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BEYOND PROMETHEUS: CREATIVITY, DISCOURSE, IDEOLOGY, AND THE ANTHROPOCENE

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ABSTRACT. This article considers the strange confluence of the rhetoric of creativity and commerce at key points across the “Great Acceleration”. It argues that although the idea of creativity has its most common contemporary expression in art, it does not in fact emerge from the discourse of art. Rather, the idea of creativity as a specifically human possession emerges from the discourse of nature at the end of the eighteenth century, and particularly in the proliferation of natural scientific ideas about “natural creation”. It argues that if a global response to climate change necessitates a more enlightened remaking of ideas, industries and communities, then one of the ideas that must be “remade” is the Promethean aspect of the idea of creativity, and the relationship it articulates between human beings and the planetary environment we inhabit.

Keywords: art; creativity; discourse; ideology; the Anthropocene; commerce

We have assumed that the only kind of willing in the world lies in the consciousness of human beings; yet in the Anthropocene we must confront the possibility of a “will” beyond our own, that which we can only gesture at with metaphors...

Clive Hamilton, “The Banality of Ethics in the Anthropocene”

Introduction

In contemporary discourse, climate change is understood to have – at best – a tangential relationship to creativity. In our habit of thinking, climate change is apprehended as a kind of epic “unmaking” – a large-scale unravelling via which words, things, peoples, industries and ideas fall apart. It is alternatively presented as a problem demanding a “creative” response, an “innovative” geo-engineering solution (cloud brightening, sulphurous explosions, solar shields rocketed into orbit beyond the earth’s atmosphere) designed to put nature back in its place as something humanity can control or at least manipulate. What is seldom

contemplated is that the same “fables of abundance” (Jackson-Lears, 1994) and myths of “unlimited growth” that have led to the potential destruction of the earth’s ecosystems have also forged certain aspects of the creative idea.¹ If a global response to climate change necessitates a more enlightened remaking of ideas, industries and communities, then one of the ideas that must be “remade” is the Promethean aspect of the idea of creativity itself.

Although the creative idea has received its most characteristic – or, at least, common – expression in art, the origins of the idea do not in fact lie within the discourse of art. Rather, the creative idea as a specifically human possession has been shaped not only by religious or artistic but – far more profoundly – by natural scientific ideas about creation (Nelson, 2015). The idea of creativity is better understood as the product of new forms of thought entering into the wider cultural field from the biological and life sciences at the end of the eighteenth century, finding differential expression in diverse social fields including not only art and literature, but also in the discourse of education (in the language of “*bildung*” or the “children’s garden” of Friedrich Fröbel, for example), the discourse of politics (in the “*bildung* of men and nations” espoused by Johann Herder, for example) and subsequently through the discourse of psychology (in the language of “self-actualisation” that emerged in the mid-twentieth century, for example).

This essay takes a closer look at the language of creativity as it emerges in the field of industry and commerce, where it conspicuously appears in the many lexical invocations of “creative industry” going back to the industrial revolution, re-emerging in the post war oil boom, as well as in its contemporary millennial form. It argues that these diverse manifestations of the rhetoric of creativity are difficult to explain purely in terms of shifts internal to the discourse of art, and are better explained in terms of developments within the natural sciences themselves. That is, in shifting ideas about the scientific process of “natural creation” and the relationship it articulates between human beings and the planetary environment that we inhabit.

In short, creativity is better understood as the product of a discourse that shifts and remakes itself over time (Foucault, 1984: 76–100; 1994), rather than as an “innate” human attribute with its neural co-relates in human consciousness. It is the product of linguistic statements that have been articulated in specific social and historical contexts, drawing on a set of common sense assumptions to produce commonly accepted forms of knowledge. These statements gravitate towards certain categories, concepts and themes, giving rise to cultural norms that shape the material institutions and practices that reproduce them (art museums, advertising agencies, educational institutions, real estate advertisements for “creative office space”).

Implicit in the attempt to understand the creative idea as a product of linguistic usage is a recognition that – although the rhetoric of creativity crops up in the work of a wide range of philosophers – it has no rigorous enunciation in the history of ideas and its intellectual trajectory is a lot less clear than comparable concepts such

as “genius” or “progress”. Moreover, this history of linguistic usage is not linear or consistent but broken and fragmentary – in short, the words “creative” and “creativity” are frequently used to designate different things. Indeed, according to the *Trésor de la langue française* and *Historisches Wörterbuch der Philosophie*, the French and German nouns *créativité* and *Kreativität*, though they have strong roots in continental European traditions, are actually Anglo-American derivatives that are exported back to Europe via the discipline of psychology in the mid-1950s, where they displace earlier European terms with a new set of cultural assumptions and beliefs. It is in this period, at the high point of Modernism and the Cold War, that a discourse is codified the “history” of an “idea” produced. By this stage, creativity ceases to be a value and becomes a material object that can be measured through psychometric examinations, and eventually assessed by neuroscientists using MRI scans.

This essay speculates on the ways in which the same largely natural scientific forms of ideation that gave rise to the creative idea in art, literature and education across this period, may have – albeit, intermittently or tangentially – been imbricated in the ideologies of “cornucopianism” (Jonsson, 2014) and “fables of abundance” (Jackson-Lears, 1994) underpinning economic discourse. In particular, the Promethean idea that if ever the natural abundance of the earth gave out, then human ingenuity – or “creativity” – would make up the deficit. It charts the rise of the particular belief that, as Michelet once put it, “humanity is its own Prometheus” – that it is human industry, agency and “creativity” rather than “natural limits” that dictate the perimeters of social wellbeing and prosperity. Jonsson (2014) illustrates the intellectual product of this belief in an excerpt from the economist Larry Summers’s “paean to infinite progress” delivered to the World Bank in 1992,

There are no limits to the carrying capacity of the earth that are likely to bind anytime in the foreseeable future. There isn’t a risk of apocalypse due to global warming or any thing else. The idea that we should put limits on growth because of some natural limit, is a profound error and one that, were it ever to prove influential, would have staggering social costs. (Summers qtd in Jonsson, 2014)

Of course, the unthinkable has now in fact happened. Climate science has established “natural limits” do in fact exist, and it is for this reason that we will be incurring “staggering social costs”. For us “creative” Prometheans, the idea of nature that underpins so many of our belief systems – including the idea of “creativity” – must change. As the round table on nature convened under Bruno Latour’s *An Inquiry into Modes of Existence* project argued,

[Nature] is no longer that which human rationality conquers, but that which plunges us into disarray. It is no longer the backdrop for our human projects, with no project of its own, but is intruding in our dreams, values and projects. (Debaise et al., 2015, p. 168)

In sifting through the archives of the past – the newspaper collections of the British Library accessible at the stroke of a computer key, and the rather less accessible North American archives – it comes as something of a shock to see the frequency with which the rhetoric of creativity and commerce have crossed paths. Often what the Germans would call *schaffen* (to produce) was not so far from *schöpfen* (to create). Historically, this mingling of rhetoric is a striking feature of key periods across the “Great Acceleration” (McNeill and Engelke 2014) in the language of romantic industrialists such as Erasmus Darwin, in the language of entrepreneurial capitalists and owners of cotton mills and potteries at the height of the industrial revolution, in the rhetoric of colonial boosters and projectors of empire as the Anglophone frontier pushed out in all directions (a process accompanied by ecological destruction on a massive scale), as well as in the more familiar rhetoric of the “digerati” (Golumbia 2017) and the creative industries of Tony Blair’s “Cool Britannia”. The marketisation of the creative concept is far from new, but it might not be stretching the point too far to suggest that capitalism has been busy inscribing itself as a “natural” and “creative” process from the moment of its emergence.

The Creative Power of Labour

If the language of the natural sciences, and natural scientific forms of ideation, found their way into art and literature from the end of the eighteenth century onwards,² so too did they emerge in the field of economics. Here, they appear in the words of romantic industrialists and imperial projectors at time in which a range of commercial imperatives were giving rise to new ideas about economic ‘growth’. In the eighteenth century, the work of the French Physiocrats had already offered a significant challenge to the prevailing Mercantilist doctrine that economic growth was impossible (the economy was a zero sum game). This challenge was expanded by Adam Smith, whose diverse contributions to the labour theory of value, the principle of the division of labour, and the idea of productive and unproductive labour, gave currency to the belief that the wealth indeed could be “created”. This is an occasionally controversial territory that has been little explored. However, Philip Mirowski has documented the flow of language and ideas from science into economic and social theory (1992, 2001) and in a wide ranging edited essay collection (1994) has also demonstrated the extent to which biological metaphors in particular were a shaping force in the works of Francois Quesnay, Adam Smith, Alfred Marshall, Stanley Jevons, Karl Marx, and Joseph Schumpeter.

More recently, Fredrik Albritton Jonsson (2014) has forged a preliminary genealogy of the idea of “cornucopia”, in which he locates a distinct movement beyond the gloom of classical political economy within the texts of the classical economists themselves, most particularly in Ricardo’s advance beyond the idea of finite resources and permanent God-given limits as they are expressed in the works

of Malthus. However, it is particularly in the works of the economic popularisers, such as John Ramsay McCulloch and Andrew Ure, for example, that a pronounced mingling of creative and industrial rhetorics is to be found.

Take, for example, the shifting attacks on Malthus's famous metaphor of the beggar at "Nature's Feast" who, according to the logic of fixed limits, has "no claim of right to the smallest portion of food". As Malthus wrote,

At nature's mighty feast there is no vacant cover for [the beggar]. She tells him to be gone, and will quickly execute her own orders, if he does not work upon the compassion of some of her guests. If these guests get up and make room for him, other intruders immediately appear The order and harmony of the feast is disturbed, the plenty that before reigned is changed into scarcity; and the happiness of the guests is destroyed ...

This of course was the image that helped to make Malthus, as his biographer James Bonar (1885: 1) put it, the "best abused man in Europe". William Hazlitt, Percy Shelley, and even Robert Southey attempted to refute Malthus' metaphor, focusing on the economic logic of distribution. But it was probably Marx who, in continuing the tirade against Malthus at mid-century, effectively demonstrated how far the ground had shifted away from the logic of distribution towards the "Promethean" idea that manmade capital, science, and labour could substitute for natural resources indefinitely – that as Friedrich Engels (1844/1996) wrote in his *Outlines of a Critique of Political Economy*, "The productive power at the disposal of mankind is immeasurable. The productivity of the land can be infinitely increased by the application of capital, labour and science." This idea that "humanity is its own Prometheus" is increasingly found in the language of newspaper reports on commercial projects, where the capacity to break through the Malthusian cycle – or "stationary state" – was claimed to reside in the abstract, if not mystical "creative power" that was increasingly attached to the forces of production.

In popular newspapers of the period, machines are constantly portrayed as "vital" and "self-animating", in a creative fantasy in which iron rails and telegraph wires give "birth" to wealth and new markets. The language of science – the "creative forces" of physics, the "life forces" of biology, the varied "creative energies" derived from "vitalism" and "energetics"³ – readily found its way into the rhetoric of commerce, and is found in expressions such as the "creative power of machinery", the "creative power of free trade" and the "creative power of capital". Indeed, one of the most celebrated "creative" objects of the nineteenth century was the railway and the "creative power of railways" (*Morning Post*, 1847) was repeatedly extolled in both the metropolis and its colonies, where the "rise and progress" of cities was perennially attributed to the "creative power of railways" (*South Australian Register*, 1848), which were, to quote an evocative American example, a "wonderful mechanical appliance for the elevation of a country in creative power". "I know that the thing looks strange: but, sir, the railroad itself is a strange and wondrous thing. It is a creative power" (*Athens Post*, 1856).

The phrase “creative power” soon became a nineteenth century cliché. And nowhere was the celebration of “creative power” more apparent than in the phenomena of the industrial exhibitions that seemed to presage a vision of the new future, in which the manufactured objects that “pour[ed] forth” from the “forges and metalworks of Staffordshire, the innumerable factories and workshops of Birmingham, the looms of Coventry and Kidderminster”, were repeatedly acclaimed as at once the “complete epitome of the manufacturing industry of England” and as “illustrations of creative power” (*Birmingham Daily Post*, 1865). The products of manufacturing were given particular dignity and grandeur in the Great Exhibition of 1851, which, according to Prince Albert (1857, p. 51), represented “a world-wide manifestation of the multitudinous products of the creative industry of the larger portion of mankind”. The architecture of the Crystal Palace was repeatedly declared to be the equal of the spectacular objects it housed, and appeared to enshrine, according to the *Nottingham Guardian* (1853, p. 2), “human industry enriched by the triumphs of science in every department of its creative power”. The official exhibition catalogue showcased exhibits gathered from the places where the “genius of art and industry has shed its ... creative influences” (1851, p. 1046) and the objects and inventions that were assembled from “the bowels of the earth, from the mighty deep ... from the four corners of the globe” were extolled, in the words of the *Manchester Examiner*, as “new symbols of creative power” (qtd. in *Daily News*, 1850, p. 2).

Louis Kossuth, on a tour of the industrial districts of England and Wales, repeatedly connected the creative idea to the nation-building project, citing the Great Exhibition as proof “of that creative power with which the practical individualism of the Anglo Saxon character was endowed”, as was demonstrated in “the improvement of this island, and in the formation of mighty colonies”. (*The Royal Cornwall Gazette*, 1857, p. 6) In this particular alignment of creative industry, nationality and nationhood, the rhetoric of Empire was rarely absent. The Empire was a venture predicated on “our more creative faculties”, according to the *Economist* (1867, p. 1062) – a rhetoric which was repeated in the colonial press, which, over the breadth of the century saw “the immense, the creative power of Britain at the present day” (*Hobart Gazette*, 1827, p. 4), increasingly embodied in the “creative power of railways” (*South Australian Register*, 1846) and other technological advancements as well as in the logic of the market embodied in the “creative power of free trade” (*Sydney Morning Herald*, 1887, p. 8).

Rhetorically, the logic of “creative power”, “creative force” and “creative energy” was increasingly tethered to commercial and geographical expansion. “We, with a creative power that might supply half the world, are cooped up within the comparatively narrow markets afforded by our own consumption,” complained the *London Era* (1839). “All who leave this country for the agricultural colonies”, one returning native wrote in the *Monthly Magazine*, will “find themselves thrown more on their energies as creative men.” (qtd. in *The Sydney Herald*, 1832, pp. 1–2) “Englishmen,” according to the British academic turned colonial politician

Charles Henry Pearson (1859, p. 260), “possess eminently the organ of creativity”, and conversely, as the economic populariser Rowland Hamilton (1863, p. 6) wrote, “the narrow, dark mind of the savage is thus impelled to fear and hate his fellow man in proportion to his absolute ignorance of the creative power of labour”.

Smith’s model had been one of orderly and incremental technological change, brought about by craftsmen and “makers of machines”, whose innovations had largely consisted in “combining together the powers of the most distant and dissimilar objects” (Smith, [1776] 1999, p. 115). But in the years after 1776, technological innovation altered fundamentally in both velocity and scale, creating new industries and transforming old ones. Smith’s model of an orderly, though, indeed, progressively expanding free market economy was rapidly confronted with the reality of a seemingly endless disequilibrium that writers and popularisers struggled to characterize.

In what was an often divisive and class conscious rhetoric, certain kinds of labour were presented as “creating” net additions to the national income, and supporting expansion, or were castigated as representing a mere theft of national income. This rhetorical tactic was used by William Cobbett’s *Political Register*, for example, in railing against the horrors of a social arrangement in which the moneyed classes cause all the “creative work to be done by as few hands as possible” (“Rights of Industry”, 1833, p. 645) – that is, to be done by “the creative and working classes of the nation” (“To Mark Philips, Insolvent”, 1832, p. 663). He saved his accolades for the working people of “MANCHESTER!” and “all the qualities and virtues connected with the most wonderful creative industry” (“To the People of Manchester,” 1832, p. 400). “Aristocracy, Parsons and Money Mongers. These are one,” fulminated Cobbett, “the creative part of the people is another.” (“Aristocracy, Parsons, and Money-Mongers”, 1835, p. 592).

Early socialists such as Thomas Hodgskin also conjured up the labour theory of value as the basis for the worker’s claim to the proceeds of his labour. Hodgskin (1827, p. 10 and p. 27) argued that man was endowed with “natural productive power”, and these “wonderful prolific and creative powers” were “the great source of individual opulence and national greatness”. On occasion, even the agrarian interest argued their claims in similar terms. Disraeli, who had famously declared in *Contarini Flemming* that “man is made to create” (1832/1904, p. 114), once attempted to convince the public that the farmers “created” the soil, to the mystification of the *Economist*, which, in an article “Is land a raw material?” speculated upon the economic consequences, if the tenant farmers of South Buckingham were deemed to be “pay[ing] rent to other men for that which they create themselves” (1851, p. 1120).

But it is in the rhetoric of the manufacturing interests that the language of creative industry is mostly found. The *Manchester Guardian*, for example, arguing that the rise of the cotton industry “has been followed by the display of more ... creative power ... than [is] to be found beyond the circle of the manufacturing district in the whole world” (1836, p. 3) – in one instance even going so far as to

argue that the “creative industry” of Manchester “exceeded the achievements of Venice, Florence and Alexandria” (1849, p. 6) and that in this way the northern towns provided the “gigantic creative power which so distinguishes manufacturing in England” (1860, p. 6). The rhetoric was mainstream enough to provide the basis for advertising copy. “Hyam and Co., Taylors, Clothiers and Manufacturers,” for example, informed their potential customers in a syndicated advertisement that “Capital is the creative power that sets in motion the machinery of the mercantile world” and that the “mighty results” and “triumphant instances” produced by the “creative power” of capital included “innumerable intersections of railways, the launching of enormous vessels, the erection of vast factories and other giant projects” (*Bristol Mercury*, 1851, p. 5).

To manufacturers, the rhetoric of creative industry offered a means of celebrating the restless spirit of commerce and enterprise. It valorised human agency, legitimated social mobility, offered a challenge to established systems of authority, and forcefully pressed the aspirational claims of the middle class. In night lectures delivered at mechanics institutes across the industrial north, in newspaper articles syndicated across the country, the public was repeatedly assured that “there is a species of creative power in a workman,” that can “give a value to inert matter which it had not before” (*Daily News* 1879, p. 2); that “it is man’s labour which gives birth to the giant power of creating and accumulating wealth” (*Liverpool Mercury*, 1835, p. 72); that “the population of a country, and the riches of its inhabitants, advance with the creative power of manufactures” (*The Era*, 1841, p. 11); that the “creative power” of the “the carpenter, the tinker, the tailor and the little shopkeeper” had undermined “the power of feudalism” (*The Preston Guardian*, 1855, p. 6). Or, as the popular *Chambers’ Journal* summed up the matter for its readers, “The knowledge that the business of mankind is to create ... has slowly travelled upward from the workshop of the mechanic, and the warehouse of the merchant, to the study of the philosopher, [and] the cabinet of the statesman”. And this “civilising principle” was a ‘creative, beneficent, light-diffusing’ principle (1841, p. 63) was both a cause and consequence of an untrammelled free market economy.

But as the century progressed, there was a contrary tendency for the industrial worker to be portrayed as inanimate. The same newspapers that had once praised the “creative power of labour”, and its contribution to national expansion, began to draw attention to “the deficiency in inventive power of the English mechanic,” which, in the words of the *Morning Chronicle*, was “probably attributable, more or less, to the stern law of the code of labour which condemns him for years together to spend his whole time and pains in pushing pins, making button-shanks, or raising the nap upon a piece of woollen cloth” (1850, p. 4). In his popular work *The Philosophy of Manufactures*, for example, Andrew Ure (1835, p. 279) described the system of labour that had risen up alongside the system of machines, representing the capitalist as the creative power that “animates [the] otherwise torpid talents” of the workers. Ure not only invokes biological but also energetic

images to portray the industrialist as the “life force” (p. 108) or “elemental power” that has been made to “animate millions of complex organs”. He also frequently mixes his metaphors with images of a more mechanistic origin, so that “self-acting” and “automatic” machines are deemed capable of “infusing into wood, iron and brass an intelligent agency” (p. 2).

This rhetoric of growth, animation and expansion was thoroughly secular, but often verged on the mystical. In a rhetorical flourish, the *Queenslander* told its readers “Beware how you treat the capitalist he is the very *germ* of creative power” (1868, p. 4). Or, more evocatively still, in an address to the Sydney Mechanics Institute, also reprinted in *The Colonist*, “The man whose gains are known to be rapidly increasing, is not only spoken about by the multitude, under their breath, with marked veneration and awe, but as if he more nearly approached the creative power than any other human being, he is said to be *making* money – and having said that, eulogy is exhausted” (1838, p. 4).

It is unsurprising that the idea of a “creative” and “life giving” power attributed to trade and industry drew the ire of contemporary clerics. Thomas Chalmers, for example, in the year before he railed against the attempts of evolutionary scientists to establish the “creative principle” as a material power in first of the Bridgewater Treatises, published a work on political economy that drew attention to what he described as the increasingly widespread error “that men should have been led to imagine as if commerce had a commencing and a creative virtue” (1832, p. 60). Against this heresy, Chalmers was at pains to assert the religious dimension of what he saw as the profoundly erroneous belief that “there was a creative and an emanating power in capital which could overleap” the limits of nature (p. 80).

The sense of metaphysical unease repeatedly registered in the economic imaginings of writers such as Dickens, Carlyle and Zola (Conrad, 2007: 315–336), and particularly in their images of steam power and the railway, which was, incidentally, the location for the suicides of more than a few well known literary characters. But the most enduring attack on the nineteenth century vogue for “creative” metaphors came from none other than Karl Marx who castigated the industrialists and economists for equating humanity with machinery and conferring creative “life” upon capital.

As Marx famously wrote, when a worker sells his labor-power as abstract labor in the form of a value he alienates his own creative power. The worker “impoverishes himself because the creative power of his labour establishes itself as the power of capital, as an alien power confronting him” (1858/2005, p. 660). He continues, “It is clear, therefore, that the worker cannot become rich in the exchange, since in exchange for his labour capacity as a fixed, available magnitude, he surrenders its creative power, like Esau his birthright for a mess of pottage” (p. 307). The Marxian ideal of creative self-realization through work – in opposition to Smith’s idea of work as sacrifice – has particular poignancy for being forged against the image of the spectral monster of “creative capital, sucking its living soul out of labour” (p. 660).

Under capitalism, Marx argues, everything and everyone is objectified. The worker devotes his life to producing objects that he does not own or control, and his work becomes a separate external being that “exists outside him, independently of him and alien to him” (1844/1992, p. 324). Nor do workers enter freely into these associations. They are “subservient to and led by an alien will and an alien intelligence – having its animating unity elsewhere – as its material unity appears subordinate to the objective unity of the machinery, of fixed capital, which, as the animated monster, objectifies the scientific idea” (1858/2005, p. 470).

The “animated monster” is often said to be an allusion to Frankenstein’s monster in Mary Shelley’s classic rendering of the Promethean tale (the subtitle of Frankenstein being, of course, “A Modern Prometheus”), the product of Victor Frankenstein’s scientific experiment “bestowing animation on lifeless matter” (2012, p. 53). Though Shelley’s novel has come to be associated with the theme of artistic creation, at the time of the book’s release it was read primarily as a political and economic allegory – a starkly secular tale bristling with references to the French Revolution, not to mention the savage response of the British government to the Luddite uprisings of 1816. Understood in its proper social and cultural context, the novel’s major themes of science, economics and education do not appear as “happy metaphors” for the creative idea – specifically, for the allegedly purer form of creativity that is manifested in the poet – but reflect the wider social and discursive currents that sit beneath of the surface of Shelley’s world, ideas and currents that have long been lost to our own.

The legend of Frankenstein emerged in the context of wider social transformations, as a rural agrarian society forged through systems of hierarchy and order gave way to a society that was increasingly industrial and increasingly mobile – a society moving out of conditions of dependence into a world that people believed they were making for themselves. It was also a time in which scientists believed they were on the brink of discovering the creative power in nature itself (locating it, variously, in “Kraft” or “vitality”, in the “vis viva” or “living force”, in electricity and polarity, magnetism and mesmerism) and establishing it as a material – rather than divine – power. Indeed, there are different and subtler forms of the creative idea at work in Shelley’s novel that have received little attention in comparison to the theme of ‘enraged genius’ and the monster endowed with the “spark of life”. A more detailed reading can situate it as a novel that grapples with new ways of thinking about the uses and forms of the creative idea as a specifically human possession at a time when the idea was still inchoate. It was actually in the subsequent theatrical adaptations of Frankenstein that audacity became the principle theme, featuring prominently, for example, in Richard Brinsley Peake’s *Presumption* (1823), which Shelley also attended, a theme that arguably made their way into the revised 1831 edition of the novel (Baldick, 1990, pp. 30–62). But not even these “Christianised” adaptations of the Promethean tale could curb its radical potential.

Of course, in Shelley's classic tale the monster was so ugly that everybody who encountered it was disgusted and fearful. The shimmering vision led to terror, and ended in destruction. But this was because the creature's "growth" or "self-creation" was deformed; and it was due to this maltreatment that the creature sought revenge on his society. This message was not lost in the newspapers of the period in which Frankenstein's creature, as linguistic metaphor or cartoon illustration, was repeatedly invoked to describe the activities of the working class clamouring for the franchise (Tyler Hitchcock, 2007). But, contrary to the intense and terrifying visions of Marx and Shelley, the creative idea was to gain its most significant economic expression in the discourse of entrepreneurial capitalism – in the "perennial gale of creative destruction", as Joseph Schumpeter (1942/1994, p. 87) famously put it – as the American Frankenstein (the creature that Europe had created) began rising from the table.

The Creative Power of Freedom

Horace Greeley was among the six million visitors to the Great Exhibition of 1851 and – despite his fervent dislike of the "tyrannies" of the Old World – was reluctantly impressed by this wondrous display of human ingenuity. Greeley took particular delight in the ways in which the American exhibits focused on articles not of luxury but utility, finding much to praise in the spectacle of Cyrus McCormick's reapers, Samuel Colt's revolvers, and Singers' sewing machines. Nevertheless, amidst the ceremony of the occasion, he gave voice to serious reservations about the ways in which the workers had been "thrust aside for epaulettes and white cravats". "The scene calling itself industrial was simply a continuation of the dreary annals of humanity, of State Craft over riding the majestic Individualism of the true creation Man," wrote Greeley (1853, p. 28). Hence, "The dignity and creative functions of a nation's genius has yet to be truly recognized" (1853, p. 29).

On his return to New York, Greeley formed a committee to mount a new industrial exhibition. The idea fit well with the social and cultural program of the *New York Tribune*, which sought to re-envisage labour as creative rather than mechanistic and promoted individual self-realisation through work as a means of social progress. Creative labour – that is, labour freed from the shackles of exploitation, tethered to an ideology of self-realisation and self-improvement – was deemed to be the proper basis for a fully realized human existence (Tuchinsky, 2009). In his column that regularly appeared on the front page, Albert Brisbane sketched visions of the utopian future that was to be attained through the power of "creative Labour" (1843, p. 1) – or "creative and vivifying Labour" ("To the Labouring Classes", 1842, p. 1) – in which, as Brisbane expressed it, the "charms of social life and the study of Arts and Sciences would be united to the practical pursuits of Industry, and a higher order of intellectual Existence would be connected with productive, creative Labour" ("Associationism", 1842, p. 1).

Tribune socialism was also inflected by the radical individualism of Emerson, but the ideas are perhaps best understood as a practical application of the principles of self-culture as they had been powerfully articulated by William Ellery Channing, the Unitarian preacher who had profoundly shaped Emerson's beliefs and ideas. Self-culture, said Channing, derives from the "human power of acting on, determining, and forming ourselves" (1839, p. 7). According to Channing, self-culture was the power "not only of seeing our faculties grow, but of applying to them means and influences to aid their growth". Thought expands, argued Channing, as if by a natural elasticity. Like a plant, Channing argued, the self takes nourishment from its environment, and is thus diversified both from within and from without. "Self-culture does not demand the sacrifice of individuality. It does not regularly apply an established machinery, for the sake of torturing every man into one rigid shape, called perfection." Not perfection, but rather "Growth, expansion, is the end" (p. 8).

In America, this philosophy found powerful support within a populist national mythology that had already begun to characterize democracy as the unleashing of man's spiritual and creative energies. In an article on "American Ideas of Government", for example, the *New York Times* argued that "England always operates from without, imposing laws, taxes, formulas and pressing down with the load of police and external authority". This leaves the "English mind" unable to comprehend the "audacious forms social forces assume in America." In contrast, "The American method of bringing about order and stability in social organization," is to tap into the "spontaneous and audacious energies" of its citizens so that "free play is given to the creative energies of human nature" (1858, p. 4). According to the *New York Times*, this new kind of energy may at times seem "chaotic", but it was a powerful source for a spontaneous self-created and therefore "natural" political order – "natural", that is, in the sense that it echoed popular nineteenth century beliefs about the natural laws that governed creation. Hence, American civilization is "organic and creative". The American polity "absorbs from within into its own fluid and flexible substance ... and easily adapts itself to any conditions." "It is a luminous manifestation of the faculty of self-government, and is of more value to prove the creative energies of human nature than any previous thousand years in the annals of the world" (p. 4).

The ideology was powerfully optimistic, replete with a sense of being unshackled from the past and of giving shape to a new future. "America, in her progress," wrote George Bancroft, the most popular historian of the period, "carried along with her the urn which held the ashes of a dead past; but she also had hope and creative power" (1866, pp. 157–176). Combining the historical philosophies of Herder, which he had studied in his youth, with the imperatives of Jacksonian democracy, Bancroft powerfully envisaged the history of America as the gradual unfolding of a higher form of human society. He traces an evolutionary narrative across the entire length of his twelve volume history of America, starting with the founding fathers, who were possessed of a "creative power of mind"

(1841, p. 413) which had been thwarted under despotic rule, and ventured across the sea to the new world where there gathered “a people, rich in creative energy, and ripe for institutions of their own” (1860, p. 22). He charts the moments of “creative impulse” (1860, p. 356) and visions of “creative grandeur” (1860, p. 400) culminating with the Declaration of Independence, which embodied “the highest creative powers of which man is capable” (1860, p. 47), and which inexorably led to the invention of new institutions, which were said to embody “the sublime display of the creative power of a free people” (1882, p. 64).

Herder and indeed Hegel form strong undercurrents in Bancroft’s work.⁴ The rhetorical template is taken directly from pre-Darwinian (that is, “Preformist”) theories of evolution, as the unfolding of potential that is inherent in the organism from the “first day of Creation”. The image of “creative power” is not one of novelty or chance (which only becomes a feature of creative rhetoric post-Darwin, as seen in the work of John Dewey, for example, see Nelson, 2014) but of growth, conceived as orderly unfolding of God-given potential. As Bancroft expressed it:

The infant republics ... resembled living plants, whose inward energies ... unfold simultaneously their whole effort or consciousness of will, and unfold simultaneously their whole existence and the rudiments of all their parts, harmonious, beautiful, and complete in every period of their growth. (1852, p. 55)

It is significant that in popular rhetoric of the period, artistic achievement is not considered essential to the viability of this – albeit still “spiritual” – version of the creative idea. There were numerous articulations of the creative idea that had their basis not in art, but in practical and commercial achievements. And in certain instances, practical money-getting creative power was deemed to be superior to artistic achievement; commerce was portrayed as life enhancing and life affirming. “The inventors are doing a work beyond the dream of poet or prophecy,” said the *New York Times*. The “embodiments of the creative might of man” were present in the “manifold applications and achievements of chemistry and mechanics, the ten cylinder printing presses, the electric telegraph, the appliances of steam” (“A Manifest Mission,” 1858, p. 4).

These sublime patterns of creative power not only shaped society, but also powerfully shaped individual minds. Hence, in America, according to the *New York Times*, “the concentration of so much mental energy on practical science has a very deep significance” revealing something of the “root structure of the American mind” which exhibits “a versatility, an aptitude, a constructiveness, that sheds inventions with a fertility that rivals the fecundity of nature.” In short, “When a nation has evolved from its creative brain and shaping hands rotary presses, locomotive engines, reaping machines, sewing machines, revolving pistols, self acting mules, and electric telegraphs – other and subtler masteries are also attained. These are taken in and go to the muscle and the make of a more lusty, electric national mind.” (“A Manifest mission,” 1858, p. 4)

The version of the creative idea that came to be aligned with American democracy and freedom was not associated with malady or madness but with “mental hygiene” and physical robustness. This alignment becomes conspicuous in “industrial kindergartens” late in the century (Nelson, 2014), but makes an occasional appearance in quasi-medical journals in which “creative power” can be found listed among the “attributes of a people who are physically buoyant” (*Hospital Social Service Association*, 1879, p. 405) Indeed, to many commercial boosters of the mid nineteenth century, “creative power” linked to artistic achievement was neither necessary or desirable. “There is a class of croakers who are eternally whimpering at the deficiency of America in Art and Literature,” said the *New York Times*, “as though these were the sole spheres in which mental power manifests itself – as though the same creative activity does not work in man’s practical embodiments as in the production of pictures or poems!” Not art but technology was commonly deemed to be the proper expression of the creative life of the New World, on “its heaving, turbulent, billowy tides. ‘Bless God!’ said the Unitarian clergyman Amory Dwight Mayo, “We can show no pyramids, no ... tombs and temples ... we cannot point to mighty piles of stone and sculpture slowly raised by the hands of bondmen cemented by the blood and tears of oppression” (1858, p. 76). But when it came to industrial achievement, “There are no limits to this creative power,” according to the *New York Daily Times* (1856, p. 2). “There is absolutely no limit to the creative might of man” said the *New York Times* (1858, p. 4).

This American variation of the creative idea was firmly linked to the idea of liberty and freedom. “What great and almighty things it has made out of little,” declared Henry Wise. “It is a creative power, this generating power of American Liberty.” (*New York Times*, 1861, p. 1) Or, as Adam de Gurowski, a European refugee and journalist at the *Tribune*, wrote, “American democracy in its germ, in its growth and development has been hitherto and is now integrally creative, self-improving and progressive” (1857, p. 214). “The creative power of the human spirit is inexhaustible and in freedom, self action, self-consciousness man realizes himself in the outward world” (p. 154). Americans “melt down stupidity, evoke action, enterprise, stir up the initiatory creative powers of a people” (p. 147). “Freedom creates or opens new arteries for the creative currents of mind and of imagination” (p. 353). Or as Amory Dwight Mayo wrote in fervent praise of the “healthful” effects of creative power “molding human nature into higher forms of individual and social life” (1859, p. 79). “The best state must be that which offers the broadest field for the development of the active energies of its citizens, where it is easiest for every man to obtain the post in which his peculiar genius may find scope in creative toil.” (1859, p. 75) Creative toil – that is, the “spontaneous enterprise of a whole people ... using every vital energy to the utmost” – was beneficial to both man and nation, raising men from poverty to “comfort and liberty” (1859, p. 78).

In this sense, labour ideology in the north provided a ready contrast with south, where, as *The Examiner* put it, slavery “extinguishes the creative power of the people” (May 13, 1848, p. 2) and is “every hour of every day – paling the glow of creative energy in us by its destructive breath ... [and] debasing influences” (April 15, 1848 p. 2). Or as Mayo wrote, “Let [slavery’s] advocates pile up their bales of cotton their tons of sugar their rice and hemp and loathesome tobacco to the heavens and exultingly cry, ‘This is ours!’ But what has become of the Creative Power of Man meanwhile” (1859, p. 78).

Another notable feature of the rhetoric was the way in which it attached itself to an expansionist ethos – the expansion of mind and skill went handed in hand with the expansion of territory, in a rhetorical fantasy of ceaseless renewal. Creative power, wrote Gurowski, was what had brought about the raising of cities, the taming of the wild, and the expansion of the frontier. It furnishes “motives” for “spreading and expansion” (p. 151). It “urges the American incessantly to work, to undertake, to spread, create, produce” (p. 151). “This people moves on a separate almost limitless orbit,” wrote Gurowski (p. 343). “The creative and untiring activity of these genuine Yankees covers the pestilential marshes with railroads, clears forests, subdues wild nature” (p. 257).

Inevitably, the rhetoric filtered through the ideology of westward expansion becoming a rhetorical accompaniment for the aggressive conquest of the country. “This colony is a new and striking example of the creative and directing genius which seems to be the privilege of the Anglo Saxon race”, said the *Kansas News* (August 8, 1857, p. 1). “We are a grand example of energy – intellectual, creative, resistless energy,” said the *Freeman’s Champion* (1858, p. 1). “Our true symbols are the ax the plough share and the steam engine.” “The west flourishes beyond precedent,” said the *Alleghenian* (1864, p. 1), “never were the creative energies of a people more aroused, or more surplus capital rapidly accumulated”. Westward expansion was bristling with “The creative industries, the world encompassing energies of the cities” claimed the *Kansas News* (November 28, 1857, p. 1). “Your mills – your machines, instinct almost with creative intelligence” proclaimed the *Kansas Herald of Freedom* (1855, p. 4). “Man is ever approximating towards creative power” (December 29, 1855, p. 1). Or, as Horace Greeley, among the contenders for the invention of the famous phrase, wrote in his editorial of 1865, “Go west young man”.

Conclusion

For those who cling to the concept of creativity as a purely artistic construct with its roots in literary romanticism or biblical mythology, the rhetorical invocations of creativity collected together in this essay may well appear strange. Nevertheless, the project from which this essay is drawn does not attempt to replace the history of the creative idea offered by the arts, but only to show how these other diverse histories have existed alongside it. Indeed, this yearning after creativity is often to

be found in strange and unexpected places, such as the version of the creative idea that was enshrined in the scientific projects of the Cold War period, with strong links to military and defence concerns, and to schools and universities through the National Defence Education Act (Bycroft, 2012; Cohen-Cole, 2009; Nelson, 2010, 2014, 2015).

Any essay that touches on the Promethean aspects of the creative idea must also consider the ways in which the myth of Prometheus has changed – what started as a myth about Enlightenment, about the transfer of knowledge and technology, later became, in the age of romantic industrialism, a myth about energy, power and the conquest of nature. Though the intellectual ghosts of the concepts mapped out in this essay linger (in the psychological rhetoric of “growth” and “self-realisation”, for example) modern forms of the creative idea are more likely to be marked by the idea of nature mapped out in Charles Darwin’s work. It was Darwin’s work that gave rise to new forms of the creative idea for a world in which human beings were no longer destined to “unfold” and “grow” naturally in orderly or preformed ways, but to engage in acts of self-making in defiance of nature’s indifference (see, for example, Dewey, 1910; 1917, see also Nelson, 2015). The Promethean myth is, therefore, predicated upon particular ideas about nature, which have transformed through modern European history, and which are no longer adequate to a future beset by environmental crises. In a time of climate change creativity can no longer be the sole province of a singular or heroic human agent but must be rethought collaboratively, through new ideas about nature, networked ecologies, sustainability and conservation.

NOTES

1. I have used Raymond Williams term “the creative idea” for ease of reference although, as I have argued elsewhere (Nelson, 2015), the rhetorical clusters and language fragments which I identify as existing from the late eighteenth century onwards lack the internal coherence of a codified discourse until the mid twentieth century.

2. The transactions between literary and scientific writing in this period is already well documented. Trevor Levere was one of the earlier critics to scrutinise the confluence of aesthetic and scientific ideas within Romanticism, particularly focusing on the work of Coleridge. Trevor Levere (1981) *Poetry realised in nature: Samuel Taylor Coleridge and early nineteenth century science*, Cambridge: Cambridge University Press, pp. 42–43. See also, Andrew Cunningham and Nicholas Jardine (eds.) (1990) *Romanticism and the sciences*, Cambridge and New York: Cambridge University Press; Robert J. Richards (2002) *The romantic conception of life: Science and philosophy in the age of Goethe*, Chicago, IL: University of Chicago Press; and Richard Holmes (2009) *The age of wonder*, London: HarperCollins.

3. On eighteenth and nineteenth century biological theory, see Bowler, P. J. (1984) *Evolution: The history of an idea*, Baltimore, MD: John Hopkins University Press, and (1988), *The non-Darwinian revolution: Reinterpreting a historical myth*, Berkeley: University of California Press. Greene, J. C. (1981) *The death of Adam: Evolution and its impact on Western thought*, Iowa City: Iowa State University Press; Gould, S. J. (2002) *The*

structure of evolutionary theory, Cambridge, MA: Harvard University Press. On its political influence in the British context, see Desmond, A. (1989) *The politics of evolution: morphology, medicine and reform in radical London*, Chicago, IL: Chicago University Press, and Desmond, A. (2002), 'Lamarckism and democracy: corporations, corruption and comparative anatomy in the 1830s', in J.R. Moore (ed.), *History, humanity and evolution: essays for John C. Greene*, Cambridge: Cambridge University Press, pp. 99–130. On the secularisation hypothesis, see Blumenberg, H. (1985), 'Secularisation: Critique of a categorical historical wrong', in *The legitimacy of the modern age*, Cambridge, MA: MIT Press, pp. 3–124.

4. On the influence of Herder in Bancroft see Armin Paul Frank and Kurt Mueller-Vollmer, 'Herder, Bancroft and the importation of cultural nationalism in the Early Republic', in *The internationality of national literatures in either America: Transfer and transformation*, Wallstein Verlag, Göttingen, 2000, pp. 157–176. On the influence of German thought on the formation of American national consciousness more widely, see Mueller-Vollmer, K. (1990) 'Herder and the Formation of an American National Consciousness,' during the early Republic, in Kurt Mueller-Vollmer ed., *Herder Today: Contributions from the International Herder Conference, Nov. 5–8, 1987, Stanford, CA*, Berlin and New York: Walter de Gruyter, 1990, pp. 415–430.

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