

Integrating Conceptions of Human Progress

Rick Szostak¹

Abstract: This paper applies interdisciplinary techniques toward the investigation of the idea of human progress. It argues that progress needs to be considered with respect to an ethical evaluation of a host of different phenomena. Some of these have displayed progress in human history, others regress, and still others neither. It is argued that it is possible to achieve progress on all fronts in the future, but only if we engage constructively with the true complexity of the world we inhabit. Classification is seen as a critical complement to interdisciplinary analysis.

Keywords: Ethics, human progress, interdisciplinarity, policy.

Introduction²

The existing literature on human progress predominately focuses on a small set of indicators: optimists stress advances in economic output or technology, while pessimists bemoan environmental or cultural deterioration. Yet progress can potentially be evaluated across hundreds of indicators. Indeed the Organization for Economic Cooperation and Development heads a collaborative research project designed to develop such a list of indicators. However, we can only speak of progress in this way after first identifying what would be ‘good’ or ‘better’ with respect to a variety of social, political, psychological, and other variables. Is it possible to develop consensus cross-culturally on the direction human societies *should* move?

This paper will argue that it is indeed possible to identify what most humans would consider progressive across a wide range of phenomena. It is then possible to perform a historical survey in order to ascertain for which of these phenomena³ progress (or regress) has been observed historically. And then it is possible to speculate on whether it is possible to achieve progress in the future for phenomena that have shown regress in the past. Since people will disagree

¹ **Rick Szostak** is professor of Economics at the University of Alberta where he has taught since receiving his PhD in Economics from Northwestern University in 1985. He teaches courses in European and Canadian Economic History, Economic Growth, and Interdisciplinary Research. He is the author of ten books and thirty scholarly articles. He is President of the Association for Interdisciplinary Studies 2011-3. rick.szostak@ualberta.ca

² This paper draws heavily on my *Restoring Human Progress* (2012). I thank Cranmore Publications for permission to borrow from that book.

³ In addition to critiquing meta-narratives, postmodernists also stress the uncertainty inherent in contemporary society. They may be guilty in this respect of exaggerating the uniqueness of today’s world. Indeed, most people in the developed world live largely free from the fear of periodic food shortages that threatened most past societies. While they also face uncertainties related to stock markets and nuclear warheads that were unknown to distant ancestors, one should be careful about assuming that today’s world is more uncertain in some aggregate sense than yesterday’s world. Moreover, humans can aspire to reduce the degree of uncertainty in the world by better understanding it.



regarding the relative importance of different types of progress, humanity can only share confidence of a progressive future if progress can be imagined across most/all phenomena.

Such a project involves integrating across both disciplines and cultures. It requires integrating ethical, historical, and social scientific analysis. And it involves integrating scholarly and public policy analysis. In so doing, the project must grapple with three prominent sources of pessimism regarding the human condition: a fear that we cannot identify a universal ethics (and thus do not know what progress is), a concern that the world we live in is too complex for us to understand (and thus that we could not identify a path to progress even if we could decide what progress would mean), and finally a concern that public policy is not guided by rational discourse (and thus we would not achieve a path to progress even if we could identify it).

These challenges can each be met through the application of recent developments in interdisciplinary analysis. This paper will both outline how these challenges can be surmounted in achieving a holistic understanding of human progress (its nature, its history, and its future prospects), and present the results of research that has attempted to overcome each of these challenges.

The next section reviews some prominent recent critiques of the idea of progress. The subsequent section discusses how consensus can be achieved on the nature of progress across hundreds of distinct phenomena. We must first in that section discuss how to achieve consensus on a list of phenomena to care about. Having identified the nature of progress across diverse phenomena, we can turn to history and ask for which of these history has been progressive. Last but not least, we can ask if it is possible to imagine strategies or policies that can achieve future progress in areas of past regress (or stability).

Criticisms of the Idea of Progress

Complexity

In the glory days of the postwar economic boom, a host of social programs were launched across all developed countries. Decades later, all of these societies (though to quite different degrees) still face major social problems: homelessness, poverty, marginalized groups, long-term unemployed. Not only have social programs failed to eradicate these problems, they are often observed to have had undesirable side effects. For example, some social programs may provide disincentives to individuals seeking to become productive members of society. It could well be that we hold these programs to too high a standard: the thrust of this book is toward making the world better rather than perfect. A program that moves a million people out of poverty or a thousand people off the streets can be hailed as progressive even if it leaves as many behind. Yet it is understandable that many people, facing the seeming intractability of a range of social problems, worry that societal problems have turned out to be too complicated for us to solve.

This societal concern with complexity has been articulated most clearly within the discourse on the 'postmodern condition.' Lyotard (1984, p. xxiv) stated that: "Simplifying to the extreme I define postmodernism as incredulity toward meta-narratives." Not only are such meta-narratives necessarily simplistic but they then mislead individuals into 'seeing' the world as less complex

than it actually is.⁴ ‘Liberal democracy,’ for example, is a meta-narrative which suggests that democracy, capitalism, and individualism are mutually supportive elements of a progressive society. Such a meta-narrative, if accepted without question, blinds individuals to contradictions inherent in democracy, capitalism, and individualism. Critics of postmodernism have noted (often a bit too gleefully) that postmodernism itself can be viewed as a meta-narrative, and suggested that the postmodern meta-narrative can too easily lead individuals to ignore that which might be good in contemporary society.

Postmodernists have performed a valuable service in urging scholars away from ‘grand theories.’ The history of the social sciences and humanities (hereafter human science) is littered with attempts to explain most or all of human activity within the confines of one theory. The inevitable failure of such exercises naturally induces scholarly pessimism. Yet grand theories generally illuminate some aspects of the human condition, and thus their failure to illuminate all should hardly be taken as a sign that human understanding is impossible. Indeed we are guided not to entirely reject any grand theory, but to look for particular insights it might generate. Those postmodernists who have not abandoned hope of advancing human understanding celebrate more narrowly focused scholarly research. They thus appreciate, at least to some extent, that the fact that the world is complex does not mean that it is incomprehensible. The world may not be orderly, and may even seem chaotic, but we can and should nevertheless aspire to gradually enhance our comprehension of pieces of this vast puzzle.

The attitude toward meta-narrative urged here reflects the attitude generally taken by instrumental interdisciplinarians toward disciplinary insights: we start with a healthy skepticism, suspecting that there is both some truth and some error in most insights. Whereas decades ago interdisciplinarians were often attracted to meta-narrative, the more common approach today is to suspect that each complex problem demands a unique evaluation and integration of disciplinary insights (Szostak, 2004, Repko, 2011). It thus makes sense to apply that contemporary interdisciplinary sensibility to meta-narratives themselves: these are not likely to be as far-reaching as their supporters suspect, but each is likely to tell us something useful about some phenomena or relationships.

The argument of the preceding paragraph accords with the ‘common sense’ that guides most of us through our daily lives. I am all too aware that I cannot hope to comprehend all of the economic, political, technological, and other characteristics of the world in which I live. I take my car to a mechanic when it doesn’t work, have only the vaguest appreciation of how computer chips are manufactured, and do not even know where most of the food on my table was grown. Yet I know enough about how the world works to make a set of decisions that generally work for me (importantly these include informed recourse to experts of various sorts as appropriate). These are not incorporated in some grand theory of the universe, but in a host of specific

⁴ In addition to critiquing meta-narratives, postmodernists also stress the uncertainty inherent in contemporary society. They may be guilty in this respect of exaggerating the uniqueness of today’s world. Indeed, most people in the developed world live largely free from the fear of periodic food shortages that threatened most past societies. While they also face uncertainties related to stock markets and nuclear warheads that were unknown to distant ancestors, one should be careful about assuming that today’s world is more uncertain in some aggregate sense than yesterday’s world. Moreover, humans can aspire to reduce the degree of uncertainty in the world by better understanding it.

understandings. My understanding of what happens when I press the accelerator need not be related theoretically to my understanding of what happens when I am nice to a stranger, though I should strive for consistency across such understandings.

If we will favor research that is focused, we will want some way of connecting our understandings of different pieces of the puzzle that eschews appeals to simplistic meta-narrative. In Szostak (2004), I outlined one way in which scholars could hope to organize their understanding. Classifications were developed of the phenomena that scholars study, the data they use, the types of theory they employ, the methods they apply, and the everyday practices of scholarly research. Any piece of scholarly research can be precisely identified in terms of each of these characteristics. And thus one can imagine a multidimensional ‘map’ of the scholarly enterprise in which every insight has a place. To be sure this ‘map’ will not look like a roadmap, but will serve the same purposes: it provides a precise location – in terms of phenomena, data, theory, method, and practice – of each piece of scholarly research, and thus also of how one piece of research might be connected to another: do they investigate some of the same phenomena or data, or apply the same theory or method?

One important implication of such a map is that scholars are thus encouraged to specify carefully which phenomena are implicated by any theoretical argument. Human science in particular is all too often characterized by failure to specify where a theory (or method) is applicable. I also in that book urged a balance between specialized research and integrative research: the latter is necessary to tie scholarly understanding into a complex yet coherent and complementary whole.

Human understanding can never be perfect. One insight of contemporary philosophy of science is that it is impossible to prove or disprove any scholarly statement. To be sure, some statements – such as the laws of thermodynamics – are so widely accepted as to appear to be ‘proven.’ Yet there is always some argument that can be sketched in opposition to either a scholarly statement or the evidence provided in its support. This result need not and should not prevent humanity from first trying to understand and then trying to change the world. For example, economic growth as a process involves important interactions among hundreds of phenomena, and scholars can never hope to understand any of these interactions flawlessly: the path of economic activity is thus necessarily uncertain. Nevertheless humanity can hope to understand some relationships (or ‘causal links’) well enough to be confident of the main effects of certain policies or practices (Szostak, 2009). Humanity can thus recognize uncertainty without being immobilized by it.

If human understanding can only come in little bits rather than in meta-narratives, but these bits of understanding can potentially be organized into a coherent understanding, it follows that understanding of human progress should also come in a disaggregated but coherent form. Sometimes pessimism regarding progress flows from focusing only on the manifest challenges facing contemporary societies, and dismissing (sometimes explicitly; more often implicitly) any characteristics that might be viewed in a more favorable light. Often it is assumed (again generally implicitly rather than explicitly) that there is some inevitable connection across these problems: perhaps capitalism must lead inevitably to environmental destruction, cultural dissolution, and political strife. Such an argument is a meta-narrative, and deserves to be treated with caution. In this paper, human progress will be evaluated phenomenon by phenomenon. A

picture of human progress as a whole can only be gained by combining our insights into progress phenomenon by phenomenon.

Reason

If it were assumed that humans are completely incapable of understanding their world, then it would follow that they could not apply reason to improve that world. If we do not understand, any action we undertake or decision we make, no matter how well-intentioned, could as easily do harm as good. Progress might still occur, but would be much less likely. One might for example posit an evolutionary process: humans choose randomly (since they do not understand) among beliefs or institutions, and the changes that happen to make the world a better place are selected. Even here, there is a problem: how are the better beliefs and institution selected if human reason cannot appreciate when an improvement has occurred?

Scholars have emphasized two distinct arguments regarding reason. The first is that in the West since the Enlightenment of the seventeenth century reason has been emphasized at the expense of human emotion and intuition. This insight is embraced in this paper. Human reason cannot operate in isolation, and never has. Even within science reason is *supposed to be* tied inextricably to experience: scholars are not supposed to just sit in their offices and theorize but are expected to use scholarly methods in order to provide real-world evidence for their conjectures. Moreover historians of science have long appreciated that scientific discoveries always come in the form of intuitive inspiration, and that these inspirations are sandwiched between lengthy periods of rational reflection and revision. That is, the scholar having identified a problem thinks about it at length, and explores various avenues, but the solution most often comes while the scholar is walking in the park or taking a bath, and thus not consciously addressing the problem at hand. Creative problem solving is by definition not an entirely rational act, but involves the intuitive drawing of new connections (which are then clarified through a further exercise in reason). Nor does the role of intuition stop there. As the eighteenth century philosopher Jean-Jacques Rousseau (among many others) appreciated, humans cannot identify their goals by recourse to reason alone, but must look inside themselves to divine what the purposes of human lives (individually or collectively) should be. Reason not harnessed to human feelings can too readily support totalitarian excess. The dictator who kills millions in order to fashion a better world is guilty among other things of failing to use their intuition to challenge their reason. Yet while reason works best if harnessed to experience and intuition, it is likewise true that experience and intuition should not be trusted in isolation. We all draw lessons in life from experience, but can easily be guided by spurious correlations – it always rains on Thursday, people of group X are rude, I am unlucky at cards – unless we subject our experiences to reasoned analysis. And while our intuition in part seems to reflect subconscious understandings of the world, it also reflects a set of subconscious desires and self-serving beliefs that also deserve to be carefully analyzed.

The second argument regarding the exercise of reason is an understandable concern that reason does not in practice guide human affairs. Some have suggested that humans *never* make decisions on the basis of reason.⁵ Individuals only pretend to apply reason to justify decisions

⁵ See for example Detmer's discussion of Laurie Calhoun (2003, 245-9). Ruth Benedict has suggested that *all* societal decisions are arbitrary and subconscious. Detmer responds that *some* may be, such as which

that have in fact been reached subconsciously. It is argued that this is an inevitability to be accepted rather than an ill to combat. It can hardly be denied that individuals often make decisions on non-rational grounds: they go with their gut instinct or do what they observe others (especially figures in authority) doing, and may be especially guilty of making decisions according to a decision-rule of not offending those most likely to attack them for making the ‘wrong’ decision. It must seem, though, that reason is not totally absent from human decision-making. The author certainly believes that he has made some uncomfortable decisions from time to time precisely because reason compelled him in a direction he did not wish to go. Note also that if skeptics are correct and reason never matters, then making a reasoned argument that open-minded conversation should be pursued is merely harmless: it can have no effect on individual behavior. If, however, these skeptics are wrong, and reason does matter, then failing to urge open-minded discourse limits societal progress.

I myself have often walked out of committee meetings despairing of the inability of even well-educated people to fully articulate their thoughts or fully understand the thoughts of others. I have been astonished that what seemed to me to be obvious efforts at manipulation or coercion were not clearly perceived as such by others. At such moments it is easy to accept extreme skepticism of the possibility of rational human action.⁶ Yet there are many other moments in life when I have engaged in open honest conversations that seemed to lead to mutual enlightenment. At such moments it is hard to think that there is not some hope for enhanced understanding through the exercise of reason.

The simple observation that some conversations seem fruitful and that others do not suggests a way forward. If we can identify the conditions under which reasoned discourse is most likely, *and* if we can then strive to generate those conditions in public debate, then we can enhance the role of reason in public affairs. The philosopher Jurgen Habermas has devoted much of his career to outlining the conditions conducive to reasoned conversation, and how such conversations could and should inform public policy. Notably, Habermas believes that language is not as ambiguous as literary theorists claim. In particular he notes that utterances – sentences, paragraphs, speeches – are not as ambiguous as the words they contain, because the listener/reader can appeal both to other words in the utterance and to conventions governing utterances in order to narrow the range of possible meanings. Yet this argument is not essential to his discussion of ambiguity-lessening conditions: once one recognizes that ambiguity is not absolute it makes sense to pursue conditions that reduce ambiguity. For Habermas, a reasoned conversation is one where participants share a goal of agreement (as opposed to victory): they will then seek to understand the reasons why another might disagree and seek jointly with the other person to determine whose reasons are more valid. Participants should thus hope that the better argument will win: they will try to state their reasons as clearly as possible, recognizing potential defects, rather than trying to score an artificial victory by recourse to rhetorical ‘tricks’

side of the road to drive on (though even here consensus may reflect reasoned consideration of the cost of not agreeing), but that others, such as ‘do not murder’ are not (2003, pp. 237-238). More generally he notes that it is inconsistent for postmodernists to use reason in attacking rationality (p. 307).

⁶ And in a world of manipulation, close-mindedness, and pigheadedness, every individual from time to time is treated by others in ways that show insufficient respect for one’s being: the denial of individual authenticity – another important aspect of postmodern thought – spares us the angst associated with such moments, for we can maintain that there is no authentic person to be offended.

of various sorts. Likewise they will ask questions of the other designed to clarify their position rather than to make them look bad; if as a result a clear weakness in a position is exposed, this will be recognized by all without necessarily concluding that the entire position is misguided. All participants should strive to see that no relevant argument is suppressed. This result is most likely if participation in the discussion is as broad as possible, for different individuals will bring different perspectives. Finally, participants will be aware of the inherent ambiguity of language, but strive toward shared meanings. Of course, these various conditions are never perfectly achieved. Nevertheless, they provide concrete standards against which certain conversations *and their outcomes* can be critiqued. The conclusions that result from a conversation are more likely to be valid to the extent that these conditions are met.⁷

One of the items in Habermas' list of ideal conditions has special import for this paper: the idea that all relevant arguments should be embraced. This implies that reasoned discourse must be focused. Even in the best of circumstances, an open-ended debate regarding progress in which individuals talk past each other – because some are thinking of economic growth and others of environmental degradation – will not be productive. It can only become productive once the broader question has been broken down into little bits: has there been progress with respect to health, happiness, technology, and so on; and if not can progress be achieved in these areas? It then becomes possible that all participants will agree on the range of relevant arguments. It is also much more likely that we can overcome the ambiguity of language in such focused conversations. Likewise we can better work to identify the biases that might have influenced our intuition or experience in a conversation that does not run off in a million directions. To be sure, there are inter-relations across phenomena that cannot be ignored. Nevertheless reasoned discourse demands that we engage these inter-relations one at a time as well. Only by working toward increased understanding of each little piece of the progress puzzle can we work constructively toward understanding of the broader question of whether human progress is possible.

It should be stressed that the arguments offered here for the *possibility* of reason are quite distinct from the Enlightenment belief that the exercise of reason would guarantee a progressive future. Postmodernists and others are quite right to argue that exercises of power often masquerade as exercises in reason. Our pursuit of reason must be vigilant. We must patrol both our own biases and the rhetorical practices of others if we are to harness reason to the pursuit of progress.

Ethics

In a previous age of religious orthodoxy, the ethical code associated with a particular religion could be widely accepted. In contemporary society, respect for diversity is urged. Not only are different cultural practices to be respected, but diverse religious and ethical perspectives as well. This widespread respect for diversity is one aspect of the contemporary world that is widely celebrated both within and beyond the academy. Yet many then conclude that respect for diversity is incompatible with any universal ethical statements: if we are to be respectful of others we cannot then criticize them for being dishonest or irresponsible. The only universal ethical

⁷ A very accessible overview of Habermas' thought, and how it relates to postmodernism and sociolinguistics more generally, can be found in (especially the 'Introduction' to) Cooke (1998).

precept possible is respect for diversity itself. Even here there is a potential problem: must we respect the views of those who refuse to respect the views of others?

Habermas argues instead that ethical claims can be judged to be valid if they reflect the consensual results of a dialogue that approaches the ideal conditions for conversation, and if the result of the dialogue is equally in the interest of all affected. That is, reasoned conversation is possible in the realm of ethics as well (Cooke, 1998, pp. 12-13). As an interdisciplinarian this approach has a natural appeal to me, for interdisciplinarity is grounded in a belief that different perspectives can be integrated through open dialogue. Yet one might reasonably wonder if consensus is likely in ethical matters, no matter how reasonable the conversation. In discussing how the world works participants have access to external reality in judging the validity of competing truth claims. In conversing about ethics there is no obvious external referent. Two people with different perspectives on ethics may find no common ground for appreciating the strengths and weaknesses of the two perspectives.

Happily, the possibility of ethical consensus is greatly enhanced by an examination of the sources of ethical argument. How do humans make ethical decisions? In Szostak (2005a), I argued that there are five broad ways in which humans can make any decision:

1. They can analyze the likely consequences of various choices.
2. They can follow some decision rule they have found valuable in the past.
3. They can act as they see others doing.
4. They can act on 'gut feelings,' or
5. They can be more concerned about how they act than what they do (that is, emphasize process or virtues such as 'always act honestly').

It follows that all ethical arguments draw upon one or more of these types of decision-making [the exception that proves the rule is 'existentialism,' a philosophy that effectively requires individuals to choose their own decision-making guideline(s)]. Philosophers have long appreciated that there are a handful of competing approaches to ethical analysis.⁸ Yet they have rarely made this argument explicit precisely because philosophical argument has not accorded with Habermas' conditions. Philosophers have argued for their favored type of analysis and against others, and thus not often recognized that each approach has both strengths and weaknesses.⁹

⁸ There is some scope for disagreement as to how many types there are. Philosophers have tended to emphasize the three 'formal' types of decision-making associated with consequences, rules, and virtues – see, for example, Baron, Pettit, and Slote (1997) – while downplaying intuition and tradition. Feminist scholars might wish a classification that gives more emphasis to the 'ethics of caring' than does mine. Lewis (2000) urges six approaches to ethical analysis. The important point is that a manageably small number of different approaches can be identified.

⁹ Solomon (1992) is an exception. He notes that consequentialists often see so many possible outcomes as to be unable to decide, deontologists (who follow rules) can be compulsive, virtues can be taken to extremes of obstinacy and foolhardiness, and reliance on intuition can lead to excesses of mysticism and sentimentality. Likewise, blind adherence to tradition can preclude beneficial changes in ethical guidelines. Solomon concludes that each approach fits some situations better than others. To use interdisciplinary terminology, each of the five approaches captures different facets of an issue. One's judgment of the relative importance of these facets may well vary by issue.

As a result, philosophers have failed to appreciate, at least explicitly, that the different types of ethical analysis *often point in the same direction*. That is, honesty can be justified in terms of consequences, virtues, rules, tradition, and intuition. None of these justifications are perfect, to be sure: one can always construct a reasoned counter-argument. In the memorable words of Ernst Laszlo (1987) there is no ‘immaculate perception.’ Yet if the preponderance of argument within each type of analysis points in the same direction, then we can reasonably expect that the sort of conversation envisioned by Habermas will indeed reach consensus. We will see below that consensus can indeed be achieved across a wide range of issues.¹⁰

The important point here is that societies can respect diversity and still expect individuals to behave honestly, responsibly, and caringly. This result is a bit ironic to be sure. One starts by recognizing that there is no one right way to perform ethical analysis, yet arrives at a conclusion that ethical consensus on a wide range of issues is possible. Moreover, since the five types of analysis are found across all philosophical traditions, these areas of consensus are not for the most part limited to particular cultural contexts. Note that the strategy pursued here – breaking the ‘what is ethical?’ question into a handful of subsidiary questions, and then connecting the answers to these phenomenon by phenomenon – reflects the general strategy of disaggregation and connection pursued throughout this paper.

Achieving Consensus on the Nature of Progress

It has been suggested above that a disaggregated approach provides a productive response to a variety of critiques of the idea of progress. Before proceeding to perform such an analysis, it is useful to review seven arguments as to why human progress should be analyzed in terms of a wide range of phenomena rather than at some broad aggregate level. To be clear: the disaggregated approach recommended here will involve distinct analyses of human progress across some one hundred distinct phenomena. It can be contrasted with the common approach which assumes that one or a few types of progress (such as economic growth or environmental pollution) proxy for human progress as a whole.

1. Once it is appreciated that the human world is characterized by diverse phenomena, and that there is no obvious metric for comparing the experience of progress/regress across these, then examining progress phenomenon by phenomenon is the only viable strategy for evaluating progress historically.¹¹ Any attempt at a more general evaluation of progress must involve implicit judgments regarding which phenomena are most important and/or an assumption that the phenomena one ignores in one’s calculations are (or will inevitably be) moving in the same direction as the phenomena one cares about. Does economic growth or the spread of democracy

¹⁰ Not surprisingly, both philosophers and the public tend to focus attention on those issues for which there is no consensus: abortion, euthanasia, animal rights, and so on. A recognition that different types of ethical analysis often do agree should encourage respect for diversity when consensus does not occur. As well, society is guided to search for aspects of a complex issue where consensus is possible. The heated debate over abortion interferes, for example, with discourse regarding the critical social problem of fetal alcohol syndrome where consensus is much more likely.

¹¹ Notably, even the comprehensive analysis of Van Doren (1967, 15) identifies only five broad types of progress: in knowledge, technology, wealth, institutions, and morality (art is treated briefly in an appendix).

inevitably lead to other progressive changes, or does environmental decline cause numerous types of regress? By attempting to identify an exhaustive list of the phenomena that humans care about,¹² and dispassionately examining the history of progress with respect to each, we can potentially achieve a more accurate, less biased appreciation of the state of human progress. The disadvantage of the disaggregated approach is that a definitive conclusion is unlikely. If both progress and regress are observed, it must be left to the reader to determine which matters the most. Notably, postmodern critiques of scholarly practice often urge a strategy whereby the reader is empowered to reach their own conclusions about the matter at hand, rather than being guided to a particular conclusion by the author.

As noted above, optimists and pessimists both tend to assume that some phenomena are more important, and/or that these are causally related to other phenomena. Perhaps the most compelling of such claims urges a focus on human happiness. Concern that happiness is hard to measure across time and place can be circumvented by focusing on those phenomena that appear most closely related to human happiness. Heylinghen and Bernheim (2000a) pursue such an argument. Yet even they are then forced to argue that there are various types of regress observed in the world, but that the importance of these is exaggerated. Moreover, they avoid the philosophical issue of whether human happiness can be treated as the only goal of human societies: if we could be hooked up to a machine that kept us happy, would we choose such a life? Finally, they inadvertently ignore the importance of human diversity: just because a particular phenomenon is not strongly correlated on average with happiness does not guarantee that it is not of critical importance for some individuals.

2. Just as there is no objective metric for weighting progress across phenomena, there is also no obvious standard to use in identifying what progress might mean at a global level. As was noted at the outset, it is only possible to speak of progress if one has an idea of what is 'good' or 'better.' Yet humanity has no clear idea of the form an ideal society should take. With respect to individual phenomena, though, it is generally possible to speak of either ideals or the direction in which (most of) humanity would like society to move. But there is simply no objective way of adding the progress or regress observed across economic growth, environment, crime, cultural attitudes, and a host of other phenomena; some individuals may want to place the highest weight on sense of community while others stress economic performance.

3. *The disaggregated approach ensures clarity of argumentation.* This argument flows from the first two. Previous writers on progress were often unclear as to which types of progress they were referring to. Since claims that society was progressing (or regressing) were made at a vague aggregate level, it was difficult to know where one might begin to critique the analysis. Alternatively, Emerson and George Bernard Shaw are among those who have explicitly made an argument that progress in one realm is always balanced by regress elsewhere. Such an argument, like claims for aggregate progress or regress, deserves to be subjected to empirical scrutiny. Only

¹² This, notably, is an exercise in classification rather than theorizing, and does thus not itself qualify as a meta-narrative. To be sure, exercises in classification are not free of bias. This exercise followed a deductive approach supplemented by a broad inductive reading of the literature to ensure that no important phenomena were missed (Szostak 2003).

with the evaluation of the degree of progress or regress observed across a wide range of phenomena can the merit of such a conjecture be evaluated.¹³

4. *Others can readily evaluate the research.* No piece of research is ever perfect. If this article were to pursue some (necessarily arbitrary) strategy of identifying whether society was on the whole characterized by progress or regress, any errors or biases in the author's approach would be deeply buried in the analysis. Good scientific practice calls for a disaggregated analysis, so that each reader can make their best judgment of the reliability of each estimate and how these might best be compared.

5. *This approach can tell us whether the contemporary situation is novel in important respects.* The postmodernist Frederic Jameson has suggested that any sense of continuity or development from the past has evaporated in the postmodern condition (Malpas, 2001, p. 80). A disaggregated examination of progress serves not only to identify those phenomena for which progress is continuing, but also to identify changes within contemporary society that are continuations of trends observable for centuries or even millennia.

6. *Attempts at aggregate evaluation can all too readily lead to 'my society is better than yours' claims.* It was common within Western philosophical circles in the nineteenth century to argue that Western societies had progressed in some aggregate sense beyond Asian or African societies. Yet as Isaiah Berlin had urged, one can and should analyze progress in particular realms without engaging in the dubious practice of comparing entire societies. The disaggregated approach has the benefit of allowing us to argue about progress with respect to particular phenomena without in any way supporting the holistic claims to superiority of racists and demagogues.¹⁴ It will likely be the case that no society turns out to have progressed further than any other with respect to all phenomena.

7) *This approach sets the stage for a progressive future.* If one makes a global judgment that the world is static or regressive (or only a little progressive), it will not be obvious how this situation can be improved. Of course, those who reach such conclusions often assume or argue away the possibility of progress. If, though, one holds out any hope that humanity's future can be progressive, one will want to know in what directions human societies have to be moved in order to achieve this result.

A problem here is that virtually every phenomenon is causally linked with virtually every other. This makes it likely that changes one might view as progressive with respect to one phenomenon may cause decline in another. Those who describe the postmodern condition often make precisely this point, suggesting for example that technological innovation leads to environmental degradation. Rather than assume some inevitable causal relationship, it will be necessary to investigate below the possible tradeoffs that may exist across phenomena. For now, the point to stress is that the starting point in designing a progressive future for humanity is the identification of the areas that need improvement.

¹³ Van Doren (1967, 199) discusses these arguments, and notes that they were often driven by an observation that human nature itself has not improved. Brome (1963, p. 206) is highly critical of this idea of necessary balance. He feels that such a case fails to appreciate what life was really like centuries ago.

¹⁴ See Solomon (1992), Gellner (1989), Szostak (2003). On Berlin, see Ryan (1996).

Identifying Relevant Phenomena

Before performing ethical analysis, we must first identify the key phenomena that humans/scholars care about. The task of classifying the phenomena of interest to human scientists might seem particularly daunting. Surely there are thousands upon thousands of such phenomena? While this is true, these phenomena can be organized hierarchically within a small number of umbrella categories. Such an endeavour can draw upon a general scientific commitment to the belief that ‘things’ are made up of constituent parts (Krieger, 1997, pp. 31-32). The starting point for the classification in Table 1 is an attempt to divide the subject matter of human science into logical categories. These categories must cope both with individual and societal characteristics. At the level of individuals two categories of phenomena can be identified:

- The first is ‘genetic predisposition.’ As a species, humans share a gene pool that gives all a set of basic abilities, motivations, and emotions.
- While this common gene pool guarantees a certain set of characteristics that defines the species, differences in the precise genes that individuals possess, in concert with differences in environment, serve to guarantee that individuals differ from each other both physically and psychologically. This yields a second category of ‘individual differences.’

All humans are necessarily part of a larger community, especially for the first few years of life. That is, one of the shared characteristics noted above is that humans are born needing the help of others. Several distinct categories of collective behavior can be identified:

- Humans interact with the non-human environment in order to create (and distribute) food, shelter, and other items of practical utility: ‘the economy’
- Humans interact with the non-human environment to create items desired primarily for their aesthetic appeal rather than their utility: ‘art.’ Note that works of art, through their aesthetic appeal, may serve further purposes, such as encouraging religious belief; such effects would be captured in causal links. Art is often viewed as a subset of ‘culture’; it is treated separately here because works of art, while they contain cultural elements, are defined in terms of an aesthetic effect that transcends cultural boundaries.
- The various sub-groups of society must interact in some way: ‘social structure.’ There are always at least two types of sub-group, for the family is ubiquitous, albeit in different forms, and genders have never yet been treated in precisely the same way.
- Power is distributed and exercised: ‘politics.’
- It is obvious that hierarchical economic, social, and political structures evolve beliefs in the correctness of those structures, or at least attempts are made by those at the top to do so. Such beliefs thus logically belong to those categories. Yet societies have a host of religious beliefs, customs, habits, and so on whose connection to these other realms is (at least potentially) tenuous: these can be termed ‘culture.’ Attitudes toward all categories except economy, politics, and social structure are thus part of culture. Following common usage, languages are treated here as a subset of culture. The precise definition of culture becomes clearer as the category is unpacked.
- Humans also develop knowledge of how they can best manipulate the non-human environment to suit various ends: ‘science and technology.’
- The list may seem complete, but humanity must also perpetuate itself as a species, and

thus ‘population’ must be considered. Ability to reproduce depends in turn on ability to survive. The related matter of ‘health’ must also, then, be considered; this deserves more attention than it receives from human scientists.

- The ‘non-human environment’ has been mentioned more than once above. Since it both shapes and is shaped by humanity, it deserves its own category in the classification. This category (and that of genetic predisposition) would provide a link between this classification and a classification of natural science phenomena.

This list of ten logically distinct categories is also arguably exhaustive, for the ten categories subsume all human activities and characteristics. As Table 1 illustrates, it is straightforward to place all subsidiary phenomena within these categories. In several cases, care must be taken to establish the boundaries between categories. As noted above, ‘art’ can be distinguished from ‘culture’ by defining art as that which has an aesthetic appeal not limited to members of particular groups. These precise boundaries become clearer as the categories are further disaggregated.

Table 1 reflects an extensive exercise in disaggregation undertaken in Szostak (2003), and summarized in Szostak (2004). It categorizes in detail, but in an organized fashion, all aspects of human experience. It is motivated by a belief that we can only aspire to understand human experience by appreciating its components and how these interact. Both deduction and induction were used to develop lists of second and then third-order phenomena (Note that these titles refer only to the level of aggregation and imply no value judgment): induction in the sense of finding a place in the classification for all phenomena discussed in a wide variety of works consulted, and deduction in the sense of thinking about how phenomena could logically be disaggregated into their constituent parts. The result should be nearly exhaustive, though some phenomena may have been missed.¹⁵ It seems a reasonable conjecture that somebody sometime will have noticed every phenomenon that affects human lives: the scholarly community can thus aspire to an exhaustive list, at least at higher levels of aggregation.¹⁶ Importantly, the table is inherently flexible so that new phenomena can be added. As for the organization of the table, this too is flexible: if it were found empirically, for example, that ‘language’ was more strongly related to phenomena in a category other than ‘culture’ the table could be adjusted to reflect that.

Classifications, like any other scholarly enterprise, are subject to bias. It might be worried that I have divided up the world in a fashion that makes it easier or harder to identify human progress. It is thus worthy of note that the classification of phenomena preceded by some years the idea for this project, and even the ethical analysis that will be discussed below. Moreover, the scope for

¹⁵ One entry has, indeed, been added to the table. Though it was noted above that culture will include attitudes toward most other categories, an entry for ‘attitudes toward healing’ was missing from previous versions of Table 3.1. This oversight (which was pointed out to me) was especially egregious since Wissler, in his efforts decades ago to classify phenomena, had grouped healing with religion.

¹⁶ Sub-atomic particles are an obvious example of important phenomena only observable with advanced scientific methods. It is not clear that similarly unobservable phenomena exist in the realm of human science.

authorial bias was limited in practice by a heavy reliance on the existing scholarly literature.¹⁷ As noted above, induction was used to make sure that all phenomena mentioned by a wide range of scholars found some place in the table. More often than not, there was considerable scholarly consensus on how a particular phenomenon should be disaggregated.

Table 1: The Phenomenon

Categories	Second Level Phenomena	Third Level Phenomenon	
Genetic Predisposition	Abilities	Consciousness, subconsciousness, vocalization, perception (five senses), decision-making, toolmaking, learning, other physical attributes (locomotion, eating, etc.)	
	Motivations	Food, clothing, shelter, safety, sex, betterment, aggression, altruism, fairness, identification with group	
	Emotions	Love, anger, fear, jealousy, guilt, empathy, anxiety, fatigue, humor, joy, grief, disgust, aesthetic sense, emotional display	
	Time Preference		
Individual (Abilities) Differences	Physical Abilities	Speed, strength, endurance	
	Physical Appearance	Height, weight, symmetry	
	Energy Level	Physical, mental	
	Intelligences	Musical, spatial, mathematical, verbal, kinesthetic, interpersonal	
	(Personality)	Sociability (Extro/introversion)	Talkative, assertive, adventurous, enthusiastic vs. reserved, withdrawn
		Emotionality (Stable/moody)	Contentment, composure, vs. anxiety, self-pity
		Conscientiousness	Thoroughness, precision, foresight, organization, perseverance vs. carelessness, disorderly, frivolous
		Affection (Selfish/agreeable)	Sympathetic, appreciative, kind, generous, vs. cruel, quarrelsome, faultfinding
		Intellectual Orientation (Holistic/analytical)	Openness, imagination, curiosity, sensitivity vs. closemindedness

¹⁷ Szostak (2004, pp. 9-14) reviews theories of classification. Scholars of classification argue that the best classifications are those that are practical and theoretically justified. Reliance on scholarly consensus, and the use of induction, ensures that this classification meets both criteria.

	Other dimensions?	Dominant/submissive,in/dependant, strong/weak, future/present oriented humor, aggression, happiness
	Disorders?	Schizophrenia, psychoticism, ...?
	Sexual Orientation	
	Schemas	View of self, others, causal relationships
	Interpersonal Relationships	Parent/child, sibling, employee/r, romance, friendship, casual
Economy	Total Output	Price level, unemployment, individual goods and services
	Income Distribution Economic Ideology	
	Economic Institutions	Ownership, production, exchange, trade, finance, labor relations, organizations
Art	Non-reproducible	Painting, sculpture, architecture, prose, poetry
	Reproducible	Theater, film, photography, music, Dance
Social Structure	Gender	
	Family Types, Kinship	Nuclear, extended, single parent
	Classes (various typologies)	Occupations (various)
	Ethnic/racial Divisions	
	Social Ideology	
Politics	Political Institutions	Decisionmaking systems, rules, organizations
	Political Ideology	
	Nationalism	
	Public Opinion	Issues (various)
	Crime	Versus Persons/Property
Technology and Science	Fields (various)	Innovations (various)
	Recognizing the Problem	
	Setting the Stage	
	Act of Insight	
	Critical Revision	
	Diffusion/transmission	Communication, adoption

Health	Nutrition	Diverse nutritional needs
	Disease	Viral, bacterial, environmental
Population	Fertility	Fecundity, deviation from maximum
	Mortality	Causes of death (various)
	Migration	Distance, international?, temporary?
	Age Distribution	
Culture	Languages	By descent?
	Religions	Providence, revelation, salvation, miracles, doctrine
	Stories	Myths, fairy tales, legends, family sagas, fables, jokes and riddles
	Expressions of culture	Rituals, dance, song, cuisine, attire, ornamentation of buildings, games
	Values (Goals:)	Ambition, optimism, attitudes toward wealth, power, prestige, beauty, honor, recognition, love, friendship, sex, incest, marriage, time preference, physical and psychological wellbeing
	(Means:)	Honesty, ethics, righteousness, fate?, work valued intrinsically, violence, vengeance, curiosity, innovation, nature, healing
	(Community:)	Identity, family versus community, Openness to outsiders, trust, egalitarianism, attitude to young and old, responsibility, authoritarianism, respect for individuals
	(Everyday Norms:)	Courtesy, manners, proxemics, tidiness, cleanliness, punctuality, conversational rules, locomotion rules, tipping
Non-Human Environment	Soil	Soil Types (various)
	Topography	Land forms (various)
	Climate	Climate Patterns (various)
	Flora	Species (various)
	Fauna	Species (various)
	Resource Availability	Various Resources
	Water Availability	
	Natural Disasters	Flood, tornado, hurricane, earthquake,

	volcano
Day and Night	
Transport Infrastructure	Mode (various)
Built Environments	Offices, houses, fences, etc.
Population Density	

Source: Szostak (2003, 2004)

Readers should feel no need to master this Table. Like a phone book, one need not memorize where particular entries fall but only appreciate the organizing principles at work. For the purposes of this paper, it is important only to appreciate that it is possible to identify an (almost) exhaustive set of the major phenomena that characterize human societies. Table 1 can thus be used as a basis for further steps in our analysis.

Establishing the Good

Table 1 was used in Szostak (2005a) to provide the basis for a comprehensive ethical survey. Since a list of the phenomena of interest to human scientists should subsume the list of phenomena that humans care about, every question of interest to ethicists can be viewed as the application of one or more of the five types of ethical analysis (listed above) to one or more of these phenomena. Notably, the list of phenomena includes both individual and societal phenomena. An ethical society needs ethical institutions and values as well as ethical individuals. Yet ethical treatises rarely juxtapose societal and individual analysis. Only by doing so can consistency be assured between analyses of how people as individuals should behave and how societies should be structured.

It was shown in Szostak (2005a) that defenders of each type of ethical analysis appeal to one or more of the others for justification. Moreover, the five types of ethical analysis are each celebrated across the world's philosophical traditions. That is, the five types of ethical analysis are not themselves products of any one philosophical (or cultural) tradition. And thus the ethical analysis pursued here is not culturally bounded.

Recent developments in the philosophy of science and epistemology establish that neither scientific nor ethical claims can be 'proven' or even 'disproven.' Scholars can nevertheless compile arguments and evidence that increase collective confidence in particular statements. The emphasis on the pursuit of unassailable argument by ethical philosophers appears quixotic in light of the insights of epistemologists. The greatest confidence should be placed in ethical statements for which each of the five types of ethical analysis largely provides support. The set of statements for which such consensus exists was termed the 'ethical core.' It will be argued below that this ethical core provides the basis for a universal ethics that would still respect reasoned arguments against particular elements in the core, but would not casually excuse selfish behavior.

In other words, there is never complete agreement within any of the five types of ethical analysis in favor of (or against) any statement. Honesty is generally viewed as generating good consequences, according with the Golden Rule (and other deontological principles), and being virtuous, but one can construct arguments against each of these conjectures (while likewise

denying the general observation that honesty accords with traditions and makes us feel good). If we seek the perfect ethical argument, we will inevitably fail. We must thus either embrace 'anything goes' or accept a more forgiving ethical standard. And such a standard is possible. We can ask whether the arguments in favor of a particular statement are more compelling than the arguments against. If this is the case across all five types of ethical analysis, we can have confidence that the statement is ethical. Our confidence will increase to the degree that arguments in favor are stronger than arguments against. Of course, we cannot escape a subjective evaluation here in determining the relative strength of different arguments. I have striven to reflect scholarly consensus in providing these evaluations. Note that we are not asking scholars to agree on whether a particular statement is correct but rather to agree on whether most of their peers would agree that arguments in favor of a particular statement are stronger than arguments against. This sort of consensus is common in the literature.

It is useful at this point to provide in Table 2 the overall results of the ethical survey undertaken in Szostak (2005a). Note that consensus across the five types of analysis occurs in roughly half of the cases examined. It should be stressed that the ethical statements analysed in Table 2 were not selected randomly. Rather, they are statements about the phenomena outlined in Table 1. Note that for the vast majority of phenomena the ethical question(s) to be asked was obvious: often these ethical statements can be phrased as '(more of) phenomenon X is good' or 'this aspect/effect of phenomenon X is good.'

For each statement, a score is provided with respect to each of the five types of ethical analysis: If a particular type of analysis has little or no implication for the statement in question, a score of '-' is given: note that this has quite different implications from a score of 3. While numbers have been used as scores for convenience of expression, it would be nonsensical to add these numbers, whether by statement or type of analysis. There is no objective metric by which to aggregate across types of analysis. Moreover the scores themselves represent an ordinal ordering: while a 5 is better than a 4, there is no reason to assume that it is 20 percent better (indeed, it is usually much more impressive than that). In the rating column, an A denotes no score lower than five, a B denotes no score lower than four, and a T, C, V, D, or I indicates that only one type of analysis generated a score below four: respectively tradition, consequences, virtues, deontology, or intuition. Cases for which only tradition and intuition generate a score below four are denoted by T/I. In all cases where letter ratings occur, but one or more types of analysis received a score of '-', the rating is followed by a '-'.

How accurate are these scores and rankings? Given that no scholar has previously attempted such an exercise, there is no basis for comparison. Recall that this table summarizes not the author's own personal views but an estimation of the strength of various implications of each of the five types of ethical analysis. There are undoubtedly some errors owing to an inaccurate or incomplete reading of the literature (most likely in cases where the score is '-'). There were many cases in which it was difficult to determine whether a score of, say, 4 or 5 should be given. Other scholars would undoubtedly reach different conclusions in some cases. Nevertheless, the overall picture is likely broadly accurate.

Table 2: Summary of the Ethical Evaluation of Phenomena

Phenomenon-based Statement	T	C	V	D	I	Rating	Comments
<i>Genetic Predisposition:</i>							
Human abilities are good.	5	5	5	4	5	B	
Most basic drives are good.	5	5	5	-	-	A-	
Human emotion is good/necessary.	4	5	5	4	5	B	
Emotions should be constrained at times.	4	5	5	4	5	B	Enhanced too
Love is generally good.	4	5	5	4	5	B	
Hate is generally bad.	4	5	5	4	5	B	
Sympathy is generally good.	4	5	5	4	4	B	
Humor is good.	4	5	4	-	4	B-	
Envy is generally bad.	4	4	4	3	3		Incites effort?
The future should be valued more.	4	4	5	-	4	B-	
Genetic diversity is good.	-	5	-	-	-	B-	
Genetic engineering <i>can</i> be good.	-	4	4	3	-	D-	
<i>Phenomenon-based Statement</i>							
<i>Culture:</i>							
Culture is valuable, but individual elements should be evaluated	4	5	4	-	4	B-	Need social cohesion
Societies should be open to cultural change.	3	5	4	-	3	T/I	But respect tradition
Individuals are responsible for ethical evaluation.	4	5	5	4	4	B	
Be open to innovation.	4	5	5	-	4	B-	
Individuals should be able to choose cultural membership.	2	4	3	4	4		Virtue: duty to humanity?
Religious faith is good.	4	3	3	-	4		
Religions enhance ethics.	4	3	3	-	3		
Ecumenicism is good.	4	4	3	-	2		
Religious freedom is good.	2	4	4	4	3	T/I	Biases in T, I
People should be less aggressive.	5	5	4	4	2	I	Some is good
Valuing achievement is beneficial.	4	5	5	4	4	B	
The abuse of power is bad.	4	5	5	4	4	B	

People should value ethical means.	3	4	5	5	3		Ends <i>may</i> justify
One should help others, but not deny the self.	5	5	5	5	5	A	Where is balance?
Slight bias toward optimism good	4	5	5	-	4	B-	
Marriage is good.	5	5	5	-	5	A-	
...But divorce should be easy.	3	3	3	4	3		
People should focus on the care of children.	5	5	5	5	5	A	
Romantic love should be valued.	3	4	3	-	4		
Sexual freedom is good.	2	4	3	4	4		
Honesty toward sex is good.	4	5	5	4	2	I	
Homosexuality should be accepted	3	4	4	4	4	T	
The elderly should be cared for.	4	5	5	4	4	B	
Trust should be encouraged and valued.	3	5	5	-	4	T-	Too trusting?
Ethical wrongdoing should be exposed.	3	4	5	-	3	T/I	If can; ch.2
Curiosity should be applauded.	3	5	5	4	5	T	Respect soc. cohesion
People should be less secretive.	3	4	4	3	2		
Consensus on everyday norms is desirable.	4	5	4	4	4	B	
Expressions of culture are valuable.	5	4	-	4	5	B-	Some support bad values
Cultural 'stories' are valuable.	5	4	-	4	5	B-	
Language orthodoxy should be enhanced	4	5	-	5	-	B-	Remove spelling irregularities.
Language diversity is good.	4	2	-	2	4		
Phenomenon-based Statement	T	C	V	D	I	Rating	Comments
<i>Individual Differences:</i>							
Virtuous acts lead to happiness.	5	5	5	-	4	B-	Not self-denial
Self-knowledge encourages both happiness and ethics.	4	5	5	5	4	B	Need accurate self-schemas
Personality diversity is good.	4	5	5	4	5	B	Not on all dimensions
There are advantages to shyness.	2	5	3	-	4		

Some emotional control is good.	4	5	5	-	4	B-	
Emotional display is good.	3	5	4	-	4	T-	
Conscientiousness is good.	4	5	5	4	3	I	Some role for carelessness
Empathy is good.	4	5	4	4	4	B	
Flexible intellectual orientation is good	3	5	5	-	4	T	
Openmindedness is good.	2	5	5	5	2	T/I	Self-esteem
Honesty is good.	5	5	5	5	5	A	Except under duress
Humility is good.	2	4	5	4	2	T/I	
Compassion toward disorders is good.	3	4	5	-	3	T/I	
One should respect others' complexity.	4	5	5	5	4	B	
One should avoid fatalism.	3	5	5	-	3	T/I-	
One should recognize the ubiquity of injustice.	4	5	5	5	4	B	Can combat
One should try not to worry.	4	5	5	-	3	I-	
Life is as a learning experience.	3	5	5	-	3	T/I	
Relationships are valuable.	5	5	5	5	5	A	And wider social responsibility
One should recognize financial responsibility for parents.	4	4	5	-	5	B-	
<i>Economy:</i>							
Output of <i>only</i> some goods is good	4	5	5	5	4	B	
More fulfilment at work is good.	4	5	4	4	4	B	
Unemployment is bad.	4	5	4	4	4	B	Eliminate?
Income inequality should decrease (but not be eliminated).	4	5	4	4	4	B	
Earned income should be distinguished from unearned.	3	5	5	-	3	T/I	
Society should reward earned income.	2	5	5	4	4	T	
Some redistribution is good.	4	4	4	4	4	B	
Society should pursue equal	4	5	4	4	4	B	

opportunity.							
Roles exist for both public/private	5	5	5	4	-	B	
Phenomenon-based Statement	T	C	V	D	I	Rating	Comments
<i>Economy (continued):</i>							
Charity is good.	5	5	5	5	5	A	
Freer trade would be good.*	3	5	4	5	2	T/I	
Private property is good. ...but	4	5	-	4	5	B-	Redistribution can be ethical
separate rights to control, profit.	4	4	-	3	4	D-	
Private businesspeople should be ethical.	3	5	5	4	4	T	Have become cynical?
The corporate form is good.	3	4	2	3	-		
(Some restrictions to encourage ethics)	3	4	4	3	-		
Whistleblower protection is good.	3	4	4	4	3	T/I	False accusations?
<i>Art:</i>							
Art is good and important.	5	4	4	4	5	B	Aesthetics supports Kant's deontology
<i>Politics:</i>							
Government is good.	5	5	5	5	5	A	Deontology limits
Justice is good.	4	4	5	5	4	B	Consensus?
Govt. should fight econ/social injustice.	4	4	4	3	4	D	
Freedom should be a goal.	4	4	3	5	4	V	
Government should protect people from themselves.	4	3	3	2	3		
Govt power is consistent w. freedom.	4	5	4	3	3		
Democracy is good.	4	4	4	4	4	B	Constitutional protections
Separate church and state.	3	4	4	5	3	T/I	
Some wars can be justified.	5	5	4	4	4	B	
Nationalism is good.	3	3	3	2	4		
Institutions should be evaluated wrt the 5 types of ethical analysis.	5	5	5	5	5	A	Political ideologies tied to these

Bureaucracies with some flexibility are needed.	5	5	5	4	-	B-	
Arms-length evaluation of government services is needed.	1	5	-	4	-	T-	Not just quantitative
Government secrecy should occur only when this serves public.	2	5	5	5	2	T/I	Avoid disinformation
Education should be encouraged.	5	5	5	5	5	A	teach virtue?
public provision of	4	5	5	3	-	D-	
Crime is bad.	5	5	5	5	4	B	
Punishment is justified.	5	4	4	4	5	B	Much injustice
Capital punishment is justified.	3	2	3	3	4		
Political leaders should be ethical.	3	4	5	5	4	T	
Phenomenon-based Statement	T	C	V	D	I	Rating	Comments
<i>Social Structure:</i>							
Norms of deference are bad.	2	4	5	4	5	T	
Social stratification is bad.	2	4	4	4	3	T/I	
Ethnic divisions should be weakened.	2	4	3	4	2		
Gender distinctions should be weakened.	2	4	4	4	3	T/I	
Families should be valued.	5	5	5	-	5	A-	
Some occupations are bad.	4	4	5	4	-	B-	
<i>Health and Population:</i>							
Health is good.	5	5	4	5	5	B	
Disease is bad.	5	5	4	5	5	B	
Proper nutrition is good.	5	5	4	5	4	B	
Moderate population growth can be good	5	5	4	5	4	B	Limit if overpopulated
A stable age distribution is good.	-	5	-	-	-	A-	
Abortion can be good.	3	3	2	3	2		
Euthanasia can be good.	2	4	4	4	2	T/I	
Suicide is bad.	4	5	5	3	5	D	
Migration is good.	3	4	4	4	3	T/I	Some limits?
<i>Technology and Science:</i>							

Innovation is good.	4	4	5	-	4	B-	
Science should be less hierarchical.	2	5	5	5	5	T	T reflects power relations?
Science should be more cooperative.	2	5	5	4	4	T	Little tradition
Science should have stronger links to the wider public.	4	5	5	4	-	B-	
Scientists should be curious, humble, open-minded, imaginative, honest, tenacious, and courageous.	3	5	5	4	3	T/I	Self-aware would strive for
Technological innovation should be guided to aid the environment.	4	5	4	4	4	B	
<i>Non-Human Environment:</i>							
The environment should be protected (but costs appreciated).	4	4	4	4	4	B	
Biodiversity is valuable.	3	4	4	3	3		Animal rights?
Genetically modified plants are good.	2	3	3	-	2		
Global warming should be opposed.	-	3	3	3	-		
Resource depletion should be opposed.	-	3	3	3	-		
Natural disasters should be fought.	4	5	4	4	4	B	
People should not eat meat.	2	3	4	3	3		
Farm animals should be treated well.	4	4	5	4	4	B	
Aesthetic architecture should be pursued.	4	5	5	4	5	B	
Transport infrastructure should be developed.	4	5	4	4	4	B	

Source: Szostak 2005a.

While there may be some errors in Table 2, we can be confident that there is indeed ethical consensus for the vast bulk of cases for which this is identified. It follows that *it is indeed possible to identify what 'progress' involves across a wide range of phenomena*. As with Table 1 the reader need not analyse Table 2 in detail. It may be useful to peruse some of the statements that receive scores of 'A' or 'B,' and ask whether these judgments seem controversial. Recall again that one of the advantages of the approach taken in this paper is that it is *transparent*.

The Historical Record

Space does not allow the performance of a detailed historical survey here. Yet once again it is likely that scholarly consensus can be achieved as to whether progress has occurred with respect to most of the statements accorded a score of 4 or 5 in Table 2. A broad survey of the historical literature undertaken by the author supports that conjecture (see Szostak, 2012). Table 3 expresses the results of this disaggregated historical survey. For slightly over one hundred phenomena or phenomenon-based characteristics discussed, Table 3 indicates whether predominately progress (denoted by P), regress (R), or both (B) were observed; in several cases either the question is not applicable or there are no clear grounds for providing an answer (N). The analysis has been performed for three time periods: the last decades, the last couple of centuries, and the last two millennia. A casual perusal of the table will show that there are many cases of both progress and regress for each time period. Of course, one might object that some of the conclusions in Table 3 are misguided. Scholarly consensus was followed where possible, though there had been little scholarly examination of several of these cases. Nevertheless it seems highly unlikely that the general conclusion that both progress and regress can be commonly observed across all three time periods is itself mistaken. Decisions about whether society is progressing or regressing must depend, then, on which phenomena one values the most. Clearly, different people can reach different conclusions simply by emphasizing different phenomena.

Table 3: Summary of the Evaluation of Human Progress by Phenomenon

(Notation: P= progress; R= regress; B= both; N= neither)

Ch. Phenomenon	Experience: Last Decades; Centuries; Millenia			Comments
Culture in general	B	B	B	
Sense of community	R	R	B	
Identification with larger groups	N	P	P	Mixed blessing
Ease of cross-group movement	P	B	B	Ltd by nation-state
Values in general	B	B	B	
No human sacrifice	N	P	P	
Decreased support for war	P	B	B	Not universal
Decreased support for slavery	N	P	P	
Decreased approval of aggression	B	P	P	
Increased approval of achievement	P	P	P	Should discriminate among types
Humility	R	R	R	
Respect for others (egalitarianism)	R	B	B	
Increased approval of curiosity	P	P	P	
Increased approval of openminded	B	P	P	
Sexual freedom	P	P	B	Cost in ethics; some
Support for caring	R	R	R	
Honesty	R	R	R	
Trust	N	R	R	

Optimism	R	R	N	
Value of romantic love	P	P	P	
Marriage	R	R	B	Benefits to flexibility
Care for elderly	R	R	B	
Religious freedom	P	P	B	Believers may disdain
Ecumenicism	P	P	P	
Time Preference	N	N	N	
Greater consensus on everyday norms	P	P	N	Decrease in deference
Improved cultural expressions	P	P	N	Less hostility
Stories	R	R	B	Less attention to
Decreased linguistic diversity	P	P	P	Some would disdain
Increased ease of language acquisition	P	P	P	Ease sp., grammar
Environment in general	B	B	B	Future path unclear
Pollution	B	R	R	Internal air quality
Human generated global warming (bad)	R	R	R	
Biodiversity	R	R	R	
Resource availability	B	B	P	
Control of natural disasters	P	P	P	
Treatment of animals	R	R	B	
Aesthetic value of nature	B	B	B	
Transport infrastructure	P	P	P	
Aesthetics in Architecture	R	R	P	
Genetic fitness	R	R	P	Environment change
Human abilities (realization of)	P	P	P	
Genetic drives in general	N	N	P	Genetic selection
Appropriateness of emotion	P	P	B	Therapy, psychology
Appropriateness of time preference	N	N	R	
Genetic diversity	R	R	P	
Happiness	B	B	N	Correl. w econ devel
Psychological understanding	P	P	N	
Self-knowledge	B	B	N	
Pursuit of individual talents	P	P	P	
Well-rounded individuals	R	R	R	Specialization
Freedom of choice	P	P	P	Some overwhelmed
Parent-child relationships	B	P	B	
Respect for personality diversity	P	P	P	
Feeling insignificant from globalization (bad)	R	R	R	

Ability to cope with injustice	R	R	B	
Depression (bad)	R	N	N	
Experience of anger	P	R	B	Less cultural support
Experience of aggression (esp. violence)	B	B	N	
Honesty	R	R	R	
Anxiety	P	B	R	
Health	P	P	B	Not everywhere
Decreased disease	P	P	P	Some new diseases
Increased nutrition	P	P	P	Junk food, anorexia
Population	P	P	P	Pos/neg effects
Migration	B	R	B	19th cent. golden era
Decreased gender stratification	P	P	B	
Decreased class stratification	B	P	B	Growing underclass?
Decreased role of inherited status	B	P	P	
Decreased ethnic strife	B	B	B	
Identify ourselves as individuals	P	P	N	
Decreased proportion of bad occupations	B	B	N	
Economic growth	P	P	P	Some output bad
Leisure time	B	P	R	Not always valued
Fulfilment at work	B	B	R	Future brighter?
Decreased unemployment (effects of)	P	B	B	
Decreased inequality	R	P	R	
Equality of opportunity	B	P	N	
Charity	N	N	N	
Effects on culture	B	B	B	
Effect of corporate form on values	R	R	N	
Institutions in general	P	P	P	
For growth	B	P	P	
Appreciate advs. of public/private	B	P	N	
For identifying bads	P	P	N	
For income distribution	R	P	B	
For limiting pollution	P	P	N	
Freedom (political, religious, occupational)	P	P	P	Encourages progress elsewhere
Justice	P	P	P	
Government power	P	P	P	Worry about abuse

Democracy	P	P	N	
Ethical leadership	N	N	P	Effect of democracy?
Nationalism	B	B	N	
Declining incidence of war	P	R	P	Increasingly deadly, different regional trends
Institutions in general	P	P	N	
Human rights agreements	P	N	N	
Law and order	B	P	P	
Efficiency and equity of tax collect.	N	P	P	
Provision of public works	P	P	P	
Bureaucratic flexibility	P	N	N	
Referenda	P	P	N	
Education	P	P	P	
Science	P	P	B	
Technology	P	P	P	
Natural science	P	P	P	
Human science	B	B	B	Progress dominates?
Philosophy	P	P	P	
Art	B	B	P	
Art works	P	P	P	
Art traditions	B	P	P	
Scientific and philosophical understanding of art	B	P	P	Decrease art=s magic?
Art=s role in society	R	R	B	

Source: Szostak (2012)

Table 3 also sheds light on a narrower question: how unusual is the contemporary period? In the vast majority of cases in which regress is identified over recent decades, regress is also found for previous periods (the same holds for progress). Nor is this merely an artefact of the way the three periods were all defined so as to culminate in the present. Regress in such cases can generally be observed in previous centuries and beyond as well. In some instances (but far from all) regress may be occurring at an accelerated rate. Still it is noteworthy that widespread regress across many of the phenomena stressed by critics of contemporary life can also be observed in previous time periods. Thus, the switch from a progressive to a pessimistic attitude does not for the most part reflect a dramatic change in societal experience of progress versus regress. It reflects instead a change in the *perception* of progress and regress. It could be that those who saw progress all around them in the nineteenth century falsely assumed that progress in certain realms would inevitably spill over into others. Contemporary nihilists may in turn be guilty of downplaying the importance of some types of progress in order to focus their attention on areas

in which regress or stasis rules.¹⁸ On the other hand, those who still proclaim that progress is inevitable may be guided by Table 2 to reflect on the challenge of achieving future progress across the many areas where regress is observed historically.

In the terminology of interdisciplinary analysis, Table 3 can be seen as a sort of common ground among competing evaluations of human progress. It is not so much that optimists and pessimists have disagreed over their empirical evaluation of particular phenomena. It is rather that they have disagreed about which phenomena are most important. Explicitly or implicitly, they have implied that progress or regress in their favored phenomena leads to progress or regress elsewhere. Table 3 provides a common framework in which both optimistic and pessimistic accounts have their place. Within this framework, a more nuanced empirical evaluation of the possibility of future progress becomes possible.

The reader can be spared the necessity of examining each element of Table 3 in detail. Those areas for which regress was observed in some period are:

- *Culture*: sense of community; attitudes toward humility, respect for others, caring, honesty, trust, optimism, marriage, and care for the elderly; stories.
- *Natural Environment*: pollution; biodiversity; global warming; built environment; treatment of animals.
- *Genetic Predispositions*: genetic fitness, genetic diversity
- *Individual Differences*: well-rounded individuals; feeling insignificant; ability to cope with injustice; depression
- *Health*: at a disaggregated level could speak of regress with respect to some diseases.
- *Social Structure*: No regress, though progress could be more rapid.
- *Economy*: inequality; effect of corporate form on ethics
- *Politics*: incidence of war
- *Art*: role in society

Elements of both regress and progress were often found within the same time period for the same phenomenon (in a few cases progress was identified for one period and regress for another). In such cases observers could readily disagree as to which was dominant. It is thus prudent to explore the possibility of encouraging greater progress in these cases as well. Indeed progress may be more readily achieved here than in the cases above:

- *Culture*: culture in general; values in general; time preference.
- *Natural Environment*: environment in general; resource availability; aesthetic value of nature.
- *Genetic Predispositions*: motivations; appropriateness of time preference (some regress over longest time period).
- *Individual Differences*: happiness; self-knowledge; parent-child relationships; respect for personality diversity; expression of anger and aggression; anxiety.

¹⁸ It is worth recalling in this respect that Michel Foucault, the source of many postmodern ideas, rejected the label of postmodernist and urged others to be humble about ascribing special status to their time (Alvesson, 2002, p. 26). Alvesson (p. 24) suggests that the late nineteenth century was a period of even more dramatic change.

- *Health*: population; migration (some regress in middle period).
- *Social Structure*: ethnic strife; bad occupations
- *Economy*: work fulfilment; leisure time; appreciating advantages of both public and private; effects on culture.
- *Politics*: ethical leadership; nationalism; education.
- *Technology, Science, and Philosophy*: human science.
- *Art*: art in general.

Pursuing Future Progress

One can sketch policies or strategies that might reverse the regress observed across many phenomena above.¹⁹ Notably, one need not rely on any simplistic meta-narrative in order to imagine such a set of strategies: quite different insights can be drawn upon to address different areas of regress. Yet it is also noteworthy that the very insights that have allowed us to evaluate the degree of human progress above can often point us toward achieving greater progress in the future.

In the area of culture, much of what needs to be done involves clarifying and popularizing the ethical core described above and outlined in Table 4. Table 4 reprises all statements that received support from each of the five types of ethical analysis (those in italics received very strong support). Our stories and our art could both better support an ethical and progressive society if the ethical core was more widely appreciated. An appreciation of the five types of ethical analysis is also invaluable in the area of public policy: the first step in crafting policies should involve evaluating the goals of policy in terms of each of the five types of analysis. Foreign policy might be a particular beneficiary: the days when foreign policy was conducted in secret are drawing to a close, and a clear adherence to shared values would be a salutary strategy. Public policy analysis could likewise benefit from a more explicit appreciation of the links that exist between the phenomena in Table 1 above; many unwanted side effects of policies might then be avoided (see Szostak, 2005b).

It was noted above that contemporary pessimism regarding human progress is rooted in three concerns: that human societies can not agree on the direction of human progress, that the world is too complex for us to identify the path to progress even if we could agree on goals, and that reason does not govern human affairs and thus we could not institute the right policies even if we could identify them. This paper has argued that we can indeed agree on what progress would mean with respect to a wide range of phenomena. It is useful to close the paper by discussing how we might cope with the challenges of complexity and unreason.

¹⁹ See the extensive table in chapter 17 of Szostak (2012). The table describes activist strategies and/or academic research strategies which could address 81 distinct areas in which progress should and could be experienced.

Table 4: The Ethical Core

Culture	The value of culture should be accepted in general, but individuals and societies should be prepared to evaluate individual elements (while recognizing the diverse effects individual elements of culture may have). Societies should thus be open to cultural innovation. Achievement should be valued, but the abuse of power disdained. <i>One should help others, but not deny oneself.</i> A slight bias toward optimism is beneficial. <i>Marriage is good. People should focus on the care of children</i> The elderly should be cared for and given fulfilment. Societies should strive for consensus on everyday norms. Expressions of culture should be appreciated (except those supporting bad values), while encouraging creativity. Rules of spelling and grammar should be simplified.
Non-Human Environment	Societies should protect the environment (but be conscious of the cost of this), fight natural disasters, treat farm animals better, and produce more aesthetically pleasing architecture.
Genetic Predispositions	Humanity should appreciate for the most part its inherent abilities, <i>motivations</i> , and emotions. Genetic diversity should also be valued. While emotion is good, people need at times to constrain their emotions. Love and sympathy (and humor) are generally good, while hate is generally bad. The future should be valued more.
Individual Differences	Virtuous behavior leads to happiness. Self-knowledge encourages both happiness and ethics. Personality diversity is good. Nevertheless, a number of beneficial personality characteristics can be identified: some degree of emotional control, empathy (but individuals should not wallow in guilt), <i>honesty</i> , and respect (for the complexity of others). Individuals should recognize both the ubiquity of injustice and one's ability to fight this. <i>Relationships should be valued.</i>
Health and Population	Health is good. Disease is bad. Proper nutrition is good. Moderate population growth can be good. <i>A stable age distribution is good.</i>
Social Structure	<i>Families should be valued (but one should not just assume one type of family best).</i> Some occupations are bad.
Economy	Not all 'goods' are beneficial. Societies should increase fulfilment at work, decrease unemployment, and decrease income inequality (by redistributing). Societies should strive to equalize opportunity. A role for both public and private sectors should be recognized. The value of private property should be appreciated. <i>Charity is good.</i> (Note: the ethical core contains elements thought of as right-wing – appreciate private property – and left-wing – redistribute income).
Politics	<i>Government is good.</i> Justice should be pursued as a goal. Democracy is good. Some wars can be justified. <i>Institutions should be evaluated with respect to all five types of ethical analysis.</i> Societies need bureaucracies with some limited degree of flexibility. <i>Education is good.</i> Crime is bad. Punishment is justified (but there is much injustice in the system).
Technology and Science	Innovation is good in general. Science should have stronger links to the public. Technological innovation can and should be guided to aid the environment.
Art	Art is good and important. Creating art is good and important.

Coping with Complexity

The best path to coping with complexity involves first facing up to it. Most theoretical efforts in human science address the relations among a handful of the phenomena in Table 1. They in practice ignore the possibility that relationships with yet other phenomena might interfere with or at least condition the processes they analyze. Yet it is possible to imagine some causal connection between almost any pair of phenomena in Table 1. Natural scientists do a much better job, it might be noted, of stipulating precisely under what conditions (that is, realizations of other phenomena) a particular causal relationship will hold. Public policies grounded in such partial understandings of a complex reality are likely both to miss important aspects of the problem being addressed and have unpredicted (but potentially predictable) negative side effects on other public policy goals.

The claim here is important: we can not hope to cope with complex social problems unless we first face up to the complexity of the world in which we live. Much of this paper has served to outline ways in which we can get a grip on that complexity: by identifying the constituent phenomena, understanding how these interact, and organizing these understandings.

There are several strategies that deserve particular emphasis:

- **Employ interdisciplinary analysis.** While individual pieces of scholarly research explore only a small part of the complexity of the world, the interdisciplinarian can achieve a much more comprehensive and nuanced understanding of any issue by integrating the insights emanating from different researchers and disciplines. Other papers in this volume discuss various types of integration. Repko (2011) provides a very useful guide to the performance of interdisciplinary research. Yet interdisciplinary analysis is limited by the scope of disciplinary research. Interdisciplinarians can usefully urge improvements in disciplinary research practice. These will generally involve encouragement to embrace a wider range of phenomena, theories, or methods.
- **Carefully map all relevant causal linkages.** As suggested above, this means not just appreciating all of the phenomena involved in a social problem or its resolution (and the interactions among these) but the side effects that policies may have on yet other phenomena. Given the limited scope of disciplinary research (and the tendency of disciplines to simply ignore the existence of other phenomena), it is all too easy to neglect relevant linkages unless one consults an exhaustive list of phenomena such as that in Table 1.
- **Likewise, draw upon the widest range of theories and methods.** No theory or method is perfect. Each has its strengths and weaknesses. The best policies will result not from the narrow application of one imperfect theory, no matter how much evidence from one imperfect method can be cited in its support. Rather we need to integrate argument and evidence from the widest range of theories and methods. As with phenomena, we are likely to overlook relevant theories and methods unless acquainted with the full range of theories and methods. Szostak (2004) established a five dimensional classification of types of theory. He also provided a list of the twelve broad methods used by scholars. By asking the 5W questions – who, what, where, when, and why – of each theory type and

method, he was able to establish the key strengths and weaknesses of each.²⁰ Importantly he was also able to show that disciplines choose mutually supportive sets of theories and methods: since a discipline's favored method is likely to exaggerate the power of its favored theory, we will want to ask what other disciplines' methods have to say about that theory. Researchers can consult these classifications in order to determine which theories and methods are most applicable to a particular research question. If they instead merely follow disciplinary practice they will gain an incomplete and likely biased understanding.

- **Develop more coherent systems of knowledge organization.** The academy devotes an infinitesimal fraction of the resources spent on research to organizing the results of that research. Existing systems of library classification tend to be grounded in disciplines. The exact same topic may thus appear in several different places in a library classification, often using different terminology. Moreover, works are usually classified in terms of (one or two of) the phenomena studied rather than the relationships among these. Nor are works usually classified in terms of the theories or methods applied. Trying to find "what theories or methods have already been applied to the study of how phenomenon A influences phenomenon B" is thus incredibly difficult. This need not be the case. It is both feasible and desirable to develop a better system of classification that would organize our fragmented understandings more coherently (Szostak, 2007, 2008, 2011).²¹

Combating Unreason

Four complementary paths to encouraging reasoned conversation can be identified:

- Ethical education. As Habermas would stress, people must come to want reasoned conversation. They need to realize that both they as individuals and the broader society will be better served if they pursue social responsibility and open-mindedness. Humility and courage are important components of this ethical outlook.
- Rhetorical education. As in other endeavors we should hardly anticipate a perfect ethical outlook from all. Those who wish to pursue reasoned conversation need thus to be able to debate those who wish to win at all costs. Fortunately, rhetoricians have studied debating tactics for thousands of years, and there are many handy guides to rhetorical tricks and how to combat these.
- Critical thinking education. Complementary to rhetorical education, this shows how to both make and evaluate arguments. Groarke and Tindale (2004) provide a very detailed guide. They urge, among other things, precise definitions of terms, visualization of arguments such that precepts are clearly distinguished from conclusions and emotional from reasoned argument, and interrogation of authorial biases. One or more chapters address arguments from classification (such as 'all X are Y'), prepositional statements (such as 'if X then Y'), and inductive arguments.
- Institutional reform. The fourth path requires more imagination at present, but the goal is straightforward: to increase the rewards for open honest conversation and/or increase the penalties for dishonest or evasive rhetoric. Some sort of arms-length evaluation of the veracity of political claims might be useful for example. Note that such institutions

²⁰ He could thus show in detail how the methods favored by disciplines tend to be biased toward supporting their preferred theories.

²¹ See also the Leon Manifesto at www.iskoi.org/ilc/leon.htm

become easier to imagine as the citizenry appreciates both the ethical and rhetorical material above.

Concluding Remarks

This paper has argued for a disaggregated but coherent evaluation of human progress. Rather than focus on a small number of types of progress, as is the norm in the literature on progress, the paper instead looks at a wide variety of types of progress. It argues that it is quite possible to identify what would be a progressive change with respect to some one hundred distinct phenomena. Human history has seen progress with respect to many of these but regress with respect to many others. There is no objective weighting by which it can be determined whether progress has outweighed regress. It is however possible to envision a set of strategies that would allow humanity to achieve progress across (virtually) all of these phenomena in future. An objectively progressive future is thus entirely possible.

Interdisciplinarity itself is one of the keys to a progressive future. The key insight of the present paper for interdisciplinary research involves the value of classification. The paper has produced classifications of phenomena and types of ethical analysis, and used these to develop tables of ethical evaluation of phenomena and historical experience of progress by phenomena. It later noted the value of classifications of theory types and methods (and their key strengths and weaknesses). And it urged the development of better systems of library classification. The synergy between interdisciplinarity and classification is often overlooked (in part because some interdisciplinarians worry that classification is antithetical to the freedom of inquiry associated with interdisciplinarity). Exhaustive but coherent classifications alert researchers to the full range of possibilities (and thus structure supports freedom) while organizing the results of all research such that these can be readily assimilated

References

- Baron, M. W., Pettit, P. & Slote, M. (1997). *Three methods of ethics*. Oxford: Blackwell.
- Brome, V. (1963). *The problem of progress*. London: Cassell.
- Cooke, M., ed. (1998). [Jürgen Habermas:] *On the pragmatics of conversation*, Cambridge MA: MIT Press.
- Detmer, D. (2003). *Challenging postmodernism: Philosophy and the politics of truth*. Amherst NY: Humanity Books.
- Gellner, E. (1989). *Plough, sword, and book*. Chicago: University of Chicago Press.
- Heylinghen, F. & Bernheim, J. (2000a). Global progress I: Empirical evidence for increasing quality of life. *Journal of Happiness Studies*, 1 (3), 323-49.
- Heylinghen, F. and Bernheim, J. (2000b). Global progress II: Evolutionary mechanisms and their side-effects. *Journal of Happiness Studies*, 1(3), 351-74.
- Krieger, M. H. (1997). *Doing physics: How physicists take hold of the world*. Bloomington: University of Indiana Press.
- Laszlo, E. (1987). *Evolution: The grand synthesis*. Boston: New Science Library.
- Lewis, H. (2000). *A question of values: Six ways we make the personal choices that shape our lives*. Mount Jackson, VA: Axios Institute Press.
- Lyotard, J. (1984). *The postmodern condition*. Minneapolis: University of Minnesota Press.

- Malpas, S. (2001). *The postmodern*. London: Routledge.
- Repko, A. (2011). *Interdisciplinary research: Theory and process*. 2nd ed. Thousand Oaks: Sage.
- Ryan, A. (1993). Liberalism in *A companion to contemporary political philosophy*. Edited by Goodin, R. E. & Pettit, P. Oxford: Blackwell.
- Solomon, R. C. (1992). *Entertaining ideas: Popular philosophical essays 1970-1990*. Buffalo: Prometheus.
- Szostak, R. (2003). *A schema for unifying human science: Interdisciplinary perspectives on culture*. Selinsgrove PA: Susquehanna University Press.
- Szostak, R. (2004). *Classifying science: Phenomena, data, theory, method, practice*. Dordrecht: Springer.
- Szostak, R. (2005a). *Unifying ethics*. Lanham MD: University Press of America.
- Szostak, Rick (2005b) "Interdisciplinarity and the teaching of public policy" *Journal of Policy Analysis and Management*. 24:4, 853-63 (Fall, 2005).
- Szostak, R. (2007). "Interdisciplinarity and the classification of scholarly documents by phenomena, theories, and methods" in Bravo, B. R. & Diez, D. A. eds., *Interdisciplinarity and transdisciplinarity in the organization of scientific knowledge: Actas del VIII Congreso ISKO-Espana* (Leon, April, 2007). Leon: University of Leon, 469-77.
- Szostak, R. (2008). "Classification, interdisciplinarity, and the study of science" *Journal of Documentation* 64:3, 319-32 (2008).
- Szostak, R. (2009). *The causes of economic growth: Interdisciplinary perspectives*. Berlin: Springer.
- Szostak, R. (2011). "Complex concepts into basic concepts" *Journal of the American Society for Information Science and Technology* 62(11), 2247-2265.
- Szostak, R. (2012). *Restoring human progress*. Cranmore Publications (UK).
- Van Doren, C. (1967). *The idea of progress*. New York: Praeger.