luddites and their intellectual analogues as indulging in an "Edenic fantasy", the compatriot social historians of Snow's times revealed the exact opposite: that it was the historical process of enclosures and capitalist expropriation that prompted the commoners' insurrectionary struggles of machine-breaking in defense of their culture at the point of production and reproduction. Any collective effort toward the making of a "third culture" is bound to fail without properly situating the arts/sciences cultural divide as an organic part of this historical privatization of knowledge and social relations.

Keywords: humanities, sciences, enclosure, Luddites.

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No other English-language work in the last half a century has exerted as much influence on the debate over the relationship between the humanities and the sciences as Charles Percy Snow's 1959 Rede lecture *The Two Cultures*. Reexamining this classic text over fifty years later, we are struck by how much *The Two Cultures* bears the stamp of its own times and culturally restricted, British intellectual milieu, from its sweeping optimism regarding the global benefits of an ahistorically generalized "industrial revolution" to its socially reified treatment of the "two cultures" which fails to consider any of the signal political developments taking place on its native soil at the time, most especially the decline of British imperial power and the rise of the British New Left. Thus, although Snow's formulation ought certainly to be acknowledged as having served a valuable function in reformulating a seminal issue that arose as soon as industrial capitalism, under the aegis of the British empire, obtained a measure of full maturity in the nineteenth century, it also posits a cautionary tale for those of us continuing the debate he had pioneered: when discussing the issue of culture, of sciences and humanities, we must always relate it to the materiality of the historical moment in which the discussion is taking place as well as within the longer view of the socioeconomic system that has produced this moment.

Unfortunately, despite the best intentions of the participants, the more recent debates with direct bearing on "the two cultures" - from the Culture War to the Science Wars to the Third Culture - have reproduced inadvertently some of these same defects found in Snow's pioneering lecture. Two years prior to Snow's lecture, the political philosopher Masao Maruyama noted in his celebrated *Japanese Thought* (*Nihon no shiso*) that one of the peculiar qualities of Japanese intellectual life was that a particular debate (*ronso*) would occur and then the next generation of debate on the same issue would restart as if the previous one had never even taken place, toiling in a kind of intellectual equivalent of Sisyphean labor. Insofar as this debate on "the two cultures" is concerned - and possibly on most issues connected with cultural matters - this is not an exclusive attribute of Japanese intellectual history. The question that confronts us then is: can we find any productive way to break this farcical repetition in intellectual and cultural history, to effectively advance the argument beyond the important question posed and handled inadequately by Snow and his epigones?

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Whose "Social History," Theirs or Ours?

In his lengthy introduction to the 1998 reissue of Snow's *Two Cultures*, Stefan Collini describes the working-class/lower-middle-class milieu out of which C.P. Snow emerged:

> The grandfather, William Henry Snow, was a characteristic Victorian figure, a radical and nonconformist who educated himself and became foreman engineer of the Leicester tramways… He lived until 1916, incarnating for his elder grandsons the self-help and stern virtue of an heroic age (Charles was to refer to him with admiration several times in his writing and lectures)… In the delicate gradations of English class identities, the Snow family hovered just on the right side of that crucial divide between the would-be genteel lower-middle class and the barely respectable upper-working class.[2]

Collini goes on to add that Snow's scientific leaning owes "especially to the Cambridge of the 1930s… and he imbibed a certain cultural conception of science that was especially powerful in those years, particularly among 'progressive' scientists and radical spokesmen for science such as J.D. Bernal and P.M.S. Blackett," to say nothing of Snow's literary and intellectual model H. G. Wells.[3] Snow's unqualified appreciation of the "industrial revolution" is thus a clear discursive symptom of what the British Cultural Studies would soon call "embourgeoisement" of British working-class culture, not so much in the contemporary subcultural sense as they understood it but as a throwback to the labor tradition of scientific self-education, which posed a meritocratic challenge to the hereditary hierarchy of the British class system and which developed in the nineteenth century thanks to the effort of such people as George Julian Harney, William Lovett, William Cuffay, and Snow's grandfather William Henry Snow, "a characteristic Victorian figure, a radical and nonconformist who educated himself."

However, what may have been "progressive" in nineteenth-century or even 1930s England may very well turn out to be "reactionary" or at least institutionally compromised by 1959. After all, since Snow's scientific study in Cambridge in the interwar years, the world came under assault with the heretofore most technologically developed war, resulting in the explosion of that manifest symbol of the postwar scientific spirit, the atomic mushroom cloud over Hiroshima and Nagasaki. It is difficult to match up Snow's strangely innocent Wellesian, social reformist vision of scientific progress against the sentiments of fellow Europeans who absorbed more acutely the visceral shock of that globally catastrophic war, as exemplified in Theodor Adorno's dour notice on the writing of poetry and Samuel Beckett's *Waiting for Godot*, perhaps the most definitive drama of the post-

[2] C.P. Snow, *The Two Cultures* (Cambridge: Cambridge University Press, 2008), xviii.
[3] *The Two Cultures*, xxii-xxiii.

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Auschwitz, post-Hiroshima "end of man" whose very allegorical, theological, and linguistic capacity for meaning has all but broken down. Indeed the point is not so much being for or against science *per se* - or being for or against the humanities - because to put the matter so baldly already distorts simplistically what are complex, above all *historical* traditions, practices, and relationships.

Hence it is particularly ironic when Snow invokes "social history" in his progressive defense of "industrial revolution": "There are plenty of scholars professionally concerned with pre-industrial social history. Now we know something of the elemental facts of the lives and deaths of peasants and agricultural labourers in seventeenth- and eighteenth-century England and France." And what are these "elemental facts"? Citing French demographic history and Peter Laslett, Snow tells us:

> In the dry but appallingly eloquent language of statistics, the historians explain to us that, in eighteenth-century French villages, the median age of marriage was higher than the median age of death. The *average* length of life was perhaps a third of ours, and appreciably less, because of the deaths in childbirth, for women than for men…The greater part of entire communities died of starvation, which appears to have been common occurrence.
>
> Though English records are nothing like so complete…The same stark conclusions stand out – except that in England there is as yet no proof of periodical famine, though it was endemic among the Scottish poor.
>
> There is a mass of other evidence, from many kinds of provenance, all pointing in the same direction. In the light of it, no one should feel it seriously possible to talk about a pre-industrial Eden, from which our ancestors were, by the wicked machinations of applied science, brutally expelled. When and where was this Eden?[4]

It is odd to be reading these lines about the expulsion from a non-existing Eden. It is odd because, in these lines about pre-industrial Eden, Snow fails to follow some simple "ground-rules" of intellectual debate he had set on the occasion of F.R. Leavis's attack on *Two Cultures*: "If he [the intellectual opponent] refers to words that I have said or written, he will quote them accurately. He will not attribute to me attitudes and opinions which I do not hold, and if he makes any such attributions, he will check them against the documentary evidence… he will be scrupulous about getting his facts right. Naturally, I have a duty to obey the same rules in return."[5] But Snow does not even name the contemporary intellectual figures who argue the Eden thesis, let alone offer any attribution or "documentary evidence" that such a thesis is widely touted.

For if Snow had bothered look further and wider into the "pre-industrial social history" of "peasants and agricultural labourers in seventeenth- and eighteenth-century England and France" being written just as he was making these pronouncements, he would have discovered among its

[4] *The Two Cultures*, 82, 83-4.
[5] C.P. Snow, *Public Affairs* (New York: Charles Scribner's Sons, 1971), 81.

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careful parsing of massive "documentary evidence" no simplistic consensus on "pre-industrial Eden," good or bad, as he suggests. Even ideologically committed historians sympathetic to Snow's argument concerning the universal benefits of scientific, industrial modernization as a panacea to global poverty may take firm exception to so rudely graft the conditions of seventeenth- and eighteenth-century English and French peasants onto the alien territory of their twentieth and twenty-first century counterparts and object that this is to commit the historiographically mortal sin of "presentism."

But, more substantially, what is missing from Snow's one-dimensionally oversimplified, secondhand account of social history is the fundamental understanding of what social history had actually accomplished, namely to empirically break down and complicate such terms as "scientific revolution" and "industrial revolution" into multilayered *social processes* that bear no resemblance to the over-generalized, ideological purposes to which they have been used in contemporary public discourses, including Snow's own contribution. I do not use the word "ideological" here to register a disagreement with a notion that science does not bring about progress or it could be - as it in fact has been - variously beneficial to the human race but to point out an elementary point: talking about science at this level of abstract generalization is meaningless because, for one, it completely ignores the question of how corporate and state power constitutes the framework in which scientific research is conducted. We look in vain in Snow's lecture and 1963 "Second Look" for any sign that he has any "elemental" understanding that the problem is not so much the communicative divide between the sciences and the humanities but how this divide is itself produced by specifically historical relations of power to which some of us give the name of "capitalism."

After all, were the historical Luddites - as opposed to the "natural Luddites" among the British intelligentsia - those machine-breaking textile artisans of Nottinghamshire, Yorkshire, and Lancashire ever consulted democratically in how "science" was going to be applied in their labor-process, were their deeply ingrained traditions of moral economy given their due respect when industrial mechanization was incorporated into their trade? I do not recall any incident of underage and prematurely aged French or English miners in the nineteenth century being asked for their permission in having to work underground in dangerous and unsanitary conditions (or, closer to Snow's time, thirteen years after his lecture in Harlan County, Pennsylvania). The only reason these impoverished, deracinated workers and their descendants were able to acquire a higher standard of living *in spite of* the capitalist use of scientific technology to debase their power and squeeze more profit out of them was because they organized and struggled. After all, without the

social motor of the French and Haitian Revolutions, 1848 Revolution, Taiping Rebellion, Paris Commune, Great Railroad general strike, the economic motor -- "machinations of applied science" -- would never have yielded any of its positive side-effects, which exponents of modernization tend to exaggerate into its *raison d'etre*. To speak in quite broad terms, what the British, French, and American "new social history" (associated with essential innovations of British Marxist historians, Annales School, and multiracial, multi-gendered labor history from below) managed to achieve in their grubby, hard-nosed intellectual labor was hardly a nostalgic idealization of the pre-industrial past. It was, as E.P. Thompson puts it in his perhaps most oft-quoted phrase, a rescuing of "the poor stockinger, the Luddite cropper, the 'obsolete' hand-loom weaver, the 'utopian' artisan, and even the deluded follower of Joanna Southcott, from the enormous condescension of posterity"[6] such as Snow displays by not only refusing to hear voices of the Luddites but by also using their name to christen in a single brushstroke ("natural Luddites") a handful of intellectuals who voiced their dissent against the inhumane, profit-driven application of scientific principles which was the root of the Luddite struggles.

F.R. Leavis, whose renowned riposte to Snow's *Two Cultures* has been described an "intemperate attack,"[7] is no less guilty of this condescension when he writes how he and his colleagues' use of George Sturt's *The Wheelwright's Shop* "had nothing William-Morrisian in it; neither of us, I may say, went in for folk-dancing - or pubs," although his general point about Sturt remains valid, namely:

> The wheelwright's business… didn't merely provide him with a satisfying craft that entailed the use of a diversity of skills; it contained a full human meaning in itself - it kept a human significance always present, and this was a climate in which the craftsman lived and worked: lived *as* he worked. Its materials were for the most part locally grown, and the wheelwright quite commonly had noted as a tree *in situ* the timber that came to the shop - which is a representative aspect of the general truth. The customers too were local, and he knew them, themselves and their settings, as meeting their particular requirements he had to, individually - he, the wheelwright of the neighborhood. He saw the product of his craft in use, serving their functions in the life and purpose of a community that really *was* a community, a human microcosm, and couldn't help feeling itself one.[8]

Apart from the static and hence reified sense Leavis distills in the term "human microcosm," a notion of organic "community" which fails to take note of the historical structure of class privilege and relations in which Strut's artisanal practice was bound up, I think this is a fair representation of

[6] E.P. Thompson, *The Making of the English Working Class* (New York: Vintage Books, 1966), 12.
[7] Frederick R. Karl, *C.P. Snow: The Politics of Conscience* (Carbondale: Southern Illinois University Press, 1963), 154.
[8] F.R. Leavis, *Nor Shall My Sword: Discourses on Pluralism, Compassion and Social Hope* (New York: Barnes & Noble Books, 1972), 84-5.

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what industrial capitalism had destroyed in England and the rest of the world. As Thompson wrote in his 1992 forward to *The Wheelwright's Shop*, although "[c]ultural theorists may have been wrong to make an 'organic community' out of all this: testimony from other sources of evidence is less reassuring," "they are wholly right to see this as a work of classical distinction, whose testimony must weigh heavily in the scales of judgment," not least of all because "[i]t is a superb and necessary contribution to cultural theory, social history and (in its upside-down way) epistemology." This upside-down "epistemology" referred to "the formation of knowledge, not from theory, but from practice and practical transmission, from the ground up," "the multiplicity of skills which must be acquired by a 'tradesman' in any craft" and which, for example, went into the making of "a farm waggon: felling and carrying timber, seasoning, the work of sawyer, the work of the foreman or manager in selecting timber of the right kind and grain, the work of the wheelwright with his many skills, and then the skills of the blacksmith."[9] Snow is completely blind to the cultural epistemology of such practical labor (in fact, it does not even figure in his rarefied idea of "culture"), and Stefan Collini is quite correct in pointing out that Snow does not even bother to make distinctions among his "natural Luddite" intellectual opponents despite the fact he should have known better: "Snow had read Raymond Williams's *Culture and Society*, published in 1958… but its complex discussion of the literary responses to industrialism does not seem to have modified Snow's conviction that the champion of 'culture' were all tainted with 'Luddism'."[10]

So where does Snow's condescension derive from? After all, Snow's grandfather belonged very much in the radical, nonconformist, working-class milieu whose formation Thompson describes so vividly in *The Making of the English Working Class*, published in the same year as "The Second Look" on *The Two Cultures*:

> I remember talking to my grandfather when I was a child. He was a good specimen of a nineteenth-century artisan. He was highly intelligent, and he had a great deal of character. He had left school at the age of ten, and had educated himself intensely until he was an old man. He had all his class's passionate faith in education. Yet, he had never had the luck… to go very far. In fact, he never went further than maintenance foreman in a tramway depot. His life would seem to his grandchildren laborious and unrewarding almost beyond belief. But it didn't seem to him quite like that… His grandfather must have been an agricultural labourer. I don't so much as know his Christian name. He was one of the 'dark people', as the old Russian liberals used to call them, completely lost in the great anonymous sludge of history… my grandfather was pretty unforgiving about what society had done, or not done, to his ancestors, and did not romanticize their state. It was no fun being an

[9] E.P. Thompson, "Foreward" in George Sturt, *The Wheelwright's Shop* (Cambridge: Cambridge University Press, 1993), xiii-xiv, xi-xii.
[10] *The Two Cultures*, xxxv.

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> agricultural labourer in the mid to late eighteenth century, in the time that we, snobs that we are, think of only as the time of the Enlightenment and Jane Austin.
>
> The industrial revolution looked very different according to whether one saw it from above or below…To people like my grandfather, there was no question that the industrial revolution was less bad than what had gone before. The only question was, how to make it better.[11]

Thus, in Snow's narrow conception based on a single recollection of his grandfather (whose oral testimony we do not have to verify if his grandson's account of his opinion is an accurate one), the historical Luddites are disqualified automatically from the view from below, as are the Silesian weavers of the 1840s who committed Luddism to their machines or the Tokugawa artisans who in their *uchikowashi* (literally, "strike and destroy") rebellion in the eighteen and nineteenth centuries broke into rice and sake merchants' houses to expropriate and share food and drinks in common in the face of life-threatening famines and - like the Silesian weavers - burned the bills of debt that forced the Japanese poor to sell their daughters into indentured labor and prostitution operated for the benefit of the rising mercantile class. Snow's language is however revealing - "we, snob that we are…" - indicating that he had made the successful exit out of his humble class origin to make, with the dint of his scientifically trained intelligence, an impressive climb up the English class hierarchy to achieve eventually the great distinction of lordship. Snow's sympathy for science and his virtually categorical, ahistorical collapse between the "scientific revolution" and the "industrial revolution" - the first as the motor for the second - reflects this experience of class mobility, for "science" was for him a meritocratic ticket out of his working-class, lower-middle-class background and, out of this personal experience, he generalized the prospect of the entire world: the only answer for world poverty and hunger in the "undeveloped" South was the practical application of science in the form of the "industrial revolution" for those regions, as he said, "The scientific revolution is the only method by which most people can gain the primal things (years of life, freedom from hunger, survival for children) - which have in reality come to us through having had our own scientific revolution not so long ago."[12] Anyone who doubts this notion he places in the multipurpose grab bag of those silly purveyors of the Eden thesis, admonishing them sternly: "It is important for the pre-industrial believers to confront the social historians. Then we can get a basis of fact accepted."[13]

Apart from Laslett, the only social historian Snow mentions is his personal friend J.H. Plumb, a forefather to such public historians as Simon Schama, Linda Colley, and Niall Ferguson, and the

[11] *The Two Cultures*, 26-7.
[12] *The Two Cultures*, 79-80.
[13] *The Two Cultures*, 84.

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Plumb quote he cites as a coup de grace against starry-eyed "pre-industrial believers" is a telling one: "J.H. Plumb, in one of his attacks on the teaching of a pretty-pretty past, has written: 'No one in his senses would choose to have been born in a previous age unless he could be certain that he would have been born into a prosperous family, that he would have enjoyed extremely good health, and that he could have accepted stoically the death of the majority of his children.'"[14] No, no one in his/her senses would choose to have been poor and underprivileged in the previous age just as no one in our own age in his/her senses chooses to be born likewise. Plumb and Snow are playing at a rhetorical game, which has also become the staple of their contemporary descendants. For it is precisely because there were prosperous families who enjoyed wealth and extremely good health from the lands they expropriated from commoners and fruits of labor done by the masses of population they lorded over that peasants, subalterns, and indigenous peoples whose children were dying revolted as Levellers and Diggers (English Revolution) and the Ainus (Shakushain Rebellion) did in the seventeenth century and as maroons, United Irishmen, and American Indians (e.g., Battle of Fallen Timber) did in the eighteenth. We, "snobs that we are," may point at the limitations of their struggles or the archaic customs they were defending and reinventing, but, as Thompson rightly put it, "they lived through these times of acute social disturbances, and we did not. Their aspirations were valid in terms of their own experience."[15]

I do not of course mean to deny the validity of Snow's own experience, from Leicester shoe factory (where his father worked as a clerk) to Fellow of Christ's College and lordship, that Snow's uncritical commitment to the "scientific revolution" is "edged with some of the class *ressentiment* which is familiar in many of the novelists and playwrights of the 1950s," as Collini notes.[16] But if John Osborne's Jimmy Porter in *Look Back in Anger*, James Dixon in Kingsley Amis's *Lucky Jim*, and Colin in Alan Sillitoe's "The Loneliness of the Long Distance Runner" expressed this class *ressentiment* openly as a distinctive element of refusal, Snow's expression is muted - we might even cart out that overused psychological term "repressed" - and, to that extent, we must consider it a work of bad faith. The question Snow posed in 1959 - the widening gulf between the "two cultures" of science and humanities - is a valid one, remains ever more valid today after the "Culture War" and "Science Wars" of the 1990s, but the way he posed it was impaired by his uncritical apprehension of class mobility (of which he was a part), to say nothing of the class structure and relations that define the framework of academic discipline and intellectual divisions of labor within contemporary capitalist culture.

[14] *The Two Cultures*, 82.
[15] *The Making of the English Working Class*, 13.
[16] *The Two Cultures*, xli.

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However, Snow's embryonic notion of "third culture" may contain something suggestive in it, though quite contrary to his intentions:

> It is probably too early to speak of a third culture already in existence. But I am now convinced that this is coming. When it comes, some of the difficulties of communication will at last be softened: for such a culture has, just to do its job, to be on speaking terms with the scientific one…
>
> There are signs that this is happening. Some social historians, as well as being on speaking terms with scientists, have felt bound to turn their attention to the literary intellectuals or more exactly to some manifestations of the literary culture at its extreme. Concepts such as the 'organic community' or the nature of pre-industrial society or the scientific revolution are being dealt with, under the illumination of the knowledge of the last ten years. These new examinations are of great importance for our intellectual and moral health.[17]

What is suggestive here is not so much that Snow appoints "social history" the task of brokering a negotiation for a "third culture" between science and humanities -- although this is a proposal that John Brockman ought to have taken more seriously given his borrowing of the term from Snow -- but that any kind of viable "third culture" will have to contain some sort of critical historical consciousness of itself. As we have seen, Snow's concept of "social history" is a very partial and partisan one, but, taking his point seriously, as we historicize in terms of social power and relations the divide between "two cultures" against the backdrop of *longue durée* of historical capitalism, we realize something quite simple: the prospect of building a genuine "third culture" that retains the best of the two in true dialectical fashion will not happen until the problem of class division and capitalism is resolved.

This is in fact what Snow wanted to say but could not, limited as he was by his ideological tunnel vision rooted in his personal experience of upward class mobility and by his knowledge of social history. After all, this is the man who says: "one mustn't despise the elemental needs, when one has been granted them and others have not. To do so is not to display one's superior spirituality. It is simply to be inhuman, or more exactly anti-human."[18] Perhaps this is the proletarian grandfather in Snow speaking. It is exactly what any serious discussion of "third culture" should being with, for "culture" is not a matter of simply the mind or the spirit but of the body, labor, materiality, as Terry Eagleton reminds us:

> The word 'coulter', which is a cognate of 'culture', means the blade of a ploughshare. We derive our word for the finest of human activities from labour and agriculture, crops and cultivation…

[17] *The Two Cultures*, 70-1.
[18] *The Two Cultures*, 79.

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> Etymologically speaking, then, the now-popular phrase 'cultural materialism' is something of a tautology. 'Culture' at first denoted a thoroughly material process, which was then metaphorically transposed to affairs of the spirit. The word charts within its semantic unfolding humanity's own historic shift from rural to urban existence, pig-farming to Picasso, tilling the soil to splitting the atom.[19]

However, where Snow goes wrong is to entertain the impossible liberal dream (this *is* the great Edenic fantasy of our times) that, by simple application of scientific and industrial technologies, without radically democratizing the structure of inequality in the workplace, state, and international institutions, this problem of human "elemental needs" can be resolved with the rest of the world adopting the consumerist lifestyle of a contemporary Brit, American, Japanese.

Snow keeps mentioning "Asians" and "Africans" as if they were a cipher for those "poor yellow and black brothers" whom he and other scientifically revolutionized, progressive Westerners must help to raise up to their level of consumption: "It [industrial revolution] looks very different according to whether one sees it from Chelsea or from a village in Asia"; "Pronouncements such as one still hears from old Asia or old Africa hands - Why, it will take those people five hundred years to get up to our standard! - they are both suicidal and technologically illiterate"; "That is why scientists would do good all over Asia and Africa."[20] Suddenly, we are hurled into an Edenic fantasy world again, for we see here no mention of the fact that Asia and Africa, to say nothing of America, were plundered, colonized, enslaved, underdeveloped by the Western elites (those wily "old Asia" and "old Africa hands"!) precisely with the tools of scientific revolution Snow offers as the messianic panacea for post-independence Africa and Asia still dealing imperfectly and often erroneously with the aftereffects of this colonial legacy. How did Karl Marx describe such Edenic fantasy espoused by liberal political economists who explained the origins of the poor and the working class?

> This primitive accumulation plays approximately the same role in political economy as original sin does in theology. Adam bit the apple, and thereupon sin fell on the human race. Its origin is supposed to be explained when it is told as an anecdote about the past. Long, long ago there were two sorts of people; one, the diligent, intelligent and above all frugal elite; the other, lazy rascals, spending their substance, and more, in riotous living. The legend of theological original sin tells us certainly how man came to be condemned to eat his bread in the sweat of his brow; but the history of economic original sin reveals to us that there are people to whom this is by no means essential. Never mind! Thus it came to pass that the former sort accumulated wealth, and the later sort finally had nothing to sell except their own skins. And from this original sin dates the poverty of the great majority who, despite all their labour, have up to now nothing to sell but themselves, and the wealth of the few that increases constantly, although they have long ceased to

[19] Terry Eagleton, *The Idea of Culture* (Oxford: Blackwell Publishers, 2000), 1-2.
[20] *The Two Cultures*, 27, 43, 48.

> work. Such insipid childishness is every day preached to us in the defence of property.[21]

Mercifully, Snow spares us the mid-twentieth-century capitalist variant of this "Ant and Grasshopper" myth but it is very likely that some modified notion of it must inform his one-dimensional praise for scientific technology, for he betrays no understanding of how such a potentially humanizing knowledge as science is used historically for liberating as well as brutally exploitative ends:

> Hence the historical movement which changes the producers into wage-labourers appears, on the one hand, as their emancipation from serfdom and from the fetters of the guilds, and it is in this aspect of the movement which alone exists for our bourgeois historians. But, on the other hand, these newly freed men became sellers of themselves only after they had been robbed of all their own means of production, and all the guarantees of existence afforded by the old feudal arrangements. And this history, the history of their expropriation, is written in the annals of mankind in letters of blood and fire.[22]

Ninety-two years before Snow's lecture, Marx understood that such "primitive accumulation" undergone by the English and French peasants and agricultural laborers was connected organically to the primitive accumulation that capital proceeded to impose on indigenous peoples abroad as it expanded its imperialist power: "The discovery of gold and silver in America, the extirpation, enslavement and entombment in mines of the indigenous population of that continent, the beginning of the conquest and plunder of India, and the conversion of Africa into a preserve for the commercial hunting of blackskins, are all things which characterize the dawn of the era of capitalist production"; "In fact the veiled slavery of the wage-labourers in Europe needed the unqualified slavery of the New World as its pedestal."[23]

My intention in citing these famous passages from Marx's *Das Kapital* at length is not to critique Snow as an insufficient Marxist, for I could have very well extracted similar passages from Adam Smith. Rather, the point here is that a very basic historical understanding of class power, science, and capitalism that an exiled, nineteenth-century German independent scholar had achieved with the limited wherewithal of the British Museum, working in a non-native tongue and with all kinds of domestic, political interruptions, surely was within Snow's reach as well in the mid-twentieth century. Moreover, regardless of what one thinks of Marx's political standpoint, *Das Kapital* is a classic of the humanities, next to Plato, Bible, Confucius, Shakespeare, Lao-Tze, and to so mindlessly talk about "scientific revolution" in the way Snow does without confronting empirical

[21] Karl Marx, *Capital: Volume One* (London: Penguin, 1990), 873.
[22] *Capital: Volume One*, 875.
[23] *Capital: Volume One*, 915, 925.

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facts of social history found in *Das Kapital* (which have been refined and amplified variously by many able scholars, not only within the Marxist tradition, in the subsequent hundred years) is to fall into exactly the kind of cultural provincialism that Snow was attacking and proposing to overcome. A genuine cultural cosmopolitanism does not of course mean the acquisition of knowledge on the order of cultural literacy among the ethnocentric cognoscente; it means, in our context, the historical understanding that the Luddites were bearers of, in Atlantic social historian Peter Linebaugh's words, "a politics of revolutionary traditions of Ireland, France, and the 1790s, and a local defense of ancient right and custom which were threatened by privatization, machinery, and enclosure," in other words, hybrid revolutionary traditions that cannot be compartmentalized into conveniently discrete category of the premodern, the modern, and other ideologically constituted idioms that slip into our tongue without much thought.[24] We could very well say the same thing about the divarication suffered between the humanities and the sciences, which has never been a historical inevitability but is merely the latest sequence of capitalist enclosures that are as much a cognitive, discursive process as a material one.

From Whence "Third Culture"?

What is the prospect of an actual "third culture" then, short of what Marx described abstractly as "expropriation of the expropriators," "negation of the negation," when "we have the expropriation of a few usurpers by the mass of the people"?[25] I believe one major task is a critical expansion - in some ways, a "negation of the negation" - of what John Brockman has narrowly defined as "third culture," the contemporary practice of working scientists writing popularized books for a general audience. It would be insufficient for working humanities scholars to simply emulate this practice (or for the said scientists to continue doing what they are doing) because it does not confront that question Snow raised, namely how to deal with the question of human subsistence among the multitudes struggling, suffering, and dying in the world today. In other words, how are twenty-first century intellectuals and academic workers to realize their common interests with the rest of humanity and, without falling into the condescending position of enlightened intellectuals, learn from the experiences of their fellow workers, whatever their trade, nationality, ideological sympathy happens to be? For what Brockman's "Third Culture" lacks is not only social history and humanities but also any sense of how the vast majority of intellectuals, scientific or humanist, contributes to the reproduction of the scientifically managed corporate capitalist system, to say

[24] Peter Linebaugh, *Ned Ludd & Queen Mab: Machine-Breaking, Romanticism, and the Several Commons of 1811-12* (Oakland: PM Press, 2012), 18-19.
[25] *Capital: Volume One*, 929-30.

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nothing of how those critical intellectuals aware of this can work and organize with the "mass of the people" to halt this reproduction and create in whatever way possible something more radically democratic and just.

In institutional terms, there are a number of reasons why conditions are ripe for such a collective work of solidarity in building "third culture" from below. For academia and publishers have been rapidly undergoing a "primitive accumulation" of their own, as independent scholarly and literary values become replaced with principles of corporate market-share. Of course, universities and publishers have always been tied to corporate interests but what is extraordinary is the extent to which they are becoming ruthless in their managerial practices more recently. For example, when the seemingly ever-irreconcilable relationship between humanities and science comes up nowadays in U.S. academic circles, the "troubled" party is always designated the humanities. We are all familiar with the nature of this recent trouble (by "recent" I mean in the last forty years). This involves essentially the financial and administrative, to say nothing of moral, marginalization of the humanities at the expense of patent-producing, financially well-endowed science departments and business schools, which rake in the profit in our neoliberalized universities that are run increasingly like a corporation and rarely headed by a president or board of directors with a humanities background. Even a journalistic work intended for a general audience, such as Jennifer Washburn's *University Inc.*, sounds the alarm bell for this academic race to, literally, "the bottom line":

> Academic administrators increasingly refer to students as consumers and to education and research as products. They talk about branding and marketing and now spend more on lobbying in Washington than defense contractors do. Many have eagerly sought to convert "courseware" into intellectual property that can be packaged and sold over the Internet for profit. Others have allowed whole academic departments to forge financial partnerships with private corporations, guaranteeing these firms first dibs on the inventions flowing out of their labs.
>
> […]
>
> When researchers at the University of Utah discovered an important human gene responsible for hereditary breast cancer, for example, they didn't make it freely available to other scientists, even though we - the U.S. taxpayers - paid $4.6 million to finance the research. They raced to patent it and gave the monopoly rights to Myriad Genetics, Inc., a start-up company founded by a University of Utah professor, which proceeded to hoard the gene and restrict other scientists from using it. On one occasion, the company actually threatened legal action against

> Haig Kazazian, chair of the genetics department at the University of Pennsylvania, after he had tired to use the gene in his own breast cancer research.[26]

So Snow's fifty-year-old boundless optimism about science for the global poor has withered quickly on the poison ivy of corporate privatization and profit, and we are not even talking about distributing the benefits of the said scientific research freely to the poor who need it but merely doing free collective research on it so that such benefits could be ascertained and developed in the first place. Even the commoning rights of scientific researchers - along with many indigenous peoples' knowledge, as Vandana Shiva for example has chronicled - thus suffer privatized enclosure and become grist for neoliberal accumulation.

Although such market liberalization and destruction of academic values continue apace today, this is not due to the doings of leftwing, postmodern, multiculturalist, and relativist academics, as rightwing pundits (and, ironically, some fellow humanities scholars) argue ad nauseam. Rather, it is by the effective application of the oxymoronic "business ethic" and "corporate synergy" into a traditionally self-managed, non-profit "educational factory" whose ostensible purpose of "human capital" development was earlier offset to some extent by the tacit support for intellectual pursuits that were all but useless in the kingdom of surplus value. There never was a "golden age" of the university when the Groves of Academe were lined by Platonically constructed Ivory Towers where value-free intellectuals could speak of the ideal Republic run by a philosopher-king - indeed even Plato and Aristotle's academies were hierarchical, class institutions that excluded women, slaves, and commoners, that is to say, the majority of the Athenian population. Be that as it may, the increasingly widening and accelerating divarication between humanistic and scientific discourses in twenty-first century academia denotes a larger and more serious crisis in the uniquely American - which is to say, U.S. in the imperial shorthand - ideology defining the historical relationship between knowledge and power in capitalist culture.

It is then quite appropriate that Snow's *Two Cultures* became such a major, widely influential cornerstone in the debate on sciences and humanities. For in the manner of the proverbial Minerva's owl flying at dusk, this critical self-awareness was registered by a subject of an empire whose hegemonic fortune was being eclipsed at the time by the U.S. "imperialism without colonies." However, for all the reasons I have indicated above, this self-critical awareness went only so far, imbibing the safe liberal illusion that assumed the effects of the monetary market to be benign and capitalist power in defining social values and, above all, the boundaries of *culture* to be

[26] Jennifer Washburn, *University, Inc.: The Corporate Corruption of American Higher Education* (New York: Basic Books, 2005), x, xi.

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all but invisible. Perhaps this ideological Achilles' heel goes a long way in explaining why Snow's lecture had so quickly earned the status of a contemporary classic.

Those of us working fifty years later within the province of similar debates over "third culture" have no excuse being tangled up in such illusions. We should fight them every step of the way in whatever we think, write, and do about it in order to collectively forge a historically self-conscious bridge across the humanities and the sciences. That this necessitates a far more drastic event than a cognitive revolution should be self-evident. As Maruyama Masao wrote, "The energy that raises conglomeration into hybridity cannot be born without an agency that possesses, in terms of both cognition and practice, tough self-control. Our 'revolutionary' task is namely that it is *we* who produce that agency."[27]

[27] Masao Maruyama, *Nihon no shisoh* (Tokyo: Iwanami-shoten, 1961), 66.

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