From outside-in to inside-out: rethinking The Two Cultures and the contribution of C. P. Snow.

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Abstract

The publication in 1959 of the University of Cambridge Rede Lecture by C. P. Snow, entitled The Two Cultures and the Scientific Revolution, is justly remembered for the considerable stir it caused. Sir Charles' account of the growing communication barrier between practitioners of the natural sciences and technical fields, on the one hand, and the arts and humanities, on the other, inspired a veritable blizzard of urbane invective on both sides of the Atlantic, indeed throughout the Anglophone world. Yet, for all the heat, little light was shed on the sources of a profound and growing confusion. The following paper argues for a reinterpretation, 1) of the underlying points C. P. Snow wished to emphasize and, therefore, also for a rehabilitation of certain features of his most controversial work and 2) for a revised understanding of the two cultures, so called. The present author proposes to view them as merely two facets of the same coin: scientia or human knowledge. From this perspective on an intellectual realm newly reunited, curiosity is the principle currency and must be recognized, encouraged, and made the bedrock of decision-making throughout all forms, levels, and institutions of education.

Curiosity
may have killed the cat. More likely,
the cat was just unlucky, or else curious
to see what death was like, having no cause
to go on licking paws, or fathering
litter on litter of kittens, predictably.

Nevertheless, to be curious
is dangerous enough. To distrust
what is always said, what seems,
to ask odd questions, interfere in dreams,
smell rats, leave home, have hunches,
does not endear cats to those doggy circles
where well-smelt baskets, suitable wives, good lunches
are the order of things, and where prevails
much wagging of incurious heads and tails.

Face it. Curiosity
will not cause us to die--only
lack of it will.
Never to want to see
the other side of the hill
or that improbable country
where living is an idyll
(although a probable hell)
would kill us all.

Only the curious
have if they live a tale
worth telling at all.
Dogs say cats love too much, are irresponsible,
are dangerous, marry too many wives,

desert their children, chill all dinner tables
with tales of their nine lives.

Well, they are lucky. Let them be
nine-lived and contradictory,
curious enough to change, prepared to pay
the cat-price, which is to die
and die again and again,
each time with no less pain.
A cat-minority of one
is all that can be counted on
to tell the truth; and what cats have to tell
on each return from hell
is this: that dying is what the living do,
that dying is what the loving do,
and that dead dogs are those who never know
that dying is what, to live, each has to do.
Alastair Reid, Weathering (1)

Introduction

The publication in 1959 of the University of Cambridge Rede Lecture by C. P. Snow, entitled The Two Cultures and the Scientific Revolution, is justly remembered for the considerable stir it caused. (2) It is, in fact, well known to have been something of a sensation in the academic world, among literary intellectuals, and even in educational circles at the pre-university level. "It rapidly took on the standing of a classic," wrote F. R. Leavis, a few years later. "Sixth-form masters were making their bright boys read Snow as doctrinal, definitive and formative--and a good examination investment." (3) To the dismay of this Cambridge colleague, it was undeniable that Snow had made quite a splash. By the early '60's, The Two Cultures and the Scientific Revolution had become the talk of the town on both sides of the Atlantic.

It was and remains conspicuous that not all the chatter was particularly good-natured or friendly. Beginning with Leavis himself, whose 1962 Downing College Richmond Lecture--also in Cambridge--launched the opening salvo of hostile responses in the form of what Lionel Trilling of Columbia University later called an attack of "unexampled ferocity," Snow was subjected to a veritable avalanche of criticism of varying substance and tone. (4) The English poet and critic, Hilary Corke, described him in the following terms: "His is a typical administrator's mind, not very perceptive over the details but capable of forming and retaining a well-balanced picture of the entire field." (5) No less an American celebrity than the young William F. Buckley, Jr., fresh from tuition in the Joseph McCarthy school, pronounced concerning Snow: "What he has been preaching is that final effrontery of relativism that, in the last analysis, there simply aren't any essential differences between the two contending parties in our great war with Communism." (6) The episode swiftly turned into an expose of the ugly underside of life in the Ivory Tower.

Ultimately, much heat would be generated by the vigorous exchange of urbane invective. Unfortunately, little light would be shed on the fairly simple questions Professor Snow wished to ask: why did natural scientists and humanists increasingly fail to comprehend each other, and what actual difference did their apparent mutual incomprehension make? To these questions, Professor Snow offered tentative, personal answers in the Rede Lecture of 1959. That many of those to whom he directed his observations failed to grasp what he was talking about and that others who might have been expected to take up the challenge responded with a harsh rejection of Snow's proposals are the inspiration for this reevaluation.

No one in the humanistic or the natural-scientific establishments of the time seemed capable of agreeing concerning The Two Cultures. Was C. P. Snow a prophet? Was he a hero? Was he the herald of a new age? Or, was C. P. Snow a charlatan, a villain, a nobody, a snake-oil salesman in academic robes? In historical perspective, The Two Cultures and the Scientific Revolution presents a valuable opportunity to reflect on the potential for failure in the public airing of normative discourse. For in the end, the debate occasioned by publication of this work was merely superceded by more pressing matters; it was not resolved. One task of the present, therefore, must be in a frank spirit of inquiry to ask how and why Snow failed. Another must be to ask if legitimate concerns he raised, now so very long ago, could be formulated presently in such a way as to lead productively ahead rather than retrogressively backwards or distractingly off to the side.

Science and Political Culture

In returning today to the issues raised so provocatively by Snow some years ago, it is necessary to acknowledge the influence along the way of certain ancillary factors, prominent among a corrosive political dispute. Snow had traveled widely and spoken his mind publicly on political topics: the threat of nuclear annihilation, the Cold War, and the relative merits of life in the West versus life in the Soviet Union. Asked in a television interview, for instance, if he could imagine himself living happily in a Communist society, Snow responded:

Snow. I think so. It would depend a bit on what I, on my particular profession. You mean me as ...

Muggeridge. (Interviewer) Yes, you as you.

Snow. You mean me as me.

Muggeridge. You, writer-scientist.

Snow. Yes, I think so ... 7

Dithering of this kind had predictably adverse impact on the reception of The Two Cultures. The novelist, poet, and critic, John Wain, observed of this particular exchange:

> The slight difficulty over identification here ("You mean me as me?") reflects the bureaucratic habit of mind very accurately. It seems almost as if in Sir Charles' eyes, nothing as statistically insignificant as an individual person could be quite real. His happiness in a Communist country would depend ("a bit") on what he was doing; that is, whether he was on top, handing it out, or down below, taking it. And when he says, "they," of the Russians, he means "the Soviet bureaucracy," obviously, since it is this bureaucracy, not the Russian people, who are making "a serious attempt" to translate foreign writers of "a highish standard" who "are not actually, in their sense, really hostile" It is they, not the people, who dub all criticism, all skepticism about the perfect wisdom of their own decisions, "Fascist." What the common humanity of the Soviet Union feels about it all, we have to try to feel intuitively, since they have no voice. (8)

It is worth noting that partisans also rushed to the defense. Writing in the Spectator, a certain G. S. Fraser

expressed the view that, "men like Snow, at home both in Russia and America, and in a blunt simple way trying to teach these two blunt simple giants to understand each other may in the end prove greater benefactors of humanity than Dr. Leavis." (9)

What is most troubling about the Two Cultures episode is not that those with an axe to grind found the controversy a convenient whetstone. It is that artists, politicians, scientists, and even humanists seem all but completely to have missed the point when they zeroed in on Snow's somewhat naive political eccentricity. Snow did not expressly raise the question of politics in the context of the Cold War; he did expressly raise the question of a widening communication gap between natural scientific and technical disciplines, on the one hand, and the humanities and fine arts, on the other. It is puzzling that more focused debate took place on matters of lesser intellectual interest, while the issues which lent their weight to the very title of his work went largely overlooked. What was it about C. P. Snow's presentation of the relations between the arts and humanities and the natural sciences and technology that put people off the scent? What was it that caused people so profoundly to misunderstand The Two Cultures and the Scientific Revolution?

The answers to these questions, the present author contends, are less to be located in the details of what Snow said about the two supposed cultures than in the general form into which he chose to cast those details. It seems reasonable to assume that, whether he was brilliant or not, C. P. Snow was sufficiently well versed in science to recognize certain fundamental differences between it and the arts and humanities. Whether he was successful at articulating his perceptions of that difference or those differences is, of course, another matter. It is to this question of articulation, above all, that one seriously interested in the question eventually must turn.

The Scientific Revolution

In The Two Cultures, Snow paints a verbal portrait each of the prototypical scientist and the prototypical humanist. The non-scientist, i.e. the essentially literary intellectual, is a "natural Luddite," as Snow depicts this character. (10) This traditional, humanistically oriented type neither willingly accepts nor fundamentally understands the industrial revolution.

> Mr. T. S. Eliot, who just for these illustrations we can take as an archetypal figure, saying about his attempts to revive verse-drama that we can hope for very little, but that he would feel content if he and his co-workers could prepare the ground for a new Kyd or a new Greene. That is the tone, restricted and constrained, with which literary intellectuals are at home: it is the subdued voice of their culture. (11)

The natural scientist, by way of contrast, is brash and assertive:

> Then they hear a much louder voice, that of another archetypal figure, Rutherford, trumpeting: 'This is the heroic age of science! This is the Elizabethan age!' Many of us heard that, and a good many other statements beside which that was mild and we weren't left in any doubt whom Rutherford was casting for the role of Shakespeare. (12)

To a member of either culture, its opposite number is incomprehensible:

> The non-scientists have a rooted impression that the scientists are shallowly optimistic, unaware of man's condition. On the other

hand, the scientists believe that the literary intellectuals are totally lacking in foresight, peculiarly unconcerned with their brother men, in a deep sense anti-intellectual, anxious to restrict both art and thought to the existential moment. (13)

Snow then attacks what he calls two dangerous misinterpretations: allegations of the scientist's naive optimism and of the traditional or literary intellectual's contemptible social attitudes. In the case of scientific optimism, this platitude, as he puts it, depends upon a fundamental confusion between individual and social experience.

Most of the scientists I have known well felt--just as deeply as the non-scientists I have known well--that the individual condition of each of us is tragic. Each of us is alone: sometimes we escape from solitariness, through love or affection or perhaps creative moments, but those triumphs of life are pools of light we make for ourselves while the edge of the road is black: each of us dies alone. (14)

However:

Most of our fellow human beings, for instance, are underfed and die before their time. In the crudest terms, that is the social condition. There is a moral trap which comes through the insight into man's loneliness: it tempts one to sit back, complacent in one's unique tragedy, and let the others go without a meal.

As a group, the scientists fall into that trap less than others. They are inclined to be impatient to see if something can be done: and inclined to think that it can be done, until it's proved otherwise. That is their real optimism, and it's an optimism that the rest of us badly need. (15)

Regarding the allegedly contemptible social attitudes of literary intellectuals, Snow observes:

I remember being cross-examined by a scientist of distinction. 'Why do most writers take on social opinions which would have been thought distinctly uncivilized and demode at the time of the Plantagenets? Wasn't that true of most of the famous twentieth-century writers? Yeats, Pound, Wyndham Lewis, nine out of ten of those who have dominated literary sensibility in our time--weren't they not only politically silly but politically wicked? Didn't the influence of all they represent bring Auschwitz that much nearer?' (16)

Snow counters this misapprehension with the assertion that the dominant figures of the past dominate no longer:

Literature changes more slowly than science. It hasn't the same automatic corrective, and so its misguided periods are longer. But it is ill-considered of scientists to judge writers on the evidence of the period 1914-50. (17)

What has not changed since well before that time is the hostile standoff. Incomprehension reigns between two worlds of human experience, the scientific and the humanistic, as the two cultures drift further apart. While some scientists may have, "'tried a bit of Dickens,' rather as though Dickens were an extraordinarily esoteric, tangled and dubiously rewarding writer," they remain otherwise largely self-impoverished. (18) Representatives of "the traditional culture," on the other hand, cannot, "describe the Second Law of Thermodynamics," explain the concepts of mass or acceleration and remain pitifully mired in a Neolithic mindset. (19)

Snow concludes this pointed and passionate complaint on a note of apparent despair. "There seems then to be," he opines, "no place where the cultures meet." (20) One wonders if, indeed, there even could be! If scientists are those, according to Snow, with "the future in their bones," and humanists or representatives of traditional literary culture those, who wish "the future did not exist," there is precious little room to maneuver or even negotiate. (21) The only outcome, in the long run, can be victory of one over the other. The only result can be that one culture is gradually but ultimately subsumed by the other. Snow says as much: "young scientists now feel that they are part of a culture on the rise while the other is in retreat." (22) The two cultures once again will become one only when the weaker finally and inevitably capitulates.

It is noteworthy that to this mournful scenario Snow, a scientist and a humanist in his own right, offers no credible alternative. With impassioned, yet vague admonishments to educational reform and the suggestion that artists seek to incorporate science, "along with, and as part and parcel of, the whole of our mental experience" into art, the humanist in Snow essentially surrenders to what he sees as ineluctable necessity. (23)

> More often than I like, I am saddened by a historical myth. Whether the myth is good history or not doesn't matter; it is pressing enough for me. I can't help thinking of the Venetian Republic in their last half-century. Like us, they had once been fabulously lucky. They had become rich, as we did, by accident. They had acquired immense political skill, just as we have. A good many of them were tough-minded, realistic, patriotic men. They knew, just as clearly as we know, that the current of history had begun to flow against them. Many of them gave their minds to working out ways to keep going. It would have meant breaking the pattern into which they had crystallized. They were fond of the pattern, just as we are fond of ours. They never found the will to break it. (24)

Beginning like a battle in the grand struggle between competing world views, The Two Cultures and the Scientific Revolution evolves gradually into a eulogy for the humanities and an elegy to the triumph of the modern scientific mind.

All this seems odd for a man like C. P. Snow who was himself a member of the literary establishment. Did he truly expect and intend to write his own professional epitaph, or did he, perhaps, miss the mark? Is it possible that, confronted with a new mindset and an increasingly obvious divergence between it and the one with which it contended for legitimacy, Snow's perspective on the two cultures proved inadequate to a characterization of their simultaneous development? The "traditional culture" did survive. Despite a plausible claim to ascendancy, there is little evidence that the natural scientific and technical outlook subsumed its humanistic counterpart, in the West or anywhere else in the world. The two cultures live on to the present day. There is, perhaps, even a case to be made that both are healthier than ever before. And

yet, one cannot quite dismiss C. P. Snow. Surely, he identified a real problem when he worried that representatives of both cultures had genuine difficulty communicating. Surely, he identified a real difference at the heart of the intellectual enterprise when he sought somewhat fancifully to describe two cultures:

> At one pole, the scientific culture really is a culture, not only in an intellectual but also in an anthropological sense. That is, its members need not, and of course often do not, always completely understand each other; biologists more often than not will have a pretty hazy idea of contemporary physics; but there are common attitudes, common standards and patterns of behaviour, common approaches and assumptions. This goes surprisingly wide and deep. It cuts across other mental patterns, such as those of religion or politics or class.
>
> Statistically, I suppose slightly more scientists are in religious terms unbelievers, compared with the rest of the intellectual world--though there are plenty who are religious, and that seems to be increasingly so among the young. Statistically also, slightly more scientists are on the Left in open politics--though again, plenty always have called themselves conservatives, and that also seems to be more common among the young. Compared with the rest of the intellectual world, considerably more scientists in this country and probably in the U.S. come from poor families. Yet, over a whole range of thought and behaviour, none of that matters very much. In their working, and in much of their emotional life, their attitudes are closer to other scientists than to non-scientists who in religion or politics or class have the same labels as themselves. (25)

Substance versus Rhetoric

A striking feature of The Two Cultures is the rhetorical standpoint from which Snow seeks to describe his sometimes shifting subject matter. Though claiming to be an insider to both spheres, the scientific and the humanistic, his description of what characterizes each sphere is remarkably extrinsic. It is as if Snow were the perennial outsider looking in: scientists are such people as have "the future in their bones." Artists and literary intellectuals are "natural Luddites." It is their bones, not our bones; it is they who are Luddites, not we who are Luddites, in the parlance of Snow. Apart from the fact that many of these labels are, frankly, stereotypes more than archetypes--Snow uses the latter term himself--they reveal a subtle externality of perspective. Snow seems to have been seeking detached objectivity by means of which to describe a situation, indeed a dilemma, of which he was a part. He seems to have been attempting to establish a rhetorical standpoint akin to the kind of thick description associated with anthropological fieldwork.

Such an interpretation of Snow need not be regarded, ipso facto, as a criticism. The extrinsic perspective not only is possible, it is legitimate and necessary. Even the cleverest cultural anthropologist must have the evidence of facts to work with before moving to a more introspective cultural analysis. Snow appears to have been laboring toward this goal. For him, too, description would have represented an indispensable first step. He says as much.

> The statements in the lecture were as simple as I could make them. Any statements which have any reference to action must be simple.

> There is always something wrong, if one is straining to make the commonplace incomprehensible ... This was intended as a description of, or a very crude first approximation to, our existing state of affairs. (26)

That said, the extrinsic perspective is not the last word on any subject of potential anthropological significance. It is equally possible, legitimate, and necessary to move beyond exterior description to arrive at an inward synthesis of material that renders otherwise merely accidental information coherent and meaningful. In other words, it is possible also to seek an intrinsic perspective.

This intrinsic element is all but missing from Snow's work, and it is the intrinsic perspective that renders the difference between the two cultures not merely apparent to the whole world but, more importantly, comprehensible to that small part of the world most intimately concerned with it: contemporary scientists and humanists. It is the intrinsic perspective that scientists and humanists today must cultivate in order for there to be a rational, fully conscious understanding of the purposes for natural scientific and humanistic endeavor.

How is it possible to construct such a perspective? For humanists to answer this question, it is necessary for them to consider first the character of natural scientific and technical fields. It is, in fact, extremely important for contemporary humanists to establish a comparative framework for their vocation in order to describe how scientific and technical fields differ from the humanities and more credibly to assert the uniqueness and significance of their own contribution. It is, therefore, necessary to begin where the natural scientist begins, i.e. in the real world, in the world of objects, of matter, in the world of bewildering danger and complexity: lightning strikes, volcanic eruptions, predacious killing, and outbreaks of lethal disease.

If reasonable people are honest, they must admit that this "real world," the material world is full of an impossibly broad range of threats to life as we know it daily. The search for the kind of knowledge commonly designated natural science begins, in part at least, with the desire to limit this range, lower the risk, and reduce the danger. It would not be sensible to argue, of course, that mortal fear is the only motivation for natural science. The causes and the motivations of the search for natural scientific knowledge are many and varied. Fear, however, must play some role, since it reflects the sensible judgment by people everywhere that the physical world they inhabit, the physical reality they experience is potentially dangerous. Fear, in this limited sense, represents an imaginary index of very real complexity. And it is, precisely, with such real-world complexity that the scientist self-consciously begins.

It is a simple truism that most problems in natural science--especially as they appear to the novitiate or non-initiate--are remarkably messy and intricate to begin with. It is a hallmark of natural science, in fact, that the scientist knows how to sort and prioritize messy information in such a way as to reduce absolute, real-time complexity to relative, virtual simplicity. In this way, scientists create universal knowledge. In simple terms, the scientist begins with all the dangerous, threatening, complicated, messy stuff "out there," and reduces it finally to a relatively clear and orderly mental image "in here." The result usually is a simple statement or equation of some kind. Examples abound, but one or two of the most famous cases surely suffice to illustrate the point.

In the nineteenth century, Westerners marveled at an ever increasing body of evidence for the remarkable diversity of organic life. Where did the seeming infinity of species come from? Was there such a thing as a new life form? Had any species ever vanished completely? Could an extinct species be revived and, if so, had one ever been? Such questions were the stuff not only of academic biology but of the popular

imagination throughout the first half of the 1800's, at least. Moreover, equally interesting, though often messier secondary questions arose at this time. For example, if species came and went, by what mechanism or mechanisms were they created or destroyed? What evidence could be found to support speculative theories that claimed to explain either species creation or destruction, and could an actual absence of evidence provide clues as much as its tangible presence? The questions seemed as numerous and complicated as the newly discovered beings that had begun to inspire them.

A clever, devoted Englishman by the name of Charles Darwin came along in time and, with two words, essentially answered all such questions in one fell swoop: natural selection. With this simple statement, he ended centuries of fruitless speculation and set the study of organic life on an altogether new footing. Breeders, according to Darwin, had held a practical key to unlocking the theoretical problem for centuries. Just as they chose breeding stock deliberately in order to propagate desirable traits in flowers, grains, vegetables, cattle, sheep, horses, or dogs, so nature, without thought, might "select" traits in various life forms by wiping out lineages unsuited to a given environment. The vast background of constant random individual change--change we now call genetic--would be enough in both cases, the artificial and the natural, to insure a deep pool of traits from which to select, thus guaranteeing an endless process of possible future change. The less swift but equally random conditions of local or even planetary environmental change would all but insure termination for every particular species in the long run. Hence, natural selection.

In the twentieth century, humans faced yet another puzzling mystery: the relationship between matter and energy. The universe was constructed of both. They existed and acted independently, according to the reigning, Newtonian view. Yet, more and more evidence, spurred by discoveries of radioactive matter, seemed to suggest an underlying relationship of some kind.

This time, a Jewish former Swiss patent clerk by the name of Albert Einstein, arrived at a solution to the problem. By proposing a fundamental constant in the speed of light, Einstein set forth a clear statement of the relationship between matter and energy throughout the universe: E=[mC.sup.2], With this brief equation, he tied together two previously independent realms of natural reality, matter and energy, and set the discipline of physics on a completely new course.

These examples serve briefly to illustrate the point that natural science starts with confusion and finishes with clarity. It begins with bewildering complexity and ends with elegant simplicity. What phrase could be simpler than one made up of two common words: natural selection? What equation could be more elegant than one composed of a mere five symbols, only one of which was a number? Scientists discover not just "how things work" but how even exceptional experience, the kind of experience people do not have every day, is part of a cosmic reality that is orderly and constant. Scientists reveal that, out of a gigantic random background of events that comprises physical reality--the real world--there comes into existence a pattern of essential reliability and predictability. Humans are part of a cosmic order when things go well--when it is easiest to believe--and part of the same cosmic order when things go poorly and one is, perhaps, inclined to wish it were not so.

The humanities, of course, function differently. In fact, one might argue the humanities operate in exactly the opposite fashion. The humanities seemingly begin where the natural sciences end: with simplicity and order, a certain kind of simplicity and order. The humanities begin with commonplace simplicity and commonplace order, all the ordinary, mundane, everyday things people take more or less for granted. The humanities begin with the obvious "dumb" stuff, the kinds of experience people generally arrange under the caption of, "nobrainer." The humanities, in fact, begin with something like the simple hello a person says on the telephone or the hand extended in friendship at a first meeting. What the humanities then go on to show, among other things, is that elements like these that make up the seeming simplicity and insignificance of the web of daily life, in fact mask a maze of intricate assumptions, delicate relations, and

complex problems. The humanities reveal that by extending your hand or saying "hello" in a certain way, as you might do here, you enter into a different relation of meaning over there. For example, the sign of willing friendship and open-heartedness you meant to give and would have given under your own, normal circumstances, when you said hello a certain way or shook someone's hand, under those other unfamiliar circumstances has just insulted that person's mother!

The humanities work in a manner opposite to the natural sciences, because a principle goal of the humanities is not immediate clarity; it is, rather, a mediated form of confusion. The goal of the humanities is to confuse people where think they are already clear. The goal of the humanities is to confuse people where they prematurely or naively believe they know already what they are talking about.

Perhaps the best metaphor for this process is driving. Like unexpected, oncoming traffic on a rainy or snowy day, the humanities throw up slush and mud on the windshield of life obscuring the anticipated view. For this reason, admittedly, studying the humanities can be and, for many people, often is exceedingly frustrating. However, study within the humanities intentionally creates this type of confusion in order to show something extremely important about the real world, about the human world: namely that one is never looking at more than a very small part, one is never looking at more than a fragment of it, that when one is clear, one is only superficially and, therefore, incompletely and sometimes even incorrectly clear about matters that may seem small but that make a difference--often a big difference--from time to time.

Revelations about such small matters can become important, in the grand scheme of things, because they reveal crucial information about the complex sphere of relationships and meaning in which truly human life unfolds. Insight into such small matters can become important, because it reveals prejudices that prevent us from seeing another kind of reality in the "real" world, namely the ever-shifting reality of human thought and action, the real world of the many and varied sources of emotion and reason, of frustration and inspiration, the real world of accident and of personal and collective choice. To continue the earlier metaphor, the humanities blur vision through the "windshield of life," but they also make individuals aware that they can pull down a sleeve and, with a little elbow grease, wipe clean a corner of the glass. If they are lucky, it may be then that they see through this small new opening more profoundly into the nature of the human condition, more deeply into the truths of the human heart.

The scholar of ancient Greece, James Redfield, puts it like this when speaking of what he calls imitative art and of creativity, in general:

> The artist thus (and Levi-Strauss saw this point also) is opposite to the scientist. Science explains the whole in terms of its parts and explains typical effects in terms of typical causes. Imitative art, which is, in a sense, more superficial than science (since it deals in appearances), is, in another sense, more profound; whereas science deals with abstracted elements, categories, and processes, an imitation states (in some specific way) the whole being of the thing. Each imitation rises from some inclusive, if schematic, intuition of the patterns found in experience. By the vision of the imitator, the parts are reduced to a whole, and their wholeness is revealed, perhaps for the first time. (27)

Conclusion

The humanities show us not just what the human condition is or may be but how it is and why it is that no one ever escapes from the essential, underlying facts of their humanity. In one sense, then, Snow's

intuition stands confirmed: there really are two intellectual cultures in the West and have been since long before he somewhat reluctantly restated the point. From the intrinsic perspective, as well as the extrinsic, natural science and the humanities differ, representing irreducible and distinct approaches to reality and experience. (28)

In another sense, however, Snow missed the mark. The two cultures, so named by him and thus brought to dubious fame, are but the two facets of a single coin. This coin is scientia, human knowledge itself, and the currency of all human knowledge is the profound human capacity for curiosity. For reasons and through methods that differ, both natural science and the humanities address and satisfy the drive which humans, as creatures of seemingly insatiable curiosity, experience, the need they feel to know, whether that be about the physical reality which all of life inhabits or the problems of life-meaning and life-purpose for which humans possess an apparently unique penchant.

It seems reasonable to suggest, then, that forms and institutions devoted genuinely to the processes of exploring and promulgating true education should strive for this at every level, that they accommodate and cultivate an ever deeper and more nuanced, conscious, and deliberate grasp of the differences between science and the humanities within the broader context of a shared human search for knowledge and understanding. Then, and only then, will the two cultures be revealed in their deeper unity, the common inheritance of the greatest possible self-awareness for all future generations of human kind.

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(1) Alastair Reid, Weathering (Athens, Georgia: University of Georgia Press, 1988), 53-54. Used and reprinted by express permission of the poet.

(2) This paper is dedicated to David Hohmann of Morgantown, West Virginia in honor of his more than 40 years of dedicated service to the teaching profession. It was David who first introduced me to the "science" of humanistic learning. May the example he sets be an enduring inspiration to those who learn and those who teach everywhere.

(3) F. R. Leavis and Michael Yudkin, Two Cultures? The Significance of C. P. Snow and an Essay on Sir Charles Snow's Rede Lecture (New York: Pantheon Books, a Division of Random House, 1963), 29-30.

(4) David K. Cornelius and Edwin St. Vincent, Cultures in Conflict: Perspectives on the Snow-Leavis Controversy (Chicago: Scott, Foresman and Company, 1964), 38.

(5) Ibid., 20.

(6) Ibid., 30.

(7) Cornelius and St. Vincent, Cultures in Conflict, 19.

(8) Cornelius and St. Vincent, Cultures in Conflict, 19.

(9) Ibid., 18.

(10) C. P. Snow, The Two Cultures: and a Second Look, an Expanded Version of the Two Cultures and the Scientific Revolution (Cambridge: Cambridge University Press, 1964), 22.

(11) Ibid., 4.

(12) Snow, The Two Cultures and a Second Look, 4-5.

(13) Ibid., 5.

(14) Ibid., 6.

(15) Ibid., 7.

(16) Snow, The Two Cultures and a Second Look, 7.

(17) Ibid., 8.

(18) Ibid., 12, 14.

(19) Ibid., 14-15.

(20) Ibid., 16.

(21) Snow, The Two Cultures and a Second Look, 10-11.

(22) Ibid., 17-18.

(23) Ibid., 16.

(24) Ibid., 40.

(25) Snow, The Two Cultures and a Second Look, 9-10.

(26) Snow, The Two Cultures and a Second Look, 60-61.

(27) James Redfield, Nature and Culture in the Iliad: the Tragedy of Hector, Expanded Edition (Durham North Carolina: Duke University Press, 1994), 55.

(28) A major contribution to this discussion is surely Stephen Jay Gould's sensitive, postumous volume, The Hedgehog, the Fox, and the Magister's Pox: Mending the Gap Between Science and the Humanities (New York: Harmony Books, 2003).