

Sense-making and acting for descent futures: human and cultural pathways

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Abstract

Purpose – *This paper aims to make the case for continued opportunity for high levels of human well-being under descent conditions characterised by declining economic throughput and socio-political complexity.*

Design/methodology/approach – *Relationships between assumptions about human well-being formed within a modern industrial context, the guiding narratives attending these, and the broader cultural influence of ideas from the evolutionary sciences are examined. Alternative ways of making sense of these relationships are explored. The experiences of societies guided by cultural narratives based on different premises to those most influential in industrial societies are reviewed for their implications for human well-being under descent conditions.*

Findings – *Human experiences of well-being are principally a function of the sources of meaning and associated narratives by which members of a culture make sense of their situation, as these determine the nature of the material and energetic conditions required to live well. Under descent conditions, the narrative of progress that has supported viable societies during the 300-year period of industrial expansion is unlikely to continue serving humanity well. Collective participation in the renewal of guiding cultural narratives is a primary target for efforts to provide continued opportunities for high quality of life to all members of humanity.*

Practical implications – *The findings point towards specific characteristics of cultural sense-making narratives that may support viable human societies under descent conditions.*

Social implications – *By moving beyond the default assumption that descent automatically implies decline in human well-being, a barrier may be lowered to more open and mature society-wide engagement in conversations about the present human predicament and effective ways of responding to it.*

Originality/value – *New connections are identified between perspectives based on biological evolutionary theory and the continued influence of the idea of progress in establishing default assumptions about prospects for human well-being under descent conditions. Experiences of non-industrial societies are taken as the basis for identifying opportunities for human well-being under far more modest material and energetic conditions than those available to the portion of humanity that presently enjoys benefits of industrial development that outweigh the attendant costs.*

Keywords *Well-being, Enactive evolution, Industrial society, Progress, Societal complexity, Viability*
Paper type *Conceptual paper*

1. Introduction

In the context of an inquiry into humanity's civilisational futures, the concept of socio-political collapse understandably stirs strong emotions. The historical and archaeological records confirm significant correlation between collapse in the complexity of socio-political institutions and serious population-scale adversity. Even so, as a possible future for any human society, the general idea of collapse tends to evoke in the popular imagination associations significantly more extreme than the records of past experience warrant. In one account, it's a magnet for end-of-civilisation apocalyptic fantasies, and, in another, as the sworn enemy of civilisation's ever onward march to futures inherently

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bigger, better and brighter than the present, it spells nothing less than the end of meaningful existence (Greer, 2008).

Differentiating between descent and collapse is an important step in ameliorating the collective anxieties and fears attending an awakening to the prospect that industrial civilisation's great material and technological gains might be impermanent. The descent metaphor, as discussed, for instance, by Greer (2008), Holmgren (2009) and Slaughter (2010), brings to bear a greater focus on the temporal dimension of collapse, shifting from a default framing as near-term and sudden *catastrophic event* within which lives (and lifeways) are *consumed* towards that of an extended *age* forming the context within which different identities and lifeways evolve. Of principal importance, the distinction between descent and sudden cataclysmic breakdown offers far greater scope for human agency in responding to the situation at hand. I argue that this has a vital – and *vitalising* – role to play in moving beyond the more dystopian assumptions that frequently attend consideration of alternatives to the dominant narrative by which the modern industrial world makes sense of its recent history, present situation and future options, *the myth of progress* (Gray, 2013)[1].

In the present article this temporal differentiation is the departure point for exploring a further distinction between the conditions of human societies as measured in quantitative economic terms and prevailing assumptions about the nature and origins of human well-being. Specifically, I will challenge the characteristically modern conceit that descent in the scope and extent of human societies' material and energetic means and socio-political complexity necessarily implies commensurate descent in individual and collective experiences of well-being. In doing so, two important qualifications bear considering.

First, on initial inspection the decoupling that I am aiming for between trajectories in economic and socio-political conditions and well-being may appear to mirror more closely than intended the distinction drawn by development economists between *standard of living* and *quality of life*, as exemplified by Amartya Sen's leading work (Sen and Hawthorn, 1987; Nussbaum *et al.*, 1993; Stiglitz *et al.*, 2010; Anand and Sen, 2000). The view that I present here marks a radical departure from this[2]. Sen's human capability perspective, for all its important nuance, remains both a product of and firmly entrenched within an industrial-world outlook, an entailment of what Roszak (1972) characterised as "single vision." The trajectories I envisage under the guise of descent pathways are characteristically de-industrial in nature. Here descent specifically entails transformations beyond industrial organisation, and assumes decrease in the net energy conversion rate available to human societies. This entails overall reduction in the rate at which material change – transformation, production and transport – unfolds. Such a starting point demands far greater flexibility in thinking about well-being than the present industrial context affords us.

Second, the theme of this special issue is specifically descent *pathways*. Coming to terms with the prospects for human well-being under conditions of descent demands that we explore beyond the question "where are we going?" to ask "by what pathways might we proceed?" Ample evidence is available for high levels of experienced well-being with far more modest economic conditions than those enjoyed by today's rich-world citizens. At the same time, the historical record indicates clearly that past periods of descent involved widespread and often severe human costs. Populations typically decline or disperse. On many objective measures, life conditions deteriorate compared with those of the prior peak in economic throughput and socio-political complexity. My intent is not to downplay or glorify this. Rather, I wish to challenge an implicit assumption that lives lived under circumstances of descent are of lesser value than those lived today by the portion of humanity that enjoys benefits associated with the peak of industrial society's prosperity that outweigh attendant costs.

A corollary of these two qualifications is that the *pathway* metaphor itself demands careful re-envisaging. In contemporary societies, pathways are themselves typically regarded as products of the industrial approach to organising and constructing, where the efficacy of centralised planning and control is taken as given. But where the industrial context is itself under question, the assumed certainties on which this relies lose their instrumental power. Such conditions suggest as more efficacious a path-making approach based on the contingency-based and situation-responsive principles of action inquiry (Wadsworth, 2010; Floyd, 2012).

1.1 Purposes

My overall intent is to take some early steps towards achieving what to the modern mind often seems unthinkable: establishing an *engaging vision* of descent based on a reinvigorated view of life quality within the context of material and energetic humility. *Autonomy of meaning making* – foundational for participating as a matter of individual *freedom* and *choice* in the generation of collective structures that enable *harmony* and *equality* (Quilligan, 2012) – is central to the view of life quality that I have in mind as congruent with this aim. This will involve not only viewing descent in a different light, but rescuing the collapse concept itself from pathological or dystopian associations by recasting it in the more useful role of an *evolutionarily adaptive* response within environmental conditions unfavourable to a continued growth trajectory. For this, we will also need to consider closely the relationship between popular misconceptions of what evolution in fact means for professional scientists, and the influence that such misconceptions, via their connections with the myth of progress, hold over contemporary thinking about preferred futures.

This implies the difficult cultural task of unlearning established habits of thought. Two propositions guide thinking here:

1. we as a species are capable of recognising and overriding the impulse to avoid such difficulty; and
2. we are also sufficiently resilient to confront the full implications of our situation.

Such views are frequently contested, even within the foresight field. I suggest that this reflects excessively narrow or cautious interpretations of the research literature on the nihilistic effects of exposure to “apocalyptic” futures images as implying that those without specialist training are not equipped to participate in such confrontation. It seems a retrograde step to extrapolate from research on the pathological effects of exposure to the most extreme images of civilisational destruction – bearing little resemblance to the archaeological and historical accounts of actual past descent processes – to the view that “everyday people” should be shielded from opportunities for coming to terms with the highly strained interrelationship between humanity and its planetary support systems. I proceed from the view that we are capable of meeting the challenge of *unlearning* both creatively and constructively, with enthusiasm, and further, drawing from this new sources of meaning to undergird the experience of lives well lived.

Such unlearning has the potential to unlock the panoply of latent cultural knowledge available to guide effective thinking about descent pathways. I will round out the article by considering two case studies from this knowledge base, and some brief implications for practical enactment of viable pathways that employ descent in an emancipatory capacity.

2. The case for confronting descent

The broad case for taking the prospect of descent seriously is outlined in this special issue’s editorial introduction. The energetic dimension of this warrants further attention before proceeding. In the most straightforward terms, descent is the general outcome when a given level of social complexity becomes too costly to maintain. Amongst those who study the historical wax and wane of human societies closely, in the more nuanced

accounts, the term collapse is often reserved for situations in which descent proceeds spontaneously, by processes beyond the influence of human institutions and agency (Tainter, 1988; Greer, 2008). Descent can also unfold in response to intentional strategies to reduce institutional complexity – that is, where the process is subject to human influence. The distinction is a matter of context-specific qualification though – in terms of consequences for socio-political complexity, “spontaneous” and “intentional” processes produce conditions for which the collapse concept performs a useful sense-making function.

The costs that mediate the relationship between socio-political complexity and its societal benefits can be viewed specifically in energetic terms (Tainter, 1988). Maintaining a given level of institutional complexity in a particular socio-political context requires a society to maintain a sufficient rate of net energy conversion, in the form of mechanical work output and heating. Increasing complexity beyond this level requires a corresponding increase in the society’s net energy conversion rate. Acknowledging the importance of the *net* rate highlights that mechanical work and heating are themselves required to make surplus energy available. Differences in nature between primary energy resources affect available surpluses. For a given resource, quality tends to decline as the easiest to exploit reserves are used. This applies whether a society depends on stock-based resources (fossil fuels) or flow-based resources (solar, wind, hydro, biomass).

Descent entails the loss or abandonment of institutional complexity when a net energy conversion rate sufficient to support a society’s peak level of complexity is not maintained. This is, however, not a matter of simple energy *determinism* (Smil, 1994; Debeir *et al.*, 1991), but rather of *contextualism*. Different societies manage similar existential challenges with different levels of institutional complexity; and similar levels of complexity can be supported in different contexts with significantly different levels of energy use (Smil, 2003).

Collapse in the face of economic limits is not inevitable – it is contingent upon the level of institutional complexity that a society seeks to maintain, and the resources it brings to bear on this task. In this sense, there is scope to extend to the concepts of both descent and collapse less pejorative interpretations than are often adopted by default. Recognising this allows us to move beyond the idea that *increasing* complexity is valuable for its own sake, or that it implies inherent progress in the direction of improved human well-being. A key contention here is that by collectively internalising this, humanity will be better equipped to make sense of its present situation and respond effectively.

According to Tainter (2000, 2006, 2011), in human societies, increased complexity is used as a problem-solving strategy. It is not an inevitable consequence of socio-cultural evolution. Nor is it a path that humans tend to choose for its own sake. Rather than exerting a “gravitational pull” on us, we have to work at complexity, and this especially means having adequate resources available to support it. For industrial societies, the definitive resource base in this respect is humanity’s one-time fossil fuel windfall. The unique and remarkable characteristics of conventional petroleum are especially significant here. The globally integrated manufacturing and distribution systems that act as the “engine rooms” for industrial consumer economies entail extremes of institutional complexity that face very significant impediments in the absence of this energy source (Moriarty and Honnery, 2012; Floyd, 2013).

The widely held article of faith that our present technology-fetishising, growth-at-any-cost trajectory represents the best of all possible evolutionary pathways is a defining characteristic of modern industrial culture. Descent, on the other hand, is taken to be inherently dystopian because it runs counter to that trajectory. But why should we necessarily assume that the trajectory we happen to have been swept along by 300 years of fossil-fuelled industrial development is *inherently*, rather than *contingently*, valuable? A comprehensive inquiry into this question must eventually bring us face-to-face with what is perhaps the contemporary world’s most influential meta-narrative, the myth of progress.

3. The progress myth: meaning-making in the modern world

Put simply, the myth of progress holds that human history is characterised by a unidirectional, largely deterministic and hence predictable pattern of change from less to more socially desirable states (Pollard, 1968). Proponents for the myth's explanatory power in relation to human history often see supporting evidence in their interpretations of change trajectories associated with the social realms of knowledge, economics and technology and also (though with more frequent reservations) those of politics and morality (Van Doren, 1967; Pollard, 1968). The influence of this sense-making narrative is a historically recent development, coinciding with the scientific worldview's rise to prominence in Enlightenment Europe and hence more-or-less with industrial society itself (Wright, 2004; Gray, 2013; Greer, 2008; Pollard, 1968). It follows from this that within the myth, the forms of social organisation accompanying industrialism are afforded a status of superiority over both the *pre*-industrial societies from which they themselves emerged and their contemporaneous *non*-industrial societies in other regions. Societies arranged along lines other than those governed by industrial-world logic, norms and knowledge are therefore regarded as essentially *deficient*.

Wright (2004) and Greer (2012) argue that progress effectively fulfils the role of a secular religion. In this respect, it has taken over both the cultural role and essential narrative features of religious traditions supposedly displaced by scientific materialism (Greer, 2008). It is not my intent here to disparage either myth or religion. Myth is central to narrative meaning-making, perhaps humanity's preeminent defining characteristic. Gray (2013, p. 82) highlights that myths "answer to a need for meaning that cannot be denied.[. . .] When truth is at odds with meaning, it is meaning that wins." For Wright (2004, p. 4), myths "are the maps by which cultures navigate through time." From this vantage point, the questions that should concern us are:

- how well does the myth of progress continue to serve us in this respect; and
- how might better appreciating the role of myth in general – and the progress myth in particular – open up human and cultural pathways better suited to futures characterised by economic and socio-political descent?

3.1 Progress and evolution

In nineteenth century Europe, within the broader social context of science supplanting theistic religion as the source of legitimate sense-making narratives, and modern Western societies as representing improvements over all others, the expanding body of theory on biological evolution provided progress with a ready source of legitimation. A principal influence in this respect was the work of Herbert Spencer, the originator of the theory later known as Social Darwinism (Gould, 1996). Spencer posited a universal law of evolution governing astronomic, biological and social change processes, applicable to both individuals and collectives. This was characterised by a directional pattern of *advance* from simplicity to complexity via increasing differentiation and integration of the evolving system's parts (Inayatullah, 1997). While his theory is central to a corpus of ideas bearing Charles Darwin's name, the directionality inherent in Spencer's model of social history is at odds with Darwin's theory of natural selection as the basis for biological evolution. In fact, Spencer's evolutionary theory, which is essentially Lamarckian (based on the inheritance of acquired traits), actually pre-dates the 1859 publication of Darwin's *On the Origin of Species*.

Darwin's theory, in contrast to Spencer's, relates specifically to biological changes in populations, in particular the descent of species from common ancestors. He adopted the term *evolution* belatedly and with significant reservation, following its widespread association via Spencer's work with change that is inherently progressive (Gould, 1996). Darwinian evolution is non-directional, its characteristic feature being diversification in the course of local adaptation to changing environments (Gould, 1989). Darwin, working in the

context of Victorian England's cultural norms, did however express views on "life's trajectory" that can be interpreted as contradicting this (Gould, 1989).

A legacy of these origins is widespread confusion, both past and present, regarding the use of the term evolution. In the context of the biological and related sciences, Gould (1989, p. 32) is perfectly clear on this: "Evolution, to professionals, is adaptation to changing environments, not progress." Despite such clarity, the enduring popular impression today is of evolution, whether conceived in relation to biological or social change processes, as inherently progressive (Gould, 1989). A variant on this, particularly related to biological evolution, is the perpetuation of Spencer's view of an *intrinsic tendency* towards greater complexity. This view is also now regarded as untenable within the evolutionary sciences (Gould, 1996). While biological evolution produces organisms of increased complexity, this is not a universal pattern for life as a whole. Evolution does not entail selection for complexity in preference to simplicity. Rather, some lineages exhibit a passive trend in the direction of increased complexity due to life's origin adjacent to a "left wall" of minimal complexity, with no discernible "right wall" to constrain maximal complexity (Gould, 1996). Nevertheless, the popular misconceptions persist, spurred on by an apparently inevitable course of history from the Neolithic Revolution 10,000 years ago to industrial civilization today. Within the narrative logic of progress, the success of industrial societies in displacing other social forms has created the illusion of an evolutionary *fait accompli*.

At this point in the argument, the possibility does, in fact, remain that while biological evolution does not proceed towards inherent complexification, social evolution[3], which is more usefully understood as Lamarckian and hence potentially accumulative, may do so. This brings us to the crux of the relationship between a more nuanced understanding of evolutionary change and the prospects for human well-being under conditions of economic and socio-political descent. For this, we will need to reach beyond the orthodox evolutionary theory of neo-Darwinism (Dawkins, 1986) to consider the systems-oriented perspective of *enactive evolution* (Maturana and Varela, 1987; Varela *et al.*, 1991; Thompson, 2007).

3.2 Beyond evolution as "optimal design": life's quest for viability

Under the guise of the myth of progress, the popular misconception of evolution as progressive improvement continues to hold great sway, even amongst those with high levels of scientific literacy, including humanists who would consider Social Darwinism, on grounds of its ethnocentrism, long dead and buried. A principal feature of orthodox evolutionary science can itself be seen as making a significant contribution to this situation.

The neo-Darwinian view of *adaptationism* treats organisms in terms of multiple and largely independent traits. Reducing organisms to sets of such traits allows for viewing adaptation in terms of a fitness criterion of *optimality*. From this point of view, organisms over time become increasingly "better-adapted" to life conditions in a relatively stable, independent environment (Thompson, 2007). This is often mistakenly taken to imply that species appearing later are, so to speak, "more highly evolved" than species that first appeared earlier.

The adaptationist paradigm, while continuing to fulfil the role of normal science in Kuhn's (1996) terms, faces significant challenges from a systems perspective. In this view, organisms are integrated wholes rather than collections of traits. Further, an organism never occurs independently of a social or bio-physical environment – the separation of organism and environment as units of analysis is simply an artefact of a particular research paradigm. In the alternative approach of enactive evolution living systems are characterised by their *autonomous sense-making* (Maturana and Varela, 1987, Thompson, 2007). In this view, evolution involves the ongoing process of *conserving identity and adaptation* between the entity in which we're interested – be it an organism or a social group – and the self-differentiable features of its encompassing milieu that count for it as "environment." Here, coupled interdependence between an entity and its co-evolving

environment provides the basis for assessing what counts as adaptive change. Successful changes are simply those that support ongoing conservation of adaptation:

[E]volution should not be described as a process whereby organisms get better and better at adapting to the design problems posed by an independent environment. Central to evolution is not the optimization of adaptation, but rather the conservation of adaptation. As long as a living being does not disintegrate, but maintains its autonomous integrity, it is adapted because it is able to carry on its structural coupling with its environment (Thompson, 2007, p. 204).

The fitness criterion shifts here from *optimality* to *viability*:

The basic concept behind the idea of viability is that the behaviour of the system is characterized by a set of possible trajectories rather than by a unique optimal one. The task of the system is to stay within the zone of viability (otherwise the system disintegrates) rather than to follow a precise trajectory defined by the requirement of optimal fitness (Thompson, 2007, p. 206).

A central insight here is that the directionality apparent in evolutionary lineages results from a *natural drift* and does not arise under the influence of some external “force.” Alongside this, there is no external standard against which to view one viable trajectory as preferable to another. In this sense, viability arises in relation to norms internal to the evolving entity. This establishes the basis for the concept of *enaction* and leads to a guiding metaphor for understanding evolution that has deep significance in contemplating descent pathways:

“Enaction” connotes the performance or carrying out in action of a lifeline. It evokes the image of living beings laying down historical pathways through their own dynamics and those of the environments to which they are structurally coupled. Enactive evolution is the laying down of a path in walking (Thompson, 2007, p. 218).

Following Jonas (1966), Thompson (2007) characterises the dialectical relationship between an organism and its environment in the course of their evolution together as one of *needful freedom*. Via the enactive view, in which the units of change are developmental systems in general, this characterisation can be extended to social groups. This understanding of freedom as a consequence of maintaining appropriate change between a living entity and its environment is central to the way of thinking about the nature of and opportunities for human well-being under descent conditions that I hope to encourage. It reflects the view that, after Maturana and Varela (1987), the futures open to us are those that we co-construct with others. Freedom in this context implies “entering into that dance of co-construction with a humility and circumspection, reflecting the uncertainty this entails” (Floyd, 2013, p. 227).

With enactive evolution’s distinction between optimality and viability in mind, as a preamble to thinking more closely about the relationship between viable descent pathways and human well-being, I will now take up the task of rendering descent-related concepts themselves in a more appreciative light.

4. Descent, collapse and viable trajectories

The extent of the progress myth’s influence on contemporary culture, apparently supported and legitimised by the popular view of evolution as progressive improvement, sheds some light on why concepts such as “descent” and “collapse” bring to mind for so many people immediate negative associations. Abstract social concepts such as these involve metaphorical mappings from more concrete experiences with physical phenomena (Lakoff and Johnson, 2003). But in the physical realm, descent and collapse can entail associations readily regarded as *positive*[4]. Two simple examples illustrate how easily the default association is turned on its head: aviation and automotive design.

The significance of the first example can be conveyed in proverbial terms: “what goes up must come down.” Descent is clearly both a necessary and desirable attribute of air transport, even of flying – whether mechanised or animate – in general. To highlight descent at the conclusion of a flight, when fuel is depleted, as inherently positive may seem

trite. If so, it perhaps also begs a question of the default aversion to descent in other contexts.

The second example references the practice of designing automobiles to collapse (or “crumple”) in collisions. In engineering terms, automobile structural design reflects the understanding that when a collision situation is unavoidable, occupant safety is better served by allowing the vehicle to deform permanently (and very often destructively) rather than by attempting to maintain its structural integrity.

The broad principle connecting these two micro examples with our macro-social concerns involves recognising that there is sometimes greater merit in yielding to hard limits, rather than stubbornly attempting to maintain a state of maximum extension. Common to the examples is that descent and collapse respectively play the roles of conservation strategies when some limit has been exceeded. They do not necessarily mark terminal points, but rather create the opportunity for regrouping and recovery.

It is in such a context that descent can be viewed as conserving adaptation for a social group. If environmental circumstance favours reduced socio-political complexity, as the present relationships between Greer’s three economies presented in the editorial introduction to this special issue suggests may be the case today, then descent potentially makes available evolutionary pathways with ongoing viability. It seems preferable that such a process would unfold through selective abandonment of institutions that no longer serve their “design purposes,” and hence under the influence of human agency. Nevertheless, from the perspective of enactive evolution and consistent with Jonas’s concept of *needful freedom*, the exercise of such agency is necessarily subject to environmental constraints on the pathways that it may lay down. Along with this, agency remains available only to the extent that members of a society are willing to change in response to the unfolding circumstances confronting them.

Perhaps the most notable historical example of managed descent as a means of conserving adaptation is the Eastern Roman empire’s successful abandonment of social complexity in the seventh century CE, consolidating its defences and eventually halting the loss of territory, before establishing the conditions for a subsequent re-expansion (Tainter, 2000). But we also see it in less dramatic form when companies contract back to their “core business” as an intentional strategy to align organisational complexity with conditions in the business environment. In fact, more than 80 years ago, Coase (1937) described the basis for such management strategy in terms of declining marginal returns on increased internal complexity. From a social-ecological perspective, however, there is also a case for viewing more “spontaneous” collapse as adaptive in an evolutionary sense. After all, situations in which this occurs result from earlier failure to anticipate, or at least adequately manage, the costs of prior complexification. While the proximate events associated with a collapse process can have destructive impacts for those immediately involved, they can also defuse dysfunctional institutional arrangements that, if allowed to continue, can contribute to larger scale and longer term hazards. State support for “too big to fail” financial institutions during the Global Financial Crisis provides a poignant example on which to reflect in this light.

5. Rethinking human well-being: from optimality to viability

In rescuing descent from its apparent hostility to human well-being, we can ask how well we are served in the first place by maintaining present extremes of economic production and socio-political complexity. Here, enactive evolution’s fitness criterion of viability in preference to optimality comes to the fore as a guide for sense-making. Tainter (2011, p. 91) points out that, contrary to common assumptions, the surplus production characteristic of contemporary industrial societies runs counter to what most people across human history have actually wanted for themselves:

One reason why humans do not ordinarily produce surpluses is declining productivity of labor. In subsistence economies, producing beyond what is needed for annual requirements

generates diminishing returns to labor inputs. Both hunter-gatherers and subsistence agriculturalists, who have comprised the bulk of human history, prefer leisure to the time and effort required to produce a surplus. Even in today's economy, people report that they would prefer extra sleep to additional income. Surplus production has not been common in human history, nor has complexity.

In considering what this might imply for laying down viable pathways under conditions of descent, historian Lewis Mumford – who continues to be regarded as one of the foremost thinkers on the relationship between technology and human development (Winner, 2010) – offers key insights. His observations relating to medieval Europe suggest that social complexity far lower than that by which contemporary industrial societies are characterised can, in fact, produce surpluses that others have found quite satisfactory:

[W]ell before the twelfth-century resurgence of urban life throughout Europe, a whole series of technological advances [. . .] released labour for other purposes and immensely added to the total productivity of the handicrafts [. . .]

How great this release was can be discovered by the number of holidays the medieval worker enjoyed [. . .] as late as the sixteenth century more than half the recorded days were holidays; while for Europe as a whole, the total number of holidays, including Sunday, came to 189 [. . .] Nothing more clearly indicates a surplus of food and human energy, if not material goods. Modern labor-saving devices have as yet done no better (Mumford, 1966, pp. 270-271).

The objection might be raised that this simply reflects a failure of vision in relation to material affluence. Did those people not realise how much better off they might have been if they had applied themselves a little more diligently to accumulating wealth? But how reasonable is it to assume contemporary values as the gold standard against which to assess such preferences? Might members of the societies to which Tainter and Mumford refer have realised something that today we forget or overlook? Is there a clue here to the ways in which *descent* futures can, in fact, be *decent* futures? In grappling with such questions, Mumford again offers a way to untangle our thinking from the progress myth's stranglehold:

If one asks why early man [sic] took so long to improve his technical skills and his material facilities, the answer must be: he concentrated upon the greatest of all utilities first. By his command of words he increasingly embraced every aspect of life and gave it significance as part of a larger whole he retained in his mind. Only within that whole could technics itself have significance. The pursuit of significance crowns every other human achievement (p. 97).

This is grounded in Mumford's (1966, pp. 74-81) understanding that meaning is not restricted to the human realm, but is central to *all* animal existence. This can be extended further still. From the perspective of enactive evolution, all *life* is understood in terms of the generation of meaning: "Living beings shape the world into meaningful domains of interaction and thereby bring forth their own environments of significance and valence" (Thompson, 2007, p. 154). The internal or self-generated status of meaning and norms is a central feature of the autonomy that characterises all living beings. Freedom here is not a result of rational and moral *transcendence* of nature, but of the self-production definitive of all organisms. Living and sense-making arise together, and imply *adaptivity*, the capacity for accommodation between living entities and their environments. Here, "Adaptivity [. . .] means flexibility, the capacity to change in relation to changing conditions in a viable (and not necessarily optimal) way" (p. 159).

Such a view suggests a very different way of understanding human achievement, one that makes values of *material accumulation* or *technological power* subordinate to that of *meaning*. This turns on its head the idea that industrial society's particular successes represent the present *pinnacle* of human achievement. Placing the pursuit of significance through language and culture ahead of indicators such as material abundance, economic output, socio-political complexity and technological sophistication opens the way to considering non-industrial cultures on very different terms to those favoured by default within the industrial worldview. In the face of environmental conditions opposed to the

pursuit of further material accumulation as the basis for human well-being, this re-opens to us opportunities and choices previously foreclosed by industrial lifeways.

To illustrate what such an approach to well-being implies in practice, I will now consider two cultures that have their traditional roots in the prioritisation of interior sources of meaning in preference to meaning derived from control of the exterior environment and material accumulation. This offers a basis for appreciating well-being in terms very different to those by which “quality of life” is formally assessed in the contemporary industrial world.

6. Lifeways for socio-cultural viability: Aboriginal Australia and Tibet

The examples I consider here are the traditional lifeways of Aboriginal Australia and Tibet. Both are presented as instances of indigeneity. For Aborigines, this is a matter of explicit self-representation. In the case of Tibet, where the term *indigenous* is not widely used, it reflects parallels between the ways many Tibetans both in exile and in China choose to represent their culture, and “ideals of environmental stewardship, connectedness to nature, spirituality, and egalitarianism” characteristic of indigenous identification (Yeh, 2007, p. 69).

The approach I take is intended, in the first instance, to demonstrate that high levels of human well-being have, in the past, been achieved with material, economic and technological means that are orders of magnitude more modest than those provided by modern industrial societies. On this basis, the accounts focus for the main part on Aboriginal and Tibetan cultures prior to their colonisation and subsequent assimilation into the industrial world. These are, however, living traditions: each survives in the modern world by conserving its defining values through flexibility in relation to non-essential features.

A further interest, though, follows directly from recognising these cultures as living traditions. I wish to offer here a basis for considering what each culture’s continued viability might imply for the plight of industrial societies today. Each has encountered its own collapse event: the invasion of an aggressor ignorant of and hostile to the indigenous lifeways. And yet, however tenuously, each survives. We can ask: what might prospects be for the viability of these cultures under descent conditions, compared with those of industrial culture? Furthermore, what relationship might exist between each culture’s unique knowledge system, and these prospects?

6.1 Appreciating traditional cultures: beyond romanticisation

Appreciative accounts of traditional or indigenous cultures can be open to legitimate charges of romanticisation or idealisation (Huber, 1991, 1997). From the perspective of value preferences formed within the context of contemporary liberal humanism’s broader cultural influence, many aspects of traditional Aboriginal and Tibetan socio-cultural arrangements are often found to be problematic, especially in relation to perceptions of social equality and power relations. As long as members of indigenous cultures are required (or feel compelled) to establish the legitimacy and value of their own unique knowledge systems on industrial culture’s terms, they will remain open to the charge that such representations are “anachronistic, exaggerated, romanticized, inaccurate and so on” (Huber, 1997, p. 107). But this is not simply a matter of the competence or honesty of those advocating for the value of indigenous knowledge traditions. The expectation that legitimacy be established on the industrial world’s terms must also be taken into account.

While the accounts that follow are indeed appreciative, the worldview at play is different to one that makes the achievements of other cultures targets for idealised projections. Consistent with the enactive view of evolution as natural drift, the basis adopted here for appreciating the value of any human lifeway is not *optimality* but *viability*. Here, the value of a social group’s culture, knowledge systems and practices follows from the role that these play in conserving adaptation in ways that enable ongoing viability. This value is

therefore established on the social group's own terms, as a consequence of its *autonomous* purpose-generation and sense-making.

If claims for the progress myth's inherent superiority as a sense-making basis are not legitimate (as is the case from the perspective of enactive evolution), then there is no sound basis for judging the worth of other cultures in its terms. The value of a lifeway is a matter of internal legitimation, established by those living it, on the basis of their own direct experience. Here, I attempt to present such value from outside, writing as an Australian-born descendent of European immigrants living on the Woiwurrung country of the Wurundjeri people from the Kulin nation, and as a student of Tibetan Buddhism.

6.2 Tibet

Tibet first arose as a unified political entity, with Lhasa as its capital, under the rule of Songtsen Gampo in the seventh century CE (Dorje, 1999). Over the subsequent thousand-year period, Tibet underwent a gradual and often tumultuous transformation “from a normally ethnocentric, warlike, imperialistic national culture to a universally Buddhicized spiritual, peaceful culture” (Thurman, 1988). This culminated with the seventeenth century consolidation of power by the Fifth Dalai Lama and return of the capital to Lhasa after a hiatus of several centuries, enabling development of strong national identity and political cohesion (Dorje, 1999).

Tibetan Buddhism is central to any understanding of Tibet's culture and society. Buddhism was first introduced to Tibet in the fifth century, during the Yarlung Dynasty that preceded unification under Songtsen Gampo (Dorje, 1999). The oldest Tibetan Buddhist school, the Nyingmapa, has associations as far back as this early dissemination. Its principal lineage tradition, however, is founded on teachings introduced from India in the eighth century by the preceptor Shantaraksita, and sages Padmasambhava and Vimalamitra, under the patronage of King Trisong Detsen (Dorje, 1999). Padmasambhava, in particular, introduced the Vajrayana – or tantric – teachings for which Tibetan Buddhism is renowned.

Following the rise to power of the Fifth Dalai Lama, the Dalai lineage holders provided the successive heads of Tibet's government – although with varying levels of authority and control – for the subsequent three centuries. They were assisted in this by powerful regents, whose influence was particularly significant during the interregna between the death of one Dalai Lama, and the time at which the child subsequently recognised as his reincarnation reached the age of majority. This tradition continued unbroken until seizure of the country by the People's Republic of China in 1951.

Tibet, throughout this period, pursued a path prioritising spiritual over material development:

Essentially, they have been unilaterally disarmed for over 300 years. Their material development has been systematically neglected in favor of their spiritual development. For centuries, the main line item in the budget of the national government has been support of the monasteries and the studies and the practices of the monks and nuns. The wheel was purposely never used for transport, but only for generating prayers [. . .] (Thurman, 1988).

Tibet's traditional society and governance can arguably be characterised as feudal theocracy, and its economic base as hereditary serfdom – at least from a Western allegorical perspective. While this does not imply systematic mistreatment of the Tibetan people by the ruling elites, and while various forms of de facto freedom were available (Goldstein, 1986, 1988, 1989; Miller, 1987, 1988), compared with established norms in contemporary liberal democracies, it seems fair to say that this entailed significant social inequality and disadvantage (Huber, 1991).

This needs to be considered, though, in terms of the “warlike” social conditions (alluded to by Thurman above) that preceded it. It certainly does not imply a necessary relationship between Tibetan Buddhism and social oppression – demonstrated by the establishment of the Tibetan Government-in-exile on modern democratic principles and the Dalai Lama's

handover of political leadership in 2009 to a popularly-elected head of government. The Thirteenth Dalai Lama, in fact, commenced Tibet's modernisation in the early decades of the twentieth century, against significant internal resistance (Dorje, 1999).

The stark differences in structure between Tibet and the industrial world that prevailed until the mid-twentieth century provide a direct means of appreciating Tibet's status as a *viable alternative* to industrial lifeways. Whatever our views of Tibetan society at the time of Chinese seizure, and our opinions on its self-imposed isolation (Dorje, 1999), for its members this society provided functional lifeways, despite very modest economic means, under some of the harshest living conditions on the planet. Debates on how *well* most Tibetans lived typically neglect or discount the different purposes and sources of meaning by which Tibetan and industrial views on well-being are organised. They also overlook that the distinct value preferences associated with each way of organising – roughly speaking, spiritual and material – make the relevance of directly comparing their respective achievements rather questionable.

Coming to terms with the Tibetan view of well-being, and the remarkable achievements in this respect, requires consideration of the culture's Buddhist foundations. Tibetan Buddhism contains a view of progress, but this is spiritual and individual rather than material and collective (Kyabgon, 2001). This does not preclude improvement in social conditions. In fact, Thurman (1988) characterises the period of the Dalai Lamas' rule in such terms; and Schumacher (1973), in his essay "Buddhist Economics," points out how this is inherent in the practice of Right Livelihood, the fifth principle of Buddhism's Noble Eightfold Path said to lead from *samsara* to *nirvana*. But the impermanence of all phenomena means that life conditions are inherently unsatisfactory – we cannot put an end to the adversities with which the material world confronts us (Kyabgon, 2001). Focusing one's hopes for fulfilment on worldly pursuits will only lead to further frustration (Kyabgon, 2007). Samsara, the suffering of cyclic existence, is a condition of the mind rather than of the external world, and so it can only be addressed through transformation of the mind, the basis of spiritual progress.

Tibet's achievements in this respect stand alone. Thurman (1988) describes these in terms of "inner modernity," in contrast with industrial culture's "outer modernity":

It is a culture of inestimable value to us, as a mirror image of ours, as extremely inward as we have been extremely outward. It may contain precious keys with which we can rediscover planetary equilibrium, restoring spiritual sanity to those maddened by extreme materialism.

This is not an argument for neglecting material conditions, but it certainly relegates these to a subsidiary position in seeking to live well. It reflects a fundamentally different set of priorities to that which tends to prevail within modern industrial societies under the influence of the progress myth. The implications of this can be discerned in contemporary Tibet. Research conducted by Webb (2009, p. 765) into subjective well-being on the Tibetan plateau found people to be "generally satisfied with life in spite of the extreme harshness of their circumstances." This general contentment is explained by the "strength of their faith in Buddhist philosophy" (Webb, 2009, p. 275). Perhaps most significantly though, Webb draws a connection here with a view of freedom that is particularly relevant to the present inquiry:

[The] spirituality that they can and do indeed draw on in the harsh reality of their day-to-day lives [. . .] provides the Tibetan with a view of life which is a form of release. While many may find it challenging to consider all experience as a form of suffering, to do so is, in reality, liberating in that with some knowledge, the Tibetan is able to view life in a non-fatalistic sense as a series of karmic consequences. There can be no consequence without a cause. And here, according to the Buddhist view the protagonist, whether Tibetan or otherwise, sits in the driving seat. With some understanding of the workings of karma, this can be incredibly empowering and could indeed lead to greater happiness. (Webb, 2012, p. 40)

In Tibetan culture, Buddhism places the responsibility for freedom with the individual, as a matter of orientation to the world. Institutionalised within Tibetan society, this equips people both for establishing their own material sufficiency, and for resilience in the face of external challenges. As a basis for sense-making, this offers significant potential to guide thinking about descent pathways.

6.3 Aboriginal Australia

Australian Aborigines represent the world's oldest continuous human culture, perhaps stretching back more than 50,000 years (Flannery, 1994). When English colonisers arrived in 1788, the people and the land that they encountered had shaped one another over a period ten times that of the agriculture-dependent, sedentary lifeways conventionally recognised as "civilisation." In 1788 Australia, there was no distinction between "natural" and "human" capital, or to put it in Greer's (2011) terms, between primary and secondary economies. One was not managed for the benefit of the other – their management was thoroughly integrated in the course of the evolutionary drift by which 1788 Australia arose. In 200 years, European ideas and practices have dissolved a legacy tens of thousands of years old, leaving in place only traces of the 1788 land and culture.

On arrival, Europeans missed the significance of what they encountered. They regarded the landscape as natural, rather than shaped by human intervention. Viewed through the lens of their culture's own value preferences, the unfamiliar culture, with its vastly more modest material and technological basis, was readily cast as *primitive* (Grievess, 2009), *shiftless* and *improvident* (Gammage, 2011). Thomas Malthus, in fact, drew on early colonists' atypical reports of Aboriginal starvation from New South Wales in proposing that:

[A]ll populations are limited by their food supply. Hunter-gatherers depend for food on the whims of nature, and this uncertainty deprives them of control over their lives, limits their number, and blocks their road to civilisation. Hunter-gatherers are victims of nature (Gammage, 2011, p. 298).

Such an interpretation has always been strongly at odds with the testimony of Aboriginal people themselves. For more than 200 years, this fell largely on deaf ears. Today, what Aborigines have said all along is widely accepted. The idea that Aborigines were "victims of nature" now stands thoroughly discredited. Nonetheless, that the overturning has come via western knowledge systems, and typically, the work of white Australian researchers, is itself testament to the progress myth's continuing power. There is rich irony indeed in noting the role played here by the myth in legitimating research that undermines its core assumptions.

The most notable recent work of this nature is from historian Bill Gammage, who, for over a decade, has studied early European records of the Australian landscape and Aboriginal practices. Time and again, colonists described the land as park-like, with the characteristics of an "English gentleman's estate." His research, documented extensively in *The Biggest Estate on Earth: How Aborigines Made Australia*, reveals how it came to be this way (Gammage, 2011). He presents overwhelming evidence for systematic Aboriginal land management spanning the entire continent. These practices, based on highly sophisticated and fine-grained use of fire, coupled with knowledge of relationships between plants, animals and land developed over tens of thousands of years, were not a *precursor* but rather a *viable alternative* to agriculture:

A key difference between how farmers and Aborigines managed land was the scale of 1788 enterprise. Clans could spread resources over large areas, thereby better providing for adverse seasons, and they had allies, sometimes hundreds of kilometres away, who could trade or give refuge. They were thus ruled less by nature's whims, not more, than farmers [...] 1788 management made resources as predictable as farming, and in times of drought and flood made them more predictable. Mere sustainability was not enough. Abundance was normal.

This was a tremendous advantage. It made plants easier to concentrate, to burn, to let fallow, to make park-like, to share. It made life comfortable. Like landowning gentry, people generally

had plenty to eat, few hours of work a day, and much time for religion and recreation. A few Europeans recognised this, but for most it was beyond imagining. They thought the landscape natural and they preferred it so (Gammage, 2011, pp. 3-4).

Aborigines “rejected or avoided the farmers’ road, and lived comfortably where white Australians cannot” (Gammage, 2011, p. 304). Their land management practices demand re-examination of two assumptions widely taken as self-evident from modernity’s view point: that hunter-gatherer lifeways necessarily reflect ignorance of agriculture; and sedentary lifeways associated with agriculture and fixed settlement are inherently preferable to alternatives.

Aboriginal society combined modest material needs with time-efficient and hence productive means of meeting them. Having modest needs is itself related to existential priorities that de-emphasized the value of technological and socio-political complexification as the principle means of conserving adaptation in the face of emergent challenges. This provided Aboriginal societies with a dual advantage under the environmental conditions with which they evolved.

At face value, this appears to contradict Tainter’s thesis that effective response to the existential challenges any society inevitably encounters necessarily entails increasing social complexity. In fact, his views on this involve considerable nuance. He recognises that effective resource management can be achieved in the face of problematical environmental situations *without* increasing social complexity, where a society manages “not for outputs [. . .] but for the context that affects critical processes” (Tainter, 2003, p. 220). A distinguishing characteristic of indigenous societies is the tendency for such management to focus on “the human context that affects life processes, allowing the biological system to work on its own” (Tainter, 2003, p. 220).

Such a view squares closely with Gammage’s account of Aborigines’ resource management practices. Understanding their remarkable achievements in this respect requires that we expand our view of *human context* to include the principal source of meaning in Aboriginal culture, its underpinning knowledge system. Imperfectly rendered in English, this is *the Dreaming*. Where Tibetan culture, through its Buddhist foundations, emphasises progress in spiritual rather than material terms, the Dreaming is timeless and so progress does not enter into consideration. Ultimate value rests in maintaining the world as it is:

The Dreaming has two rules: obey the Law, and leave the world as you found it—not better or worse [. . .] The first rule enforces and exists for the second. Together they let place dominate time, and translate well understood ecological associations into social relations—kin, marriage, diplomacy, trade and so on. They apply the same relations and obligations to all creation, guarding the universe by outlawing fundamental change, so making all creatures conservationist and conservative [. . .] [it is not clear] that people entirely succeeded in leaving the world as they found it [. . .] but they dedicated their lives to conserving what they inherited, and within the perception of living generations generally they succeeded (Gammage, 2011, p. 124).

According to Vicki Grieves, a Warrimay woman and leading Australian historian:

Central to Aboriginal Law is the responsibility to sustain the cultural landscape as it is set down from the creation stories [. . .] There is a highly developed sense of the interdependence of people on the species and all of life and a responsibility to ensure the survival of the species (Grieves, 2009, p. 15).

The Dreaming provided the source of meaning and significance underlying a set of viable lifeways; in turn, those lifeways served the meanings and purposes provided by the Dreaming. Here we encounter a critical distinction relating to the nature of autonomy. In Aboriginal society, the form this takes is strongly consistent with how autonomy is conceptualised in the enactive view as needful freedom:

Mobility let [Aborigines] stay [in country regarded by Europeans as uninhabitable]. It imposed a strict and rigid society, but it was an immense gain. It gave people abundant food and leisure, and let them live in every climate and terrain. It made possible a universal theology, and it made Australia a single estate. Instead of dividing Aborigines into gentry and peasantry, it made them a free people (Gammage, 2011, p. 304).

As with Tibet, the value preferences on which this is based pose a significant challenge to those of contemporary industrial culture. The strict and rigid society reflects a worldview based on patterned inter-relationship between every facet of the world. But this can be understood as enabling rather than constraining freedom:

In spite of this complex connectivity, the foremost value under the Law is the autonomy of individuals and groups. Those who are taught the meaning of creation and the means of ensuring the responsibility passed down through that Law is carried out, are the ones to see to that business. It is not appropriate to concern oneself with the business of others, as they are the ones to be in a position to know. If there are connections and intersections through Dreaming, and intermarriage, then there is an opportunity for negotiation and accommodation. Stockton reminds us that the objective of behaviours to ensure autonomy is peace, settled and harmonious human relations, as opposed to noise, that is, conflict (Grieves, 2009, p. 14).

Here, we confront a view of and basis for *well-being* that marks a fundamental departure from those associated with conventional *quality of life* notions in international development discourse. In Aboriginal cultures, there is no possibility of reducing the occurrence of well-being to an objective set of proximate causes and conditions. It is communal and depends on opportunity for on-going, autonomous enactment of a cultural heritage that reflects the enduring truth of the Dreaming:

The basis of this heritage and the ways that Aboriginal people live their lives, their quest for wellbeing, often referred to by them as *Spirituality*, is the philosophy developed out of dynamic and changing Aboriginal cultures. Therefore, Spirituality as an expression of Aboriginal peoples' adherence to their cultural values and ways of being and doing is central to their wellbeing (Grieves, 2009, p. 32).

The conditions of well-being are inverted relative to modern Western assumptions: the pursuit of collective cultural practices and continued connection with cultural heritage and history is essential to the enjoyment of good health. Recent research into happiness in an Aboriginal community supports this:

Murrin Bridge people do not understand 'being well' and 'enjoying life' as situated within biomedical ideas of being healthy. Murrin Bridge people understand that being healthy and being well have different meanings. Whilst they may wish or prefer to be healthy as well, they do not consider health to be a prerequisite for experiencing 'being well' and 'enjoying life' (Heil, 2012, p. 204).

The concept of health sweeps in the whole life cycle, in the context of connection with community and natural environment maintained through time. The relationship between well-being, and the continued access to core sources of meaning in the face of formidable existential obstacles, is explicit here:

Cultural survival has at its core the continuation of cultural practices that spring from the philosophical basis of the culture, that is Spirituality; without the opportunity for this to occur, the wellbeing of Indigenous peoples suffers (Grieves, 2009, p. 35).

Grieves' research is motivated by the question of how Aboriginal well-being can be supported and improved within a contemporary industrial context. However, she explicitly recognises the far-reaching implications:

The beginning of real change in Australia will be an appreciation of the inherent value of Aboriginal philosophy, what we call Spirituality, which is the basis of the cultural lifeways of Aboriginal Australians, the rationale for ways of being and doing, and for relatedness to others and the natural environment [. . .] This has the capacity not only to impact on the wellbeing of

Aboriginal individuals and their communities but to make a major contribution to the broader society (Grievés, 2009, p. 39).

The continued survival of Aborigines in Australia, in spite of the overwhelming colonial destruction wrought upon their country and culture, presents a particularly valuable source of insight for contemplating broader human well-being in the context of economic and socio-political descent. Their unique economic base long gone, Aborigines continue to conserve identity and adaptation in the face of extreme challenges principally because their original sources of meaning were not exclusively dependent on continuation of that base. In Indigenous experience, more generally, Grievés (2011) sees a source of hope for humanity:

The possibilities for solutions to the world's dilemmas that lie within Indigenous Knowledges development are potentially beyond the possibilities of the left and the right of western politics.

They come out of a radically different philosophical base that defines human beings in terms of connectedness and the development of sustainable relationships rather than the exploitation of the natural world and its peoples.

7. Implications and conclusions

My suggestion here is not that we take past traditional or indigenous societies as templates for designing descent pathways, and I am not advocating for a simplistic "return to the past"[5]. Nor am I suggesting that modern global citizens co-opt as instrumental solutions to contemporary problems isolated aspects or "features" of cultures outside those in which their own lives have unfolded (Davis, 2013). Rather, I wish to create an opening for a different orientation to well-being – one that might offer us expanded degrees of freedom under descent conditions. This is motivated by the view that *continuing to pursue the progress myth's promise when its fruits are no longer available is surely a recipe for suffering*. If a meaningful and satisfactory existence is predicated on the extension of economic growth and universal availability of increasingly arcane technologies, then what are the implications of circumstance denying us these? The knowledge systems, forms of thought and lifeways depicted in the examples of Tibet and Aboriginal Australia highlight the opportunities that alternative sources of meaning and purpose open for walking different social evolutionary pathways into existence.

The story of European presumptions of superiority over Aboriginal societies is ultimately one of distinct value preferences, and hence different developmental priorities. Gammage's account demands that we overturn popular notions of what it means to be "advanced." It makes no sense from this point of view – or from that of evolution as natural drift – to think in terms of one culture as more developed than another *in general* (as distinct from further developed in terms of some *particular* functional parameter associated with culturally-specific value preferences). This is not a matter of simplistic cultural relativism – value preferences are reflected in genuine differences in capabilities. The question is always on what basis is that which one culture values preferable to that which another values?

Rather than a romantic celebration of Aboriginal culture for its noble primitivism, this recognises its great advances in areas that white Australians have only belatedly learnt to recognise. People in 1788 were *more advanced* than Europeans in ways that Europeans could not see. Yes, Europeans could be considered more advanced than Aborigines in other areas of endeavour, but this is a matter of differential conservation of identity and adaptation, not of a general socio-cultural advancement or progress. To admire, celebrate and seek to learn from the cultures of Aboriginal Australia or Tibet is not to wish for a "return to the past," or to "reject the gains of industrial civilisation," but to recognise that there are many different paths by which people lived well in the past and continue to do so today.

Gammage invokes the metaphor of *the English estate* for understanding how Aborigines managed land across Australia, and of *gentry* for understanding Aborigines themselves.

Viewed through this lens, we might ask whether industrial citizens are, in fact, as well off as appearances suggest; and whether human well-being can realistically lie in extrapolating the paths that industrial societies have laid down to date. In seeking to understand the prospects for any lifeway, the enactive evolutionary view highlights the pitfalls of assuming an objective standard based on recent experience within industrial societies. We would do better to ask: how well does a social system's means of conserving adaptation allow for ongoing viability?

Aboriginal societies in 1788 were ill-equipped to conserve adaptation in the face of invasion; while it might be argued that Tibetans in 1951 fared better in this regard, they were similarly vulnerable. Nonetheless, the unique lifeways of each continue today, albeit in adapted forms. A strong case can be made that this is possible because their sources of meaning and purpose have proven relatively resilient in the face of shifting exterior circumstances – their identities allow for absorbing and even making sense of the assaults inflicted on them, without abandoning core structures. This has allowed ongoing opportunity for well-being, even where this is severely compromised compared with the past.

In the past, people lived well, as they do today, in circumstances far less materially affluent than those of the small sub-set of humanity that presently enjoys industrial civilisation's greatest benefits. The prominence of material conditions in rich-world quality of life models reflects values and priorities inseparable from modernity's orienting narrative of progress. People live meaningful, purposeful and rich lives where adaptation is conserved between interior sources of meaning and exterior circumstances. Loss of meaning results when people adhere to sources of meaning adapted to circumstances that no longer prevail.

Given emerging environmental conditions, today's industrial societies conserve adaptation in ways that do not bode well for ongoing viability. The myth of progress, as industrial society's principal source of meaning, presents a particular vulnerability. If the exterior circumstances that, to date, have been interpreted in terms of progress – particularly economic growth and technological complexification – can no longer continue, the myth breaks down. Time will tell if, in the wake of industrial civilisation's decline, cultures such as those of Aboriginal Australia or Tibet might in fact be better placed in the long term to support ongoing viability.

7.1 Pathways: from planning to enaction

The progress myth emerged as the principal sense-making narrative for industrial civilisation under conditions of increasing energetic and material abundance and an accommodating natural environment. Such conditions uniquely favour approaches to social organisation involving centralised planning by professional knowledge elites, where the feedback-induced self-fulfilling nature of planned growth supports the illusion of willed control by humanity over its life conditions. This supports a situation today in which, despite deterioration in the conditions that have historically legitimised such an approach, conceptual mega-planning continues to be the default mode for thinking about large-scale change in institutions and infrastructure. This is reflected, for instance, in the 18 strategies reviewed in Wiseman and Edward's (2012) *Post Carbon Pathways* study of proposals for macro-economic transition from fossil fuels to alternative energy sources.

Enactive evolution's fitness criterion of viability offers a very different way of thinking about transition pathways. Here, the destination is not pre-figured, as it is in the mega-planning approach. Pathways are instead "laid down in walking," in the dialectical interplay between necessity and contingency. As such, pathways are always plural: they reflect local origins and unique histories that produce multiple forms of viability, multiple parallel lifeways. As a corollary, and especially under materially and energetically constrained descent, well-being in such a view entails the freedom to choose amongst different pathways. Following from this, a key principle for guiding descent is that the pathways chosen should not foreclose future choice.

This brings us again to the distinction between well-being and quality of life. Rao (2013) raises a major objection to quality of life measures used in conventional international development practice that is highly pertinent here: they are based on officially-designated criteria for what people *ought* to want, as “basic necessities of life.” But humans do not live by and for such basic necessities: they seek meaning regardless of their access to these and the extent of their satisfaction. Freedom to choose what constitutes a meaningful existence is essential to understanding quality of life, and to enjoying well-being. Realising acceptable quality of life entails direct participation in determining what it means to live well.

Illich (1974) recognised something similar in observing that, beyond a certain threshold, higher rates of energy use by a society decrease rather than increase individual freedoms and in doing so undermine social relations. As energy use increases, people’s capacity to meet their own needs outside of the industrial system diminishes. The high rates of energy use associated with industrial societies shape institutions, infrastructure and environments in such ways that all members of a society, to participate fully, must subsidise or supplant their own human power with machine power, and subordinate other interests to maintaining the society’s energetic and material throughput. In this respect, high energy societies are insidiously detrimental to democratic principles of both freedom and equality, as they foreclose most cultural options and lifeways originating within traditional frameworks of commonly held values and resources. High energy use entails ceding autonomy in relation to the lifeways open to a society’s members to controllers of capital flows and technical elites.

Economic and socio-political descent presents a situation in which alternative sources of meaning can compete on a more even footing with the progress myth, and in which more energetically and materially humble lifeways can reassert their viability. By adopting sources of meaning less subject for their legitimation to the vagaries of the external environment, a wide range of viable pathways for living well can be opened to us. This reflects a view of well-being based not on the satisfaction of a prescribed list of material needs, but on active engagement in the autonomous construction of meaning that meshes with present circumstances as they unfold, in the situations people find themselves.

Conserving adaptation under the energetic, material and environmental descent conditions with which humanity appears to be confronted eventually requires *coming to terms* with this situation. Denial, avoidance and suppression are certainly available options – until the identities that these courses of action are intended to conserve disintegrate. Where the sources of meaning with which a lifeway is identified no longer enable sense-making and action adequate to prevailing life conditions, such disintegration, sooner or later, is assured. Adopting sources of meaning more compatible with these life conditions entails transformation of identity. This is no trivial matter – it implies in its own way a form of disintegration.

The progress myth’s recent origins and short history demonstrate, though, that cultural sense-making narratives are malleable, and the viability of lifeways based on alternative meaning systems, including those of Aboriginal Australians and Tibetans, confirms that evolutionary process leaves open to humanity at all times diverse paths. The enactive view presents us with a way of navigating descent conditions very different to that which has guided industrial societies to date. In place of predicting and planning transition routes based on pre-ordained and generic ideas of the material and institutional conditions that humans require to live well, it points to the power of encouraging and supporting people to craft sources of meaning suitable for guiding and coordinating flexible, locally-relevant social action. This implies approaching descent in the manner of action inquiry (Wadsworth, 2010). Such inquiry takes as its subject matter presently under-valued and as-yet unrealised realms of human experience. These realms exist in the present as possible futures, and hence their realisations remain open to influence through the ways we enact them (Floyd, 2012). The lived experience of descent is not pre-figured. Descent

pathways commensurate with human well-being are available to us. The shapes they take are a matter of the manner in which we walk them into existence; the sources of meaning that guide our sense-making as we proceed are central to this. We should expect to be surprised by what we create.

Notes

1. *Myth* is used here in the anthropological sense of a collective belief by which people make sense of their experience, rather than to imply a view that is necessarily erroneous or delusory.
2. Sen's distinction between *standard of living* and *quality of life*, widely reflected in international development discourse, recognises that the realisation of human well-being extends well beyond satisfying some set of basic material needs. The line of inquiry that I pursue in this article is a different one to that which distinguishes between material and non-material determinants of well-being. In taking this approach, I recognise that the term *quality of life* is indeed used by many researchers and writers on well-being in a broader sense than that used in conventional development practice. It is specifically the progressivist assumptions and associated entailments relating to standardised indicators, measurement and indices underpinning conventional thinking on quality of life that I wish to reach beyond here, rather than a general view that the term "quality of life" can be usefully employed in thinking about human well-being.
3. I will leave aside here the matter of the underlying preference for phenomena judged as *positive*, except to note how neatly this accords in its own right with progressivist assumptions.
4. Gould (1996) makes a strong argument for not using the term evolution in relation to social or cultural change processes, on grounds that it suggests a transformation mechanism isomorphic with that of biological evolution. While I appreciate his point, this assumes that it is reasonable to isolate the units of analysis – organisms and their social milieux – from one another in thinking about evolution. The view of evolution on which the arguments in this article are based recognises organism–milieu interdependence. While the inheritance mechanisms differ for biological and social changes, the transformation process that we call evolution relates to phenomena that are *bio-social* in nature.
5. Although consider the role of the progress myth in generating this modern aversion itself.

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