Beyond postnormal times: The future of creativity and the creativity of the future

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ARTICLE INFO

ABSTRACT

Creativity and imagination are the most important ingredients for coping with post-normal times, according to Sardar. This paper looks at the way creativity itself is being transformed in the West, from the individualistic/atomistic view of Modernity towards a more contextual, collaborative, complex approach. It explores the potential and possibilities for this more participatory creativity to help go beyond the "crisis of the future," and argues that the centrality of creativity must go beyond the mythology of genius and inspiration to inform philosophy, ethics, and action. Philosophical reflection and the imagination of desirable futures can emerge from a creative ethic that stresses the value of generative interactions and contexts that support creativity.

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1. Introduction

In his provocative and important paper Sardar [74] argues that chaos, complexity, and contradictions are central to "postnormal times." He goes on to write that

> The most important ingredients for coping with postnormal times, I would argue, are imagination and creativity. Why? Because we have no other way of dealing with complexity, contradictions and chaos. Imagination is the main tool, indeed I would suggest the only tool, which takes us from simple reasoned analysis to higher synthesis. While imagination is intangible, it creates and shapes our reality; while a mental tool, it affects our behaviour and expectations. We will have to imagine our way out of the postnormal times. The kind of futures we imagine beyond postnormal times would depend on the quality of our imagination. Given that our imagination is embedded and limited to our own culture, we will have to unleash a broad spectrum of imaginations from the rich diversity of human cultures and multiple ways of imagining alternatives to conventional, orthodox ways of being and doing. (p. 443)

Sardar's essay raises a host of interesting questions and possibilities, and in these pages I want to address several aspects of creativity that are particularly relevant to the discussion of postnormal times, specifically by reflecting on the ways in which the discourses and practices of creativity in the West are themselves changing. I discuss the who, where, and how of creativity and how they are changing from an atomistic/individualistic to a more collaborative, contextual, and indeed ecological perspective that has considerable implications for the creativity of the future and the future of creativity. I conclude by presenting one possible way in which a more collaborative creativity can assist us in imagining different futures.

1.1. Creativity and modernity

Creativity was not quite "normal" in Modernity, if we are to believe the popular Romantic mythology of tortured geniuses and lightning bolts of inspiration [1–3]. We should therefore expect that in postnormal times creativity will have a few

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surprises in store for us. In fact, creativity itself has changed, and in postnormal times creativity may paradoxically become normal in the sense that it will not be the province of lone tortured geniuses any longer (which it was not anyway), but an everyone, everyday, everywhere, process [4,5]. If, as Sardar suggests, creativity will be essential for coping with postnormal times, then changes in the manifestation and conceptualization of creativity in the West deserve our attention.

1.2. History and myths of creativity

Let us step back and unpack some of the underlying "myths" of Modern creativity, as this view of creativity is quietly and rapidly changing. Traditionally the research on creativity focused on the three Ps: Person, Process, and Product [6]. In the romantic mythology from which this atomistic view originated, the person was mostly a lone, eccentric genius. The "Who" of creativity could therefore *only* be an individual person. Not a group, an organization, or a culture. If anything, groups, organizations, and cultures were representatives of conformity and compliance, and were viewed only as potential obstacles. The creative individual could always "transcend" his environment [2].

The "How" of creativity consequently occurred exclusively "inside" the individual [7,8]. The classic image of the creative process involved a light bulb going on over the creator's head during the Eureka moment. The creative process was viewed as a solitary process. In this atomistic, individualistic view, relationships and interactions were not taken into consideration – unless it was to refer to interruption by gentlemen from Porlock that made the pleasure domes of inspiration collapse, or the masses mocking and misunderstanding the incomprehensible genius.

The "What" or creative product was typically a major contribution to physics, a symphony or transformative work of art [6,9,10]. Creativity was associated with "big bang," earthshaking insights that were not the kind of thing the average person could understand or be involved with. This takes us to the "Where" of creativity, which was almost exclusively the arts and sciences, and in the latter preferably physics. If having the Creative Person as the unit of analysis *by definition* ruled out creativity as a possibility for groups and organizations, the Where of creativity by definition made it virtually impossible for somebody not in the arts or sciences to consider herself creative or to be engaged in an enterprise that was considered creative. This meant that creativity could only "exist" in a limited number of human activities. This characterization of creativity made it a very unusual, subjective phenomenon that was limited to very few individuals during rare moments of inspiration in a closely circumscribed set of human endeavors.

Creativity was a puzzling phenomenon in Modernity. Because the Modern scientific worldview was so Objective and Order-driven [11], creativity was associated with a breakdown in Order and therefore with Disorder, whether socially or personally, and consequently with the popular belief that creative people are all to some extent unhinged [2,12]. Creativity was also viewed as essentially as contingent and subjective, rather than lawful, orderly, and objective phenomenon. Science itself could therefore not account for creativity. The creativity of scientists did not begin to be systematically addressed until the 1950s. Karl Popper stressed the context of justification, and by leaving the context of discovery to psychologists he was essentially dismissing it as a worthy subject for science and philosophy, and hence serious inquiry [13]. In the USA, the Ph.D. dissertation is supposed to be an original contribution to one's field, but tellingly originality and creativity are barely ever discussed during the educational process, unless it is in the context of plagiarism [14]. Creativity was a subject addressed by the Romantics, who emerged in reaction to the dark satanic mills of capitalist techno-science, but worked in the arts rather than the sciences. Modernity was therefore split in two, and creativity was firmly on the side of *sturm und drang* and subjectivity as opposed to cool reason and objectivity. But many of the underlying assumptions of both Scientific and Romantic camps about the who, how, what, and where of creativity were surprisingly similar, as we have seen.

Particularly in the USA, the Person was the unit of analysis, and the social and natural environment were essentially considered epiphenomenal [2,10]. The environment of creativity, and creativity's effects on its environment, were mostly not taken into account. Social, political, and economic conditions were not a consideration. The creative genius emerged no matter what the social conditions. Hence also the dearth of research on creative groups, relationships, environments that foster creativity, and generally on the social dimensions of creativity.

In summary, in Modernity creativity was essentially decontextualized at the level of person, process, and product. The creative person, viewed atomistically, did not need to interact with, and was not influenced by the social world, a view still held by some eminent creativity researchers today [15]. The creative process occurred inside the person's head, and was not influenced by the environment. The creative product was likewise not context-dependent, and the great work of art could be moved from museum to museum, inventions worked in any part of the world, and initially great factories required no more than a handy river to dispose of pollution [16,17].

The consequences of this decontextualization can be seen at the individual and the social level. In Modernity the body was to the mind as nature was to society. And creativity manifested in the myth of the self-destructive genius dying of alcoholism or drug-abuse or mental illness [1] is just as unsustainable as the techno-capitalist myth of the "atomistic" individual factory oblivious to its natural and social environment.

The creativity of Modernity did not consider Nature a *partner*, but rather something to be dominated. Its purpose was to understand how nature operates, and then use that information within an essentially technological framework, based on the metaphor of the Universe as a machine. This creativity led to the design of ways to protect human beings from nature – from disease, weather, or famine, for example – and to extend human powers over nature. This took the form of extensions of human capacities such as vision (microscope, telescope), and ways to control nature to ensure more extensive food and

energy production. But nature seemed so inexhaustibly big and powerful, little if any thought was given to making sure that nature's capacities were not depleted, polluted, or even destroyed.

As Bateson [18] summarized:

> When you narrow down your epistemology and act on the premise "What interests me is me, or my organization, or my species," you chop off consideration of other loops of the loop structure. You decide that you want to get rid of the by-products of human life and that Lake Erie will be a good place to put them. You forget that the eco-mental system called Lake Erie is part of your wider eco-mental system – and that if Lake Erie is driven insane, its insanity is incorporated in the larger system of your thought and experience. (p. 484)

The creativity of Modernity, in the manifestation of capitalist techno-science and industry, essentially sought to dominate the natural environment for the benefit of humans. The pollution of great factories and cities was conveniently disposed of in rivers and oceans, with dire consequences. They were the equivalent of a rubbish bin. Context was essentially an afterthought. For all intents and purposes, Modernity operated with a closed system view of the world.

A more relational, open systems, complex view sees system and environment in an interactive, mutually constitutive role [19–23]. In the 21st century, contextual, relational, and processual creativity is manifesting in fascinating ways. One example is Biomimicry, the development of sustainable human technologies based on Nature. Modern engineering was based on a machine (and therefore artificial) model. Biomimicry is engineering inspired by Nature [24,25]. The relationship is based on partnership rather than domination. As an example, John and Nancy Jack Todd have created "living machines" [26]. A living machine can be created in a school for purposes of waste disposal. Instead of using the traditional approaches, the Todds create an ecosystem using diverse communities of bacteria and other microorganisms, including living creatures such as algae, plants, trees, snails, and fish. A school's sewage disposal therefore takes the form of a small ecosystem with the appropriate living organisms that turn sewage into clean water by consuming the various pollutants [27]. This approach does not only take "the environment" into account in order to avoid pollution, but actively works on developing a generative ecosystem that enriches the community as well as the natural environment.

Underlying this approach is *ecological design*, which involves learning from, and collaborating with, nature to deal with human challenges [26]. Ecological design differs from the design and creativity of modernity because it approaches the relationship between system and environment as one of partnership rather than domination [27]. Creativity therefore in this new view is deeply relational and contextual. The focus is not on the creation of an object that can be abstracted from the environment, but rather on a relational, embedded, contextual creativity where the environment itself is the creative process and product. And most importantly, ecological design is a form of creativity that starts from the point of view that the environment itself must remain and indeed be made more generative. The underlying design principles show much promise for the future of creativity and innovation.

1.3. Transforming creativity

Today dramatic changes are occurring in the way creativity is conceptualized by scholars, and also in the way it is experienced by younger generations [28,29]. Postmodernism in its various forms led to new ways of conceptualizing self, society, production, art, science, and creativity [30–33]. In art and entertainment we see this in a shift to what has been called a participatory culture, which involves a blurring of boundaries between "artist" and audience [34]. The seemingly trivial example of karaoke provides a glimmer of how entertainment now involves greater and active audience participation, and where in fact the lead role in the performance is taken by a participating "audience" member. Wikipedia is another example of the admittedly controversial "wisdom of crowds." Video games like LittleBigPlanet have users design their own series of levels. According to Jenkins, participatory culture involves a quite dramatic shift from individual expression to community involvement.

Creativity research now includes a strong emerging focus on *everyday* creativity rather than on "eminent creatives" or major contributions and not limited to the arts and sciences [4,5]. The notion of everyday creativity suggests creativity can occur in everyday life, and does not have to take the form of a major work of art or scientific discovery. This opens up the possibility of the recognition of creativity as a phenomenon that can permeate every dimension of life. The Where of creativity is now potentially everywhere. There is also an increasing recognition of group and collaborative creativity, which can be found in new research on innovation, group creativity, jazz, and an increasing appreciation of "the wisdom of crowds" as opposed to an exclusive focus on the individual genius: [8,10,12,28,35–38].

Millennial college students associate creativity with everyday activities, and with social interactions [39]. Whereas for Baby Boomers creativity came from "eminent creatives" in the form of the guitar of Jimi Hendrix or the pen of Ken Kesey or Thomas Pynchon, in today's "participatory" culture [34,40] the focus is not so much "eminent creatives," but participatory processes in video games like Beaterator, and the Garageband music application. Individuals share their own music – music they have created, not just that of established bands – over the web and jam virtually. And while this is being viewed as the death-knell for traditional business models of music production, new, mostly web-based models are emerging, and it remains to be seen how the participatory culture will transform the arts.

The new participatory culture has been likened to a networked return to an earlier form of creativity, when amateurs engaged in what we now call "creative" activities at home and quilted, told tales, played piano, and so on, because entertainment was not directly available in their homes through the radio, television, internet, and so on [40,41]. Twentieth

century technology arguably created an essentially passive culture of art and entertainment consumers. Trends suggest that now there may be shift, a return to a cyber-amplified and networked everyday creativity, now with technology that allows for active participation, and where file sharing can involve, for instance, musical collaboration across vast distances [34].

The implications of the shift to a new, if not as yet well-articulated, collaborative, contextual, ecological creativity creativity are enormous. We have seen hints of the implications for the environment and the arts. In the business world, as innovation becomes an increasingly central competency for organizations, the importance of collaboration and creating work environments that foster creativity has lead to more research on collaborative creativity and on environments that foster rather than inhibit creativity and innovation [42,43]. The Modern organization, with its roots in Taylor and Ford was not designed for creativity, innovation, or collaboration [44]. Taylor referred to what we now called groups a "gangs" and discouraged communication, essentially working on a divide and rule principle. Taylor's guiding metaphor was the Machine, and machines do not innovate or collaborate. The machine's designers do, as the *Deus ex machina*. In highly innovative organizations creativity is a distributed, participatory process, and the organizations are designed so that ideally every member can innovate [8,45,46].

The crucial question now is whether this "everyone, everyday, everywhere" creativity will lead to a growing narcissism and consumerist self-absorption that will make the "Me Generation" seem positively altruistic, or whether it can be channeled this creativity towards worthy human aspirations. At this point, the jury is out, with wildly different prognostications [47,48], but there are signs of hope in the emerging contextual and collaborative forms of creativity.

The move towards collaborative, participatory or grass-roots creativity has implications for the future, and for how we envision the future. If the metanarratives of Modernity are indeed gone, and being replaced by Lyotard's [49] "petits recits" or "little narratives," we could say this mirrors the shift from a "great man" and "great narrative" creativity to a more everyday, every(wo)man creativity, from a "universal" to a local creativity.

1.4. Participatory visions of the future

The Dutch futurist Fred Polak [50] wrote that

> The rise and fall of images of the future precedes or accompanies the rise and fall of cultures. As long as a society's image is positive and flourishing, the flower of culture is in full bloom. Once the image begins to decay and lose its vitality, however, the culture does not long survive. (p.19)

Whatever we may ultimately think of Polak's controversial thesis, his statement is provocative, and provides one very interesting entry point into postnormal times. The US and much of Europe are facing what Morin calls a crisis of the future [51], and there is much talk of "decline." The anxiety many Europeans and Americans are experiencing could be attributed, therefore, not only to the more obvious issues such as the economy, terrorism, environmental degradation, immigration, and so on, but also to a larger sense of vision and direction for the future. Today's emerging generations are experiencing lowered expectations: they fear – and expect – their standard of living will be less than that of their parents, and that life will be far more difficult and uncertain for them, not to mention actually shorter. And yet at the same time, they are more ambitious than their predecessors [52].

Polak's thesis about the image of the future raises a big question: What's next? What can we hope for? What lies beyond this crisis? Now that "progress" has become an unfashionable term, we are also left with a lack of a sense of direction, and no sense of what constitutes something better. What has happened to the image of the future? Drawing on popular culture, and particularly science fiction, we can see how images of the future informed our vision of what lies ahead [53]. In the 50 s and 60 s, a whole world of science fiction imagery promised a shining, silvery future [54]. Men and women in silver space suits were conquering the Solar System, enjoying space odysseys, getting lost in space, and occasionally having to address pesky monsters from outer space or black lagoons. The "hard" science fiction typified by Robert Heinlein stressed the science and technology driven nature of the future. Looking back on these images of the future one notes that American science fiction in those days tellingly had no room for people of color or, for that matter, for nature, unless it was in the form of monsters.

In the 70 s, 80 s, and 90 s the utopian aspirations of the 50 s and 60 s turned dystopian, as the Sex Pistols sang *Anarchy in the UK* with, perhaps prophetically, *No Future*. Cinema brought us *Soylent Green*, *Mad Max*, *Blade Runner*, and *Gattaca*. The appropriately named cyberpunk fiction of William Gibson and others, presented bleak futures. Cyberpunk precursor Philip K. Dick's future worlds drifted uncomfortably between mysticism and authoritarianism, metanoia and paranoia. As of 2010, the future seems to have stalled at 2012, a year that in the Mayan calendar is said to coincide with a cataclysmic transformation. From utopian technology to dystopian haves and have-nots we have ended up on a mythological date. The 2012 phenomenon is perhaps best captured in Pinchbeck's *2012*, a bizarre and fascinating tale that ranges from psychotropic drugs to crop circles to Mayan prophecy [55]. Categorized in non-fiction, it reads not unlike a Philip K. Dick novel.

The 2012 phenomenon suggests we are unable to envision a new world. In 2010, 2012 has become the mythical wall where the imagination of the West comes to an abrupt end. From "hard" science-fiction to "hard" techno-psychedelic mysticism-fact, extraterrestrial visions interwoven with chaos theory and neurotheology. 2012 is symbolically the point at which the imagination fails. Where do we go from here? What can the West dream of? And this is not strictly a Western issue. The economies of China and India are moving at a great pace, but we have to ask, towards what? From the Middle East to Africa to Latin America this has become a global issue, a question for our planetary culture, and one that can emerge as we – meaning all humans – become aware of our interconnectedness and our community of destiny, in one of Morin's typically complex formulations [51].

When viewed from this perspective, the sustainability movement is working on "saving the environment," but, perhaps because of the incredulity towards any global normative scenarios, there is no larger vision of an alternative future in which there is truly a different relationship between humans and the environment, and how that plays out globally in terms of the economy, cities, in everyday lives. We are left with the hope that we will not destroy the environment and ourselves, but it is not clear what we will be left with and whether it is worth striving for. In Polak's terms, the West's image of the future has not just decayed, but vanished. And as we have seen, today's youth in the West has to look forward to a future that has been painted as almost inevitably less healthy and less wealthy. Whether it will be wise or not does not seem to enter the picture.

The problem is also that we are not clear how to think about the future, and how to envision the radical nature of some of the changes that are required. Morin has stated that

> We need a kind of thinking that relinks that which is disjointed and compartmentalized, that respects diversity as it recognizes unity, and that tries to discern interdependencies. We need a radical thinking (which gets to the root of problems), a multidimensional thinking, and an organizational or systemic thinking... [51, p. 130]

In order to address the complexity and radical nature of our Postnormal Times, we need to develop new forms of education and imagination [56,57]. A kind of thinking that embraces complexity and contradictions, does not recoil from chaos, and a willingness to envision alternative futures. Morin's efforts towards "complex thought" [21,58] a kind of thinking that embraces paradox, complexity, and uncertainty are invaluable here. But along with the capacity to think about complexity without simplistic reduction and polarization that mutilates the very web of interconnections that weaves complexity, what is also needed is the ability to engage in *complex dialogue*. In other words, to address complex, chaotic, and contradictory issues and be able to dialogue about them in a civil and *generative* manner with others. This means ways addressing humanity's most pressing issues in a context of creative collaboration in which complexity does not become lost in the rhetoric of argument and debate in favor of simplistic slogans and either/or logics. As anxiety rises over the complexity, chaos, and contradictions of post-normal times, it is increasingly apparent that there is also a rise in polarizing, exclusive rhetoric, and an unwillingness to listen or dialogue. There is, rather, an increasingly bellicose, authoritarian response, which precludes any social creativity by imposing a simple order, often through scapegoating and polarization [59].

The social creativity of complex dialogue can involve grass-roots efforts to explore the future together, to envision alternatives, because this also means learning to talk across differences in ways that see difference as the source of creativity rather than mutual destruction. A complex world does not merely require the ability to address complexity individually, to be able to think about it and think it through, but it also requires the ability to engage in dialogue in a way that reflects this complexity, and to envision complex and pluralistic futures. This in turn requires what was lacking from the creativity of Modernity, namely generative environments where creativity, exploration, hope and dreams of a better future can be nurtured and developed collaboratively. This is really a form of *complex ethics*, which is inspired by Von Foerster's Ethical Imperative: "Act always so as to increase the number of choices" [60].

What would a "better future" look like? Can we conceive of flourishing, positive images of the future? We have been told about the postmodern incredulity towards metanarratives [49], the rejection of the idea of progress. Incredulity towards metanarratives and disenchantment with progress do not mean that we should reject more global assessments of what used to be called "the big picture," or that there can be no such thing as human betterment. No unquestioned faith in the power of science, religion, revelation, or communism perhaps. An understanding of the role of uncertainty, complexity, contingency, and human fallibility, and hence an awareness that there is no predetermined path [61–64]. No security in the "ultimate," "absolute" statement. And no need to stop thinking and questioning, either. This may be viewed as a catastrophe from the authoritarian perspective, but it can also be viewed as a call for greater human creativity and responsibility [65–68].

With the loss of faith in science and technology and politics to lead the West into the future, with the traditional touchstones questioned, it seems there is uncertainty not just about the future, but about how even to begin to *think* about the future. There is also considerable anxiety about whether there will even *be* a future, based on the interest in apocalyptic predictions. But surely we should not throw out the baby with the bathwater. For a tragically high percentage of the world's population, access to potable water is key to a better future. The economic system, education, the environment, these are just some of the key problems facing humanity. The problem is not that the West has it so good it can not think beyond its present blissfull state. It is that the problems are so radical, they require stepping beyond the present ways of thinking. They also require a deep reflection on the nature of the Good, and the nature of human nature and human potential [69].

The new collaborative creativity may be one way of beginning to stimulate the collective imagination. As the changes in creativity in the 21st century suggest, the generation of images of the future will not be confined to a priestly class of artists and futurists. The new, participatory, grass-roots creativity can be mobilized for the creation of better futures. Envisioning the future has historically been a task left for artists or futurists. Asking the big questions has historically been left to philosophers. The time has come for a process of grass-roots philosophical futurism, drawing on some of the techniques of scenario-planning to envision alternative futures [67]. Very important in this process of envisioning *petits recits* is ensuring the participation of groups that have been traditionally under-represented in the discourse of the future, including women, so-called "minorities," and young people [70], and the emphasis that this should be a creative process – not a deterministic techno-forecast, but a creativity as ethical aspiration and ethics as creative aspiration.

One simple way to begin might simply be to stimulate the development of *petits recits*, with community collaborative creativity sessions in which citizens are invited to share their personal and/or collaborative vision of what a better world 10 or 15 years hence might be like, and then dialogue with others in small groups to weave the visions together and look for

common themes and patterns [65,68]. A variety of methods can be drawn upon to structure the process of collaboratively envisioning alternative futures, from Open Space Technology to Search Conferences to Scenario Planning, with appropriate modifications to suit the context [67,71–73]. The scenarios with visions of desirable futures can be articulated by a variety of individuals and groups all over the world and presented through narratives, video skits, illustrations and other media, again ensuring the representation of the traditionally under-represented. These mini-images of the future can be shared on the web to promote dialogues and the exchange of ideas and resources, and above all to trigger and mobilize the imagination of others towards desirable futures.

This is merely one suggestion to address the vision gap. The larger point is the emergence of a new, contextual, collaborative, emergent, networked, participatory creativity, and the implications it can have for the future. There really is an opportunity now for human beings to join together to envision new, desirable futures together.

2. Summary

Creativity is a vital human capacity for postnormal times. In this reflection on Sardar's paper I have outlined some of the ways in which creativity itself appears to be changing, and some of the implications of these changes. A collaborative, contextual, complex creativity will be a vital ingredient in coping with the present and creating the future. Creativity will cease to be a somewhat magical phenomenon that stands outside the purview of ethics, or of philosophical reflection (as Popper felt it should be). In fact, creativity should be informed by, and in turn inform, philosophical reflection. Postnormal creativity will involve above all the development of a new sense of responsibility for our creative actions, a responsibility informed by both an awareness of the extent to which creativity is already operative in our daily lives and choices, and the extent to which it assists us in moving towards a vision of a more collaborative, ecological, diverse world. As we become responsible for our creativity, we must also face our responsibilities with a creative spirit.

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