

## Turner's Noösphere: Planetary Urban Frontiers of Gentrification

*Abstract:* As capitalist urbanization evolves, so too does gentrification. The analytical frameworks and material manifestations that have anchored the reference points of gentrification in the Global North for half a century are now rapidly evolving into more cosmopolitan, dynamic world urban systems of variegated gentrifications. These trends seem to promise a long-delayed postcolonial provincialization of urban theory's longstanding Global North bias. Yet the cost is a jarring paradox between the material realities of some of the largest urban displacements in human history in the Global South, alongside a growing reluctance to 'impose' Northern languages, theories, and politics of gentrification to understand these processes. In this paper, I struggle through this paradox to provide a conceptual overview of critical themes in the transnational literatures on gentrification that are now traveling across regional, urban, and political-economic contexts. My central argument is that interdependent yet partially autonomous developments in urban entrepreneurialism and transnational markets for labor, education, and real estate are transcending the dichotomy between *gentrification in cities* versus *gentrification as a dimension of planetary urbanization*. Amidst the planetary technological transformations now celebrated as "cognitive capitalism" and a communications-consciousness "noösphere," these developments are coalescing into a global, cosmopolitan, and multicultural tapestry of class transformations of urban space that adapt to multiply-scaled contingencies of urban history, socio-cultural difference, state power, and terrains of resistance. The built environments of planetary urbanization provide ample opportunities not only for diverse, multicultural reincarnations of authoritarian urban renewal in the style of Haussmann or Robert Moses, but also for contextually-adaptive growth coalitions of 'capitalists with conscience' --

officials and entrepreneurs closing ‘moral rent gaps’ by integrating gentrification into discourses and practices of environmental sustainability, socially responsible investing, and globalizing educational meritocracies. Yet the relentless optimism of gentrification’s evolution to a more cosmopolitan planetary process conceals a resurgence of Frederick Jackson Turner’s frontier thesis, in a harsh new human ecology of violent social-Darwinist competition. [Key words: gentrification, noösphere, social Darwinism, Chicago School.]

## Sexton's New Frontier

“With the sum total of human knowledge, past and present, at our fingertips,” we’re told on the website Big Think (2014), “we’re faced with a crisis of attention: which ideas should we engage with, and why?” Big Think promises to help us sift through this vast informational rainforest, offering “an evolving roadmap to the best thinking on the planet,” so we can appreciate and use the important concepts that can be “lenses for envisioning the future.” John Sexton, the charismatic and polarizing “imperial President” (Aviv, 2013) of New York University, has seen that future, and in a Big Think video (Sexton, 2008) he offers an appropriately audacious thought on what it all means. “Biodiversity is good,” he emphasizes, challenging the obsolete American melting-pot ideology that tried to turn America “into some great Velveeta cheese of humanity.” No. Now, “post-environmental movement,” we now know that biodiversity is good, and “Human diversity is good. Intellectual diversity is good. This is a wonderful gift from God. We don’t want to homogenize. We want to create communities of microcommunities. New York is the first experiment in what the whole world is going to be.” Sexton’s vision for NYU is an institution *in and of* the city, “ecosystemic in the city,” that will demonstrate through its community of microcommunities how “humanity begins to operate like a great watch of interconnecting parts, not isolated from each other, but a whole that’s greater than the sum of the parts.”

For those who remember the history of urban theory, Sexton’s “ecosystemic” metaphors immediately remind us of the dominant Chicago School human ecology tradition of the twentieth century, where the city “is a product of nature, and particularly of human nature,” (Park, 1925, p.

1), with biological metaphors for neighborhood change as ‘invasion and succession,’ as each social group develops in its own distinctive “natural area” of the city. The bio-logical genealogy of the Chicago School is certainly important for any understanding of the significance of Sexton’s project, but his direct inspiration comes from a more surprising, obscure source:

“I have a doctorate in religion, trained by the Jesuits, so I tend to think in Teilhardian terms about a kind of noösphere, where there’s a whole different way of existence for humankind...”

Pierre Teilhard de Chardin (1881-1955) was an evolutionary vertebrate paleontologist who was also an ordained Jesuit priest: his life’s work became a philosophical synthesis of the science of human evolution with the faith of Catholic theology. He was a prolific writer, but some of his most important works only appeared posthumously, thanks to the Church’s prohibition on his challenges to official doctrine. The concept that captures Sexton’s imagination comes from the Greek *noos* (mind) + *sphaera* (sphere), which Teilhard de Chardin refined from a brief suggestion in the 1920s by the Russian geochemist and cosmologist Vladimir Vernadsky. Surveying the spreading environmental consequences of urbanization and industrialization, Vernadsky foresaw a collective human understanding of the need to live as part of, rather than against, nature in all of Earth’s “terrestrial zone containing life.” (Teilhard de Chardin, 1947, reprinted in Teilhard de Chardin, 1964, p. 151). Teilhard de Chardin refined the noösphere into the idea of a planetary “superstage of consciousness,” a “process of *co-cerebration*” and “co-reflexive evolution” in an irresistible inflexion from *complex divergence* towards a move that is “*compressional and converging*,” driven “by the double curvature of our rounded mother-planet

and of our converging minds” (Teilhard de Chardin, 1956, p. 109, 112, 111). Put simply, the expansion of travel, communication, and human interaction to the planetary scale would allow -- through “our converging minds” -- an entirely new phase of the collective evolution of humanity. Humanity would “move toward unheard-of and unimaginable degrees of organized complexity and of reflective consciousness,” to become “ultra-reflexive (that is, ‘ultra-human’)” along the way to an “implosive concentration” of the “cultural noösphere” of earth and every other “thinking planet” in what de Chardin acknowledged was a “wild hypothesis of a transhuman universe” (de Chardin, 1956, p. 111). Teilhard de Chardin’s noösphere combined the state of the art in biology and paleontology to fuse “the rise of self-evolution” of an “unbroken sheet of organized consciousness” (Teilhard de Chardin, 1956, p. 109) with Christian theology in a universalizing cosmological ontology of humanity, nature, science, communication, culture, and God. The “Last Page of the Journal of Pierre Teilhard de Chardin,” written on Maundy Thursday in 1955 three days before his death, presents a concise diagram of “*What I believe*,” and connects “Christogenesis” to an evolutionary cosmology:

“Cosmos = Cosmogogenesis -- Biogenesis -- Noogenesis --

The universe is centered -- Evolutively...”

(Teilhard de Chardin, 1955, in Teilhard de Chardin, 1964, p. 311)

This equation appears under the notes “St. Paul -- the three verses: *En pase panta Theos*.” This is Greek for “God All in All,” the culmination of 1 Corinthians (26-28), written by the Apostle Paul in 55 CE in an attempt to unify a fractious church begun only three years earlier in Corinth, Greece’s thriving, cosmopolitan world city of the day -- with its synagogue and its raucus

temples to Apollo and Aphrodite. Teilhard de Chardin died in the Corinth of the American Century, New York City, at the height of an imperial modernity shaped by a collective imagined community built on histories of a West descended from the Greek *polis*. Images and narratives of these collective memories of the present were suddenly flooding the expanding planetary circuits of the electronic age -- and Teilhard died in 'almost famous' obscurity, even as technological communications breakthroughs were vindicating his claim that "the axis of twentieth-century social evolution lay in the psychic (interpersonal) and political realm" (Buttimer, 1971, p. 85). In an oral history in the 1990s, Tom Wolfe recalls that Marshall McLuhan was "deeply influenced" by Teilhard de Chardin, but McLuhan "never" acknowledged the influence to avoid offending the Catholic hierarchy at his professional home, St. Michael's College at the University of Toronto (see Cavell, 2002, p. 256). But now, in the twenty-first century, the Teilhardian medium is the message, in a 'superstage of consciousness' achieved through planetary communication circuits of entertainment, advertising, and education in a multipolar world of diverse, dynamic global cities. The noösphere has been *the* buzzword, *the* next new thing in Silicon Valley for more than a decade (Lanier, 2010, 2013), and there is now a thriving literature analyzing how globalization and technological change have given rise to a new kind of "cognitive-cultural capitalism" (Moulier-Boutang, 2012; Scott, 2007, 2011) -- a "knowledge-based" capitalism" with "biomedical and genetic engineering and artificial intelligence at the forefront" (Harvey, 2014, p. xii). Sexton's (2008) contribution to these discussions involves "glocalizing" NYU's ecosystemic heritage: "we take being in that local city and we extrapolate it out to the world." Sexton's noösphere is what he calls the Global Network University: students are admitted to NYU through one of three gateways -- NYU New York, NYU Shanghai, or NYU Abu Dhabi -- and then spend parts of their degree program

circulating amongst a world urban system of “idea capitals” including Accra, Berlin, Buenos Aires, Florence, London, Madrid, Paris, Prague, Sydney, Tel Aviv, and Washington, DC.

Sexton is explicit in moving beyond the “Eurocentric bias” of existing Ivy League Study Abroad programs, and the goal is “at least 16 sites” in world idea capitals, “with at least one on each of the six inhabited continents.” (Sexton, 2010).

Sexton’s purpose is to mobilize educational institutions in the world’s “glocal cities” to demonstrate the power and possibilities of collective human understanding through diversity -- as an emancipatory alternative to the “fortress mentality” of gating strategies that are destined to fail amidst globalization in rising fears and tensions, “culminating in a ‘clash of civilizations’” (Sexton, 2010). The noösphere, in other words, offers “a tremendous opportunity in the process of global evolution” (Sexton, 2010). A university “in and of the city,” Sexton shows us, can teach us how to shape what Kwame Anthony Appiah (1997) calls “cosmopolitan patriots” -- “men and women whose interests, vision, and allegiance are not bounded by place or sovereignty and who are ‘citizens of the world’ as well as of their particular cultures” (Sexton, 2010). The world’s best students will come to learn with -- and transform -- NYU’s world-class faculty in “kaleidoscopic interaction with deep connectivity,” as humanity learns how to produce future generations of “citizens of global society.” This is among the world’s most selective classes: of the more than 9,000 who applied for the inaugural class, NYU Abu Dhabi admitted only 200, representing 39 countries and 43 different languages.

Sexton draws inspiration from cosmopolitan patriots as today's planetary pioneers.<sup>1</sup> They have the competitive drive and *individual* ambition signified by Richard Florida's "creative class," but they also understand what it means to think and act within *collective* assemblages of the human and non-human -- creative human beings circulating in a system that he describes as "connected skeletally by highly sophisticated" "social networking technology." To see where the cosmopolitan patriots are going, Sexton turns (without irony) to the heirs of Thatcher's "there is no such thing as society," borrowing from a borrowed metaphor of Prime Minister Gordon Brown:

"To adapt an aphorism coined by President Kennedy, the new frontier is that there is no frontier: no frontier for the internet, for the mobile phone, for e-mails, for the cyber-world; no frontier for the capacity of individuals to influence, inform, or even infuriate each other."

(quoted in Sexton, 2010).

Frontier. Consider three dictionary definitions: "the border separating one country from another," "an area of mental activity where much remains to be done," and "a marginal region between settled and unsettled lands." (Cayne, 1990, p. 382). This is where John Sexton's Big Think, Gordon Brown's New Frontier, and Pierre Teilhard de Chardin's noösphere help us understand the frontiers of gentrification today -- more than half a century after Ruth Glass (1964) first gave us a word to describe this process of urban transformation. In *The New Urban*

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<sup>1</sup> Appiah (1997, p. 617) begins his essay thus: "My father was a Ghanaian patriot. He once published a column in the *Pioneer*, our local newspaper in Kumasi, under the headline, 'Is Ghana Worth Dying For?' and I know that his heart's answer was yes. ..." But when Appiah's father died, he and his sisters found an unfinished note of "last words and wisdom" for his children, including this advice: "Remember that you are citizens of the world." (Appiah, 1997, p. 618).

*Frontier*, Neil Smith (1996) analyzed how the genocidal disposessions of Frederick Jackson Turner's understanding of the frontier in eighteenth- and nineteenth-century America -- "the meeting point between savagery and civilization" (Turner, 1893, p. 200) -- became the powerful discourses and material realities of developers "circling the wagons" to retake Harlem and all the other territories lost in America's twentieth-century urban crisis. In "Gentrification as Global Urban Strategy," Smith (2002) diagnosed how these frontier processes were being consolidated through transnational urban systems of entrepreneurial capitalist-state coalitions mobilizing city spaces as vehicles for speculative real-estate accumulation. And in one of his last written works, "The Evolution of Gentrification," Smith (2011) diagnosed the accelerating pace of dispossession as cosmopolitan capital operated through transnational network architectures of revanchist uneven development on a planetary scale.

Yet there is a tantalizing absence in Smith's use of the word evolution. While he diagnoses "an extraordinary new departure" in the scale of today's "economic excommunication of working-class people from their communities," Smith is uncharacteristically cautious and modest in this essay, and never pushes the meaning of 'evolution' beyond the familiar, neutral sense of change or transformation. We can learn a great deal if we take Smith's title literally, to be bold and explicit on the evolutionary dynamics of gentrification. Part of my inspiration here comes from Eric Clark (1987), who undertook a meticulous examination of centuries of land records in order to build an empirical foundation for Smith's (1979) theory of the rent gap in the dynamics of urban transformation; more recently, analyzing the unprecedented challenge of "collective self-regulation" of planetary humanity that will be required if we are to achieve sustainability, Clark has documented the distortions of evolutionary science that have privileged "gene-centered

thought” and an “excessive individualism” that obscures Darwin’s perspective on species participating collectively in their own development (Clark and Clark, 2012, p. 563). In this paper, my goal is to extend this line of inquiry, focusing more explicitly on the matter of evolution in frontier metaphors in urban theory, and in the driving ambitions of cosmopolitan patriots and their visionary mentors like John Sexton. My central claim is that we are living through a planetary software update of nineteenth-century, Turnuresque social Darwinism -- creating a bizarre transnational urbanization of Chicago School positivist logics masked by the deceptive drop-down-menu multiculturalism of Silicon Valley’s automated postpositivist standpoint epistemologies. The noösphere is the new frontier of gentrification as the new urban colonialism (Bridge and Atkinson, 2005) of today’s planetary cognitive capitalism. We are challenged to reconsider the explicit and implicit political ethics of the “recurrence of the process of evolution” in the “process of expansion” of this new frontier (Turner, 1893, p. 200).

Let me tell this story in three parts. First, we’ll consider the role of evolution in the historical context of conventional urban theory before Ruth Glass gave us a discourse for the analysis of gentrification. The key point here is that fundamental axioms of a hijacked social Darwinism accomplished a stealth corruption of mainstream urban theory, necessitating the aggressive political edge that came to define the very best of gentrification scholarship; unfortunately, gentrification theory was shaped by reactions to specific and partial aspects of the Chicago School’s legacy -- perpetuating debates over narrow empirical issues, and distracting attention from the evolutionary frontier ontology that is much more relevant for an understanding of the cognitive-capitalist noösphere under conditions of planetary urbanization. Second, we’ll consider a recent political paradox that has emerged with the arrival of planetary urbanization:

influential, well-intentioned calls for cosmopolitan postcolonial perspectives from beyond the “core” of the Global North are being voiced at the precise moment when powerful infrastructures are accelerating and consolidating gentrification on an unprecedented planetary scale. Third, I’ll evaluate the way this latest era of gentrification is a recombinant blend of old and new, with intensified class competition in education, labor, and housing markets legitimated on the basis of harsh nineteenth-century evolutionary frontier philosophies masquerading as inclusive multicultural meritocracies. Special scrutiny is here reserved for the bizarre technological theologies enacted *in* and *through* Silicon Valley -- a location that only begins in the San Francisco Bay Area. The “non-place urban realm” of “community without propinquity” diagnosed by the Berkeley urban theorist Melvin Webber (1964) has been thoroughly transnationalized, as the “massive communication systems” (p. 86) of urbanism are now enmeshed in planetary networks of finance, information, and production sweatshops. Silicon Valley’s noösphere is creating dangerous new frontiers of Turner’s evolutionary encounters between “savagery and civilization.”

### **The Urbanization of Evolutionary Consciousness**

The first part of our story involves the way social Darwinism was encoded into the twentieth-century hegemony of urban theory that conditioned public policy, capital investment, and social analysis in the generations before Ruth Glass (1964, p. xviii) first wrote the word “gentrification.” As industrialization transformed political economy at the beginning of the nineteenth century and produced the world’s first urbanized nation at century’s end, evolutionary perspectives on urban life were quite explicit. In *Cities in Evolution*, Patrick Geddes (1915)

portrayed the day's emergent, large, polycentric city-regions -- what he called "conurbations" -- as the logical evolution of previous kinds of cities, in a new industrial revolution. For Geddes, the old "paleotechnic" industrial age dominated by obsessions with *individual* wealth and class division was evolving, through urbanization, to a "neo-technic order" of *collective, civic* wealth, "its skill directed by life towards life, and for life ...." Humanity would set its mind "towards house-building and town-planning, even towards city design; and all these upon a scale to rival -- nay, surpass -- the past glories of history." (Geddes, 1915, p. 71).

Robert Ezra Park was similarly explicit when he was strengthening the foundations of a department of sociology at the University of Chicago that would eventually come to be known as "Urbanism, Incorporated" (Martindale, 1958, p. 28). Park's (1921) theoretical justification for the young discipline -- "the science of collective behavior" (p. 21) -- combined Durkheim's theories of organic solidarity with the social philosophies of the nineteenth century physical scientists who had made sociology possible. Auguste Comte's (1842) ontology of "social physics" offered a scientific, post-theistic positivist theory of cumulative, intergenerational advancement in the "Great Being" of humanity, while Herbert Spencer's grand synthesis of biology and physics provided a framework for the progress of industrial modernity and the development of what he had called as early as 1860 the "social organism." In turning to Spencer, Park was channeling the evolutionary theorist with the deepest influence on the American mind in the last half of the nineteenth century. "Mr. Herbert Spencer is already a power in the world," the *Atlantic Monthly* enthused in 1864; "As far as the frontiers of knowledge where the intellect may go, there is no living man whose guidance may more safely be trusted. Mr. Spencer represents the scientific spirit of the age" (*Atlantic Monthly*, 1864, p.

775, 776). Yet that spirit was a chaotic conception of revolutionary advances in science mangled with the entrenched conservatism of economics and religion. Spencer's "doctrine of the Unknowable" provided an overriding concession that gave theologians a credible reconciliation of creationism and evolution (albeit an obsolete Lamarckian version) while his insistence on the absolute freedom of private enterprise made him the philosopher of choice for America's dominant capitalists. In a Sunday-school speech, John D. Rockefeller cited Spencer's catchphrase 'the survival of the fittest' to justify the "law of nature" and "the law of God" in the growth of the era's vast industrial and financial trusts (cited in Ghent, 1902, p. 29). But if Park's (1921) theorization of the "collective mind" and the "social consciousness" was influenced by Spencer's linear *laissez-faire* evolution -- Spencer was, after all, a major influence on Albion W. Small, the sociologist who hired Park at Chicago -- there were other, more progressive influences at work. Long before he came to Hyde Park, Park took a low-paid research assistant position after completing his doctorate in order to work at Harvard with the pragmatist philosopher William James. Earlier still, as an undergraduate at the University of Michigan between 1883 and 1887, Park had been deeply shaped by the teaching of a newly-arrived Ph.D. from Johns Hopkins -- John Dewey. Of the ten courses Park took in the philosophy department, six were with Dewey.

Dewey fundamentally transformed Spencer's self-rationalizing apologies for structured social inequalities -- what Dewey (1920, p. 190) called "the apparatus for intellectual justification of the established order." Whereas Spencer's logic portrayed individual competition and selection in a fixed environment, Dewey realized that Spencer misunderstood Darwin: cooperation matters as well as competition, and the environment is changed by human actions -- which

change over the generations as human knowledge and tradition evolve.<sup>2</sup> Born in the year Darwin's *Origin of Species* was published, Dewey in later years wrote that the book not only "marked an epoch in the development of the natural sciences," but also revolutionized nearly all of the "conceptions that had become the furniture of the mind" over two thousand years, transforming "the logic of knowledge" across the expanding terrain of the social sciences "and hence the treatment of morals, politics, and religion" (Dewey, 1909, p. 90). In America, however, these ideas had been distorted by the brutal orthodoxy of the "*laissez-faire* conservatives" (Hofstadter, 1944) -- the hardcore Cro-Magnons whose extreme positions offended even Richard Ely, the conservative economist who helped fuse "environment, evolution, and cartography" by getting Frederick Jackson Turner so interested in maps when he studied at Johns Hopkins (Block, 1980, p. 32). Ely (1884, p. 64) became concerned that evolutionary theory was being abused "as an excuse for doing nothing while people starve," citing the "all-sufficiency of competition as a plea for grinding the poor."

Dewey brought together Comte's insights on the intergenerational collective of knowledge (what Marx once called the 'general intellect') with Darwinian evolution. It is not just bodies and physical characteristics that evolve; knowledge, understanding, methods of communication, social and cultural institutions, and human possibility evolve too. And we can decide how to participate in our evolution. In the same way Spencer's dogmatic commitment to an atomized individualism had provided a fraudulent justification for *laissez-faire*, "our ingrained habit of regarding intelligence as an individual possession" (Dewey, 1939, p. 456) had thwarted the

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<sup>2</sup> Indeed, part of Dewey's brilliance was in applying evolutionary logics to individual theories and theorists themselves. Dewey saw Spencer's enormous popularity in *laissez-faire* America as the historically evolutionary culmination of English liberalism: "he is not one creator with many others of the theory of evolution, but its own concrete incarnation" (Dewey, 1904, p. 53).

progressive possibilities of education and politics. “Intelligence is a social asset,” Dewey (1939, p. 456) emphasized, “with a function as public as its origin, in the concrete, in social coöperation.” There was no need to remain trapped by the retrograde conservatism of Spencerian Social Darwinism, of “drifting,” waiting “for the slow process of evolution” as the “working out of unconscious, natural law” (Dewey, 1918, quoted in Dewey, 1939, p. 424). Cooperation and the development of the collective societal wealth of knowledge makes us active, conscious participants in our relations with one another and with the social and natural environments in which we build and share knowledge. “It is proved now,” Dewey wrote, “that it is possible for human beings to take hold of human affairs and manage them, to see an end which has to be gained, a purpose which must be fulfilled, and deliberately and intelligently go to work to organize the means, the resources, and the methods of accomplishing those results” (Dewey, 1918, quoted in Dewey, 1939, p. 424). Evolution is a collective, social process that proceeds through cooperation and communication, and the “untranscendental pragmatist” Dewey and the “empirical sociologist” Park became America’s most perceptive analysts of how this evolution was urbanizing (White and White, 1962, p. 155).

This is where we encounter a fascinating yet forgotten moment in our inherited memories of urban studies. Viewed as a distant historical reference point, Chicago School urbanism is today understood as a lost hegemony, as a “bourgeois social science” so dominant that Harvey (1978, p. 68) once likened a debate request to “an invitation to the sheep to come sit down and parley with the wolves.” The ossified dogmatic paradigm Harvey encountered in the last quarter of the twentieth century was a betrayal of the progressive possibilities of the first. The most crucial potential emerges from the fascination that Dewey, Park, and the first generation of Chicago

School sociologists had for the central role of communications technologies in accelerating the circulation of information and meaning in urban society. “Park espoused a cognitive Darwinism,” J. Nicholas Entekin (1980, p. 47) writes in a landmark history of human ecology, “in which knowledge evolved and expanded in order to meet the needs created by new problems” faced by humanity. “Cognitive Darwinism” might strike you as a bizarre, obscure term. I certainly did a double-take when I first saw the phrase in Entekin’s historiography of a figure so central to Chicago School urban theory. It has been forgotten because evolutionary urbanism developed a politicized amnesia, and especially in America evolutionary social theory began to avoid explicit references to Spencer, Darwin, or any other clearly-recognized biological framework. Park’s work at Chicago building a new urban theory took place in the era of the Scopes Trial, and the violence of the ‘War to End All Wars’ had discredited the influential racist and imperialist perversions of Darwinism that had made so much of European civilization and Teutonic superiority. Likewise for the eugenics movement that flourished from the turn of the century, which “grew with such great rapidity that by 1915 it had reached the dimensions of a fad,” when notions of the preservation of the ‘racial stock’ as a “means of national salvation” fostered support for the geopolitical theories of “evolutionary human geography” led by “militant nationalists” like Theodore Roosevelt and his geographer, Isaiah Bowman (Hofstadter, 1944, p. 161, 163-164; Smith, 2003, p. 223). The movement became politically toxic as the Nazis pursued its logic in a refined science of genocide. In this environment, “[m]ention of Darwinism in the social sciences became highly unfashionable” (Hodgson, 2009, p. xix).

Nevertheless, evolutionary logics became an ever more central theme in understanding changes in economy, society, and urbanism. The paradox was most pronounced in economics. The

Darwinian epistemologies of Milton Friedman's (1953, p. 22) portrayal of the maximization-of-returns hypothesis of firm survival in terms of "natural selection" and Thorstein Veblen's proposal for a reconstruction of economics as a "post-Darwinian" science were downplayed in favor of the technocratic, neutral discourses that were coming to define American logical positivism (Hodgson, 2003a).<sup>3</sup> The business historian Geoffrey Hodgson (2003, p. 93) notes that as late as the establishment of the Association for Evolutionary Economics in 1966, the label 'evolutionary' was adopted "only by ridding it of any of its former and Veblenian connections with Darwinism and by interpreting it in the broad and banal sense of 'change.'" And yet Darwinism had always been a "derivative of political economy," (Hofstadter, 1944, p. 38) what Donald MacKenzie (1976, p. 503) calls "the biological variant of political economy." Darwin struggled for more than a year after his expeditions on the *Beagle* trying to make sense of his samples and empirical observations; when his "first note-book was opened," he "worked on true Baconian principles & without any theory collected facts on a wholesale scale," but

"how selection could be applied to organisms living in a state of nature remained for some time a mystery to me. In October 1838, that is fifteen months after I had begun my systematic enquiry, I happened to read for amusement 'Malthus on Population', & being well prepared to appreciate the struggle for existence which everywhere goes on from long-continued observation of the habits of animals &

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<sup>3</sup> Friedman's appeal to "natural selection" had an "enduring influence" in the field's hegemony, but the early post-war "brief flurry" of "biological thinking in economics had less impact than its successors. Its much diminished effect is explicable, given its immediacy after the Nazi holocaust, and the prior reaction against biological thinking in the social sciences in the 1920s and 1930s" (Hodgson, 2009, p. xxi). In a foreshadowing of the dog-whistle discourses that would later become so effective in the ruthless politics of neoliberalism, Friedman (1953, p. 22) includes scare quotes in his brief engagement with evolutionary theory: "The process of 'natural selection' thus helps to validate the hypothesis -- or, rather, given natural selection, acceptance of the hypothesis can be based largely on the judgment that it summarizes appropriately the conditions for survival." Friedman (1953) manages to cite Veblen as well as Armen Alchian's (1950) famous and explicitly Darwinian analysis of uncertainty, without ever mentioning 'Darwin' or 'evolution' in the text or the index.

plants, it at once struck me that under these circumstances variations would tend to be preserved & unfavorable ones to be destroyed. The result of this would be the formation of new species.

Here then I had at last got a theory by which to work;" (Darwin, 1876, p. 410, 411).

The theory that Darwin finally got -- Malthus's 1798 *Essay on the Principle of Population* -- had become one of the definitive manifestos of the nineteenth century; Darwin was reading the sixth edition, published in 1826 (Secord, 2008, p. xix), and it helped break his writer's block as he worked out the details of his theory -- until the discovery that the naturalist Alfred Russel Wallace was pursuing the same line of inquiry led to a simultaneous announcement at the 1858 meeting of the Linnaean Society in London. "Since it had been one of the great figures of the classical economic tradition who had led Spencer, Darwin, and Wallace toward their evolutionary theories," the historian Richard Hofstadter (1944, p. 144) observes, "the economists might have had some justification for proclaiming that biology had merely universalized a truth that had been in their possession for a long time." The core of economics had always privileged *laissez-faire* competition as a "doctrine of social selection," (Hofstadter, 1944, p. 144) and Keynes (1926, p. 113) went so far as to declare that "the principle of the Survival of the Fittest could be regarded as one vast generalization of the Ricardian economics."

During the period Hodgson (2009, p. xix) labels "The Dark Age of Darwinism in Economics," the field's foundational *implicit* social Darwinism conditioned the development of conventional

urban theory, as neoclassical economic methodology was enmeshed with Chicago sociology frameworks for analyzing neighborhoods, cities, and metropolitan regions. Classical economics and social Darwinism were both founded on an axiomatic trinity: 1) “the fundamentally self-interested animal” maximizing utility (survival), 2) the normality of competition, and 3) the survival of the organism / producer / worker most efficiently adapted to its environment. Yet while “both classical economics and natural selection were doctrines of natural law” (Hofstadter, 1944, p. 145), the twentieth-century consolidation of econometrics created an entirely new infrastructure in which social Darwinist processes could be embedded in the technocratically scientific and presumptively neutral, objective mechanisms of simultaneous equations, general and partial equilibrium solutions, and marginal productivity estimates as applied to the exploding observational vistas of economic data. The methodological genealogy goes all the way down, to a literally embodied Darwinian lineage: we wouldn’t have the correlation coefficient if Darwin’s cousin, the eugenicist Francis Galton and author of *Hereditary Genius* (1869) hadn’t been so obsessed with the ‘Gaussian Law of Error’ describing the variations around the averages of physical measures of human bodies (biometrics) and the “mental peculiarities of different races” (p. v); those variations around the mean “could be made the source of intellectual progress: specifically for Galton’s purposes geniuses could be made” (Barnes, 1998, p. 213). And in turn we wouldn’t have chi-square or regression if Karl Pearson hadn’t been so anxious to “provide his particular form of Darwinism with a proper scientific basis” (Norton, 1978, p. 6) and if he hadn’t been inspired in 1890 to focus on statistics after meeting a zoology professor who was infusing Galton’s ideas into evolutionary biology to create a “mathematical theory of evolution” (Norton, 1978, p. 6). When Galton died, his financial remains allowed Pearson to become the first Galton Professor of Eugenics at University College, London, and to merge the two labs he directed --

the Biometric Laboratory and the Galton Laboratory for National Eugenics -- into the Department of Applied Statistics. The Galton legacy of correlation and the dismal-science moralism of Malthus that inspired Darwin almost crossed paths with the noösphere and urban studies at an international symposium in Princeton, New Jersey in 1955 (“Man’s Role in Changing the Face of the Earth”) where Father de Chardin was scheduled to present his paper, “The Antiquity and World Expansion of Human Culture.” de Chardin didn’t make it, but Patrick Geddes’ American student Lewis Mumford did, and so did Sir Charles Galton Darwin, delivering a neomalthusian warning on “the menace of world overpopulation” and outlining a “rather fanciful exaggeration” in the form of a scenario of a “genetic surgeon” working to improve humanity by distilling all of the accumulated knowledge of the chromosomes of humanity “to produce an embryo which will develop into” a “really great man”: “Shakespeare, Newton, Napoleon, or -- let us be broadminded, since we cannot foresee the political tastes of the surgeon -- perhaps Marx.” (Darwin, 1956, p. 965).

In the context of America’s industrializing urbanization, the fusion of implicitly Darwinian economics through “applied statistics” and the “imperial conquests of the rational actor model” (Hodgson, 2003b, p. x) with Chicago School human ecology enabled an ambitious, comprehensive, and internally coherent matrix of policy-relevant urban social theory. Housing filtering metaphors emphasized households’ adaptive responses to the changing landscape of old and new homes in the expanding metropolis (Lowry, 1960). Neighborhood “life cycle” theories naturalized the hierarchical processes of ‘upward’ status mobility via suburbanization, and ‘downward’ spirals of decline with racial transition in the inner city (Metzger, 2000). The deeply influential Alonso-Muth (Alonso, 1964; Muth, 1969) formulation of spatial equilibrium

had the effect of concealing the ruthless struggles of urban class competition behind the elegant calculus of market-clearing locational bid-rent curves. The explicit ethno-racial hierarchies that structured the spatial evolution of the American metropolis -- such as Homer Hoyt's (1933, pp. 314-316) famous ranking of the effect of different racial groups on neighborhood rents in Chicago, from English, Scotch and Scandinavians at the top to Negroes and Mexicans at the bottom -- emerged from interwar America's putrid stew of market democracy and populist Spencerian eugenic racist thought. But all could safely be hidden in the multivariate masquerade of hedonic pricing models and the economic discourse of "property values" as a floating signifier for difference.<sup>4</sup> And the entire theoretical apparatus was hard-wired as the default setting in the mainframes of urban public policy through the deceptively obscure accounting jargon of "highest and best use," distracting attention from the political contradictions of property rights in capitalist urban planning (Krueckeberg, 1995).

This is the historical context that shaped the discourse and analysis of gentrification in urban theory: social Darwinist competition disguised in the naturalized narratives of Chicago-School urban ecology and quantified neoclassical equilibrium. Initial responses to the empirical realities of a process that defied the expectations of mainstream urban theory were dominated by the analysis of individual consumer preference: if gentrification defied the predictions of Alonso bid-rent curves, then obviously the explanation was a shift in the "indifference curves" of wealthy and middle-class households re-evaluating the tradeoffs of time, space, and accessibility

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<sup>4</sup> In a later chapter, Hoyt (1933, pp. 355-356) describes the inner-city "blight" that shaped U.S. urban renewal policy and that Neil Smith (1979) would later theorize as the rent gap: "a low level of rents and a high percentage of loss in collecting that small amount, a heavy rate of physical deterioration of property caused by waste, neglect, and acts of vandalism, reduce land values in these sections occupied by 'hobos,' seasonal workers, and criminals of Native American stock and by the lowest classes of Mexicans, negroes, and South Italians to a very low point. There is now a valley in the land-value curve between the Loop and the other residential areas..."

(Stegman, 1969; Wheaton, 1977; Schill and Nathan, 1983).<sup>5</sup> These tautological pivots became the targets for the new revolution in urban theory when Harvey (1973, p. 135) sardonically observed, “All this actually means is that the rich group can always enforce its preferences over a poor group because it has more resources” to exploit all the dimensions of competitive bid-rents. Similarly, Neil Smith’s first analysis of the transformation of Philadelphia’s Society Hill was aimed squarely at Urbanism, Incorporated: “The Chicago School’s latter-day followers have bequeathed to urban geography an empiricist and ecological quagmire in which substantive theory nearly drowned,” Smith (1977, p. 7) wrote in the opening pages of his undergraduate honors thesis. This was the first salvo of a lifetime project of politics and research devoted to challenging the friendly, market-tested violence of the “consumer sovereignty” logics that built the foundations of aggressive, state-driven neoliberal urbanism and populist middle-class support for revanchist wars on the poor and homeless. Nevertheless, despite the incisive rigor and political integrity of a generation of critical perspectives on gentrification, an important genealogical insight has been neglected: the entanglement of gentrification with the suppressed memories of social Darwinism. Glass made the link explicit. Only a few lines after describing how “modest mews and cottages” became “elegant, expensive residences” in an “invasion” spreading from Hampstead and Chelsea to Islington, Paddington, North Kensington, and even the ‘shady’ parts of Notting Hill, Glass reminded readers of the “neomalthusian” Depression-era

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<sup>5</sup> The crystallizing cognitive calculus of late-1960s planning theory was best expressed by a young urban planning scholar who would later go on to serve in the U.S. Department of Housing and Urban Development in the surreal Clinton years of a partially revived urban policy seen through the parallax view of neoliberal economic deregulation and a seemingly relentless electoral suburbanization of American politics. Michael Stegman (1969) responded to the runaway popularity of transportation models of urban structure inspired by the Alonso-Muth approach by emphasizing the importance of housing and neighborhood aspects of consumer choice: “It is conceivable that while location rents are high near the core because of the concentration of nonresidential activities and the relatively large number of *particular* consumers who find it either necessary or desirable to live near their places of work, these rents would be even steeper if the available housing were of higher quality and the environment more amenable. What might accompany such a positive change in housing conditions and environment is a complete reversal of income groups -- the wealthy would occupy the accessible and desirable inner rings, forcing the poor to live on the fringes.”

assumptions of the *Greater London Plan* of 1944. The *Plan* had been amended in 1947 to implement what we would now recognize as neoliberalism: “development rights have been denationalized; development values have been ‘liberated.’” (Glass, 1964, p. xx). Along with the weakening of rent controls, these measures quickly accelerated the polarization of the metropolis:

“In such circumstances, any district in or near London, however dingy or unfashionable before, is likely to become expensive; and London may quite soon be a city which illustrates the principle of the survival of the fittest -- the financially fittest, who can still afford to work and live there. (Not long ago, the then Housing Minister advised those who cannot pay the price to move out.)” (Glass, 1964, p. xx).

### **Decolonizing the New Urban Colonialism**

The second part of our story involves a paradox of politics, theory, and discourse in the half-century since Ruth Glass wrote these words. Can anyone deny that London is a city that illustrates the survival of the financially fittest? From all over the world, the financially fittest capitalists are bidding the top end of the residential market above the \$100 million mark in London and New York (*New York Times*, 2015). We’re now at half that level here in Vancouver, where a onetime CEO of the San Francisco social media game-maker Zynga recently sold a 25,000 square-foot home for \$51.8 million; the buyer heads a conglomerate with interests in property development, pharmaceuticals, hotel management, and textiles. The buyer grew up

in poverty and didn't finish high school, and he failed at his first business venture -- a duck farm (Lee-Young, 2015, p. A6). But Chen Mailin persevered and succeeded; he's worked his way to the top, just like Rockefeller in a previous century, and he's a hot trending topic in Hong Kong, Singapore, and Taiwan. But representing a city -- even a big city -- in the PRC's People's Political Consultative Committee isn't as secure as it once was. Things could change.

All around the world, the "financially fittest" who have survived and thrived in the creative destruction of capitalism's ecosystem are bidding up real estate prices in a planet-wide search for what the Vancouver urban planner Andy Yan calls "hedge cities" -- safe places to store capital in real estate as insurance for an uncertain future. These circuits -- what Tom Slater has carefully theorized as "planetary rent gaps" -- are now the subject once again of evolutionary social physics models and metaphors that would be all too familiar to Robert Park and Frederick Jackson Turner. The prolific science writer Philip Ball -- an editor at *Nature* and contributor to the *Financial Times* who has chronicled the new field of "econophysics" (Ball, 2006) -- writes a story in the *Guardian* making the case that "Gentrification is a Natural Evolution," based on a paper published in the journal *Physics and Society*. Those authors, Ball (2014) tells us, "are studying city evolution much as biologists study natural evolution -- almost as if the city itself were a natural organism" -- what Jane Jacobs called "the spontaneous self-organization of urban environments." Mark Buchanan, another *Nature* editor, chronicles the "quantum revolution" of "social physics" in the example of Thomas Schelling's "atomic physics" interpretation of the "social cascades" that took place at the "fringe between civilization and lawlessness": Times Square (Buchanan, 2007, p. x, 102, 22). The pioneers in this fringe included Viacom, Bertelsmann, Morgan Stanley, and the Walt Disney Company. Similarly, Ed Glaeser -- a

twenty-first century Richard Ely who has become the celebrity intellectual *du jour* among the world's leading capitalists, praises cities -- but only the dynamic, entrepreneurial free-market cities that "speed innovation by connecting their smart inhabitants to each other," serve as "gateways between cultures and markets" or as "gateway[s] to ideas" (Glaeser, 2011, p. 7). For Glaeser, the city, collective humanity's greatest invention, "makes us richer, smarter, greener, healthier, and happier," and it makes us an "urban species." But we are also a gentrifying species, and a gregarious, networked species. Tom Slater (2014) strikes up an email correspondence with Ball, and publishes an eloquent response: "There is Nothing Natural About Gentrification." The apparent sophistication of complexity theory used to predict where gentrification will happen next should not confuse us, Slater warns; this is "a dangerous diversion towards social Darwinism," ignoring "structural forces of power, politics, policy, and privilege." Not long after Spike Lee is caught on an audio recording at a Pratt Institute lecture honoring African American history month calling the gentrification of Fort Greene "Motherfuckin' Christopher Columbus syndrome," a *New York Times* editorial manager sends a note to the newsroom asking reporters to please stop describing neighborhoods in every city from Beijing to Cape Town in terms of how much they resemble hipster Brooklyn (Nguyen, 2014). But it was already too late. The #Christophercolumbussyndrome hashtag entered the twittersphere and was carefully dissected in an article in the daily online Spanish finance and politics site *El Confidential* -- 'Es el puto síndrome do Christóbal Colón' in Harlem (García-Ajofrin, 2014) -- amidst powerful structural imperatives. In the years when Harvey and Smith were first refining Lefebvre's theory of the capital-switching dynamics of the production of urban space, global capital had to find profitable investment opportunities for about \$6 billion of annual surplus value; now that figure is more than \$2 trillion every year (Harvey, 2014, p. 228).

Most of that is going into cities. And almost a century after Robert Park declared the city a product of human nature and Patrick Geddes foresaw a “neotechnic order,” the technologies of unprecedented planetary connectivity are accelerating the evolution of accumulation away from the old industrial capital of the Global North towards the new informational empires as well as cosmopolitan capital of all kinds from the Global South. Planetary connectivity is also allowing the kinds of communication that Park and Dewey first theorized at the scale of the city to now reach the scale of Lefebvre’s planetary urbanization. Woven from contextual blends of indigenous local processes and fast-moving policy innovations, gentrification has gone global -- and so have Frederick Jackson Turner’s frontier metaphors. They’re on the ground and in the cloud, in the streets and in the tweets. Fortunes are being made by those pioneers quickest to adapt and exploit the new “science of collective behavior” (Park, 1921) on the frontiers of transnational spatial fixes of informational capital. The processes Harvey (1989, Chapter 8) diagnosed a generation ago as the “urbanization of consciousness” are now operating through a global noösphere in an interconnected, evolutionary, and variegated planetary urbanization.

As situated, embodied, and urbanizing individuals, each of us can see, understand, or experience particular empirical facets of this latest urban revolution -- but now billions of us are also able to talk, learn, and fight about it in real time, in the evolutionary algorithmic ecosystems of social media. No wonder John Sexton, with that doctorate in religion from the Jesuits, thinks in Teilhardian terms. He’s in the noöspheric administration of one of the most exclusive private universities in one of the world’s most widely-recognized epicenters of gentrification, where admission requires a “superstage of consciousness” of grades, test scores, and extracurricular achievements -- along with ever-escalating tuition payments and a Hunger Games survival of the

financially fittest race in the City's housing market. NYU's "real estate footprint" in Greenwich Village and Brooklyn has grown by more than two million square feet in the past decade, while Sexton responds to critics of the "globalization of the university" by contextualizing the competition: "I live in a city where the people with all the choices, all the money, all the information, kill to get their kids into \$35,000 kindergartens" (quoted in Carapezza and Noe-Payne, 2014). He's right, and so is Spike Lee when he describes the cutthroat competition of White parents to get their kids into private schools,<sup>6</sup> and when he describes the new urban frontier in Harlem: "When you see White mothers pushing their babies in strollers, three o'clock in the morning on 125th Street, that must tell you something" (quoted in Coscarelli, 2014). Meanwhile, the acceptance rate for NYU Abu Dhabi's second entering class stood at 2.6 percent -- a group of slackers compared to the previous year's 1.2 percent -- and NYU Shanghai's recruitment criteria have been fully integrated with China's informational intravenous drip *gaokao* National College Entrance Examination. Even so, Sexton's Teihardian new frontier of "idea capitals" cannot always evade the *Limits to Capital* (Harvey, 1982): NYU's Tisch Asia biz-school gamble in Singapore failed after a cascade of embarrassing financial and management crises.

This is the new urban frontier, half a century after Ruth Glass established the link between gentrification and the survival of the financially fittest in the global city. Unfortunately, critical perspectives on planetary gentrification have been distorted by a new paradox of theory, politics, and practice. A half-century of theory and discourse built to analyze the causes and consequences of the systemic socio-spatial inequalities of gentrification -- what Atkinson and

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<sup>6</sup> "...There's a business now where people -- you pay -- people don't even have kids yet and they're taking this course on how to get your kid into private school. I'm not lying!" (quoted in Coscarelli, 2014).

Bridge (2005) call the “new urban colonialism” -- is now itself under scrutiny as a colonial imposition. Considering the catastrophic history of evolutionary hierarchies and developmental teleologies that continue to define the colonial present, this new challenge can be seen as a cosmopolitan, emancipatory evolution beyond the narrow view from Anglo-America -- what Jim Blaut (1993) called the “colonizer’s model of the world.”

Three recent landmarks in the gentrification literature offer lucid expressions of this new critical view. First, Thomas Maloutas (2011) offers an eloquent and strident challenge to the contemporary geographical and theoretical expansion of gentrification research. Gentrification, Maloutas argues, is “highly dependent on contextual causality,” and no amount of conceptual reconstruction can “remove its original contextual attachment to the Anglo-American metropolis” (p. 34). For Maloutas, the “spatiotemporal stretching” of definitions of gentrification is not only a “regression in conceptual clarity and hence theoretical rigor,” (p. 36) but has itself become a part of the established Anglo-American hegemony of academic knowledge production; “there are authors from far less commensurable contexts that are increasingly compelled to label changes within urban centres as gentrification,” (p. 37) even when the conclusion is analytically inappropriate. “It is somewhat ironic that radical thinkers like Saskia Sassen and Neil Smith contribute indirectly to this effect,” Maloutas (2011, p. 42) argues, “by reinforcing the image of neoliberal omnipotence through their critique of a regulation model that bursts out of its contextual confines due to the Anglo-American domination in the discipline.” Maloutas is deeply concerned with the simultaneous, mutually reinforcing disempowerment of researchers and theoretical concepts from the Global South, and the “contextual blindness” of researchers in the Anglo-American core -- and thus he concurs with

Butler's (2007, p. 163) response to Atkinson and Bridge's (2005) diagnosis of a 'new urban colonialism': "the issue of 'neocolonialism' is as much with the use and definition of the term as with its consequences."

Second, Loretta Lees (2012, p. 156) has recently challenged us to move "away from an 'imitative urbanism' (from the idea that gentrification in the Global North has travelled to and been copied in the Global South) towards a 'cosmopolitan urbanism' (where gentrification in the Global South has a more expanded imagination)." Lees (2012, p. 158) gives us a clear warning: "We should not read gentrification in the Global South as simply the recreation of the periphery (the urban South) in the image of the supposed centre (London or New York)." Lees calls for postcolonial comparative urbanist analysis of the "hybridity of neoliberalism," and "new, indigenous, and cosmopolitan theorizations" of gentrification in the Global South as well as the Global North.

Third, in a valuable, deeply contextualized analysis of the curious absence of gentrification discourse amidst the dramatic urban transformations of Hong Kong, David Ley and Sin Yih Teo (2013) explore the intricate ambiguities between epistemology and ontology. Drawing on Aihwa Ong's (1999) concept of "alternative Asian modernities," Ley and Teo document a broad chorus of voices from the Asia-Pacific that challenge the dominant Anglo-American narratives of neoliberalization -- emphasizing instead the distinctive built forms and political processes that culminate in the synthesis of market and state power in the constitution of a "joint urban project" (p. 14). Urban renewal is fused with national developmental imperatives. Crucially, this alternative Asian modernity holds out the promise, Ley and Teo (2013, p. 1) write, "most

surprising from a Western perspective,” of “a potentially progressive dimension for some impacted residents” through systems of negotiated compensation and broad improvements in housing conditions. “[T]he cultural hegemony of property in Hong Kong and other parts of East Asia makes redevelopment of some low-income districts a more ambivalent process,” Ley and Teo conclude, “for locked within the displacement of redevelopment is the hope of a negotiated settlement with the state leading to improved housing.”

This emergent movement for a ‘cosmopolitan decolonization’ of gentrification research expresses the best of intentions in critical scholarship and emancipatory politics. It challenges those of us who write from and about gentrification in the Global North to look beyond the narrow confines of Northern cities, while also realizing, as Maloutas (2011, p. 43) reminds us, that only a tiny fraction of the world’s urbanites live in “the core cities that set the ways of seeing and understanding socio-spatial change that often become the deforming lenses through which we examine what happens in the rest.” Yet our deferential reverence to the analytical sophistication of cosmopolitan contingency intensifies a striking paradox: today’s postcolonial theory has achieved what growth-machine advocates have been trying to do ever since the Real Estate Board of New York took out expensive ads on the editorial page of the *New York Times*, asking “Is Gentrification a Dirty Word?” (Smith, 1996). Alternative urban modernities that defy the contextual specificities of Anglo-American gentrification nevertheless involve the displacement of nearly a tenth of Shanghai’s population in a single decade (Iossifova, 2009), 720 thousand for the Seoul Olympics (COHRE, 2007), 3.45 million across the Asia-Pacific between 2003 and 2006 (COHRE, 2006), and at least 1.5 million for the Beijing Olympics (Shin, 2012). Along with the uncounted millions displaced by the kinder, gentler violence of market forces,

these are the costs for which the cosmopolitan turn provides no vocabulary, no language of questions or resistance. There is a world of difference between a politics that challenges gentrification as the new urban colonialism (Atkinson and Bridge, 2005) and one that attacks *the terminology, theory and politics of the critical analysis of gentrification* as an apparatus of colonial domination. This would not be the first time that critical sensibilities of an inclusive poststructuralist left were hijacked to serve the purposes of deeply retrograde authoritarian alliances (see Smith, 2009). At precisely the moment when gentrification is becoming truly transnational and powerfully planetary, we are asked to liquidate the intellectual and political investments of generations of critical inquiry.

To be sure, Lees is correct that we need an “expanded geographical imagination” to understand the variegated and cosmopolitan causes and consequences of the class transformation of urban space in different circumstances. Yet for three decades now, gentrification research has been marked by deep sensitivity to the “contingency and complexity, set within the structural dimensions of advanced capitalism” that Beauregard (1986, p. 35) called for in his landmark “Chaos and Complexity” chapter. Moreover, the central features of an allegedly distinctive Asian urban paradigm -- aggressive and comprehensive state planning, contested yet significant systems of relocation and compensation, and what Maloutas calls the “cross-class national pride” of urban modernization -- only present a contradiction of gentrification theory if we adopt a narrow, obsolete definition tied to “classical” Glass-style invasion-and-succession of particular city neighborhoods, thus ignoring the vast, interdisciplinary, and contextual literatures on urban renewal and state-driven gentrification (Lees et al., 2010). Indeed, it is far more meaningful to suggest that the contextual, indigenous fusion of urban transformation with consolidated Asian

nation-state power and popular consent is the refined achievement of a gentrification project that is far more effective than anything ever accomplished in the Anglo-American world. It is testament to the success of gentrification in the Asia-Pacific developmental state that the word “gentrification” is so rarely used: a pre-emptive eviction of the term helps delay and suppress the politics of resistance (Slater, 2009), although Ley and Teo (2013) document a recent “ontological awakening” amidst worsening inequality. No matter what it is called -- urban renewal, regeneration, development, modernization, or the Shanghai World Exposition’s unbridled optimism of “Better City, Better Life!” -- this is the *nationalization* of gentrification amidst the transnational interconnections of planetary urbanization. This is the *essence* of gentrification, not its Other.

### **Gentrification and the Noösphere**

My third claim is the most provocative, and the most important. But it’s also the most primitive and naive, because it’s so clear to anyone who reads the some of the latest news headlines in light of the gentrification and social-Darwinism literatures that we’ve explored together thus far in this article. Contemporary gentrification is a recombinant urbanism of old and new, defined by competitive processes accelerated through the algorithmic transformation of market relations in housing, labor, and education. Silicon Valley’s noösphere is reproducing dangerous new frontiers of Turner’s evolutionary logics in dynamic transnational urban networks of class competition. In an essay written not long before his “Evolution of Gentrification” chapter, Neil Smith (2009, p. 54) challenged the idealism of poststructuralism for “engender[ing] the implicit assumption that to change the world it is necessary first and foremost to change the discourse,”

as against the structured material inequalities of class in the capitalist mode of production. Yet this distinction has quickly blurred in the years since the global financial crisis, as the most dynamic frontiers of capital accumulation are now pursuing the commodification and monetization of discourse itself on a planetary scale. Apple first surpassed Exxon in August of 2011 to become the world's most valuable company in terms of market capitalization, and is now valued at \$719 billion; Facebook's market cap, at \$232 billion, recently surpassed JP Morgan; Google posted revenues of \$66 billion last year, 89 percent from advertising. If we take a broad view of the old and new names in cognitive-cultural capitalism (Scott, 2007, 2011) ranked by market capitalization, we see Apple, Google, Microsoft, China Mobile, Facebook, Verizon, Oracle, Disney, Amazon, AT&T, IBM, Comcast, Intel, Cisco, Taiwan Semiconductor, and Qualcomm; this is a combined market capitalization of \$3.66 trillion devoted to an informational mode of production in which the human attention span has been assembled into a transnational resource to be dynamically measured, managed, and mined. Poststructuralism is the new frontier for Wall Street finance, Silicon Valley venture capital and technological innovation, and a remarkably cosmopolitan global alliance of emergent middle classes, political elites, and energetic, idealistic students in a variegated planetary and urbanizing capitalism. In this context, a wider array of individuals, firms, and state institutions in cities -- even the most "ordinary" cities (Robinson, 2006) -- are forced to compete and adapt across an increasingly dynamic, insecure, and expanding networked noösphere of accelerating measurement and marketization in housing, employment, and education. Urban assets -- their real-estate markets, their educational institutions, their 'human capital' -- are all being mobilized more aggressively and creatively to support capital accumulation (cf. Smith, 2000), eroding the relevance of intra-urban distinctions

between old-fashioned urban renewal, Jacobs' "spontaneous self-organization," the escalation of prices in existing elite areas, and massive industrial or waterfront mega-projects (Olds, 2001).

Both Marxist perspectives on relations to means of production and Weberian understandings of economic, prestige, and political orders are being reshaped by the realignment between Wall Street and Silicon Valley -- between the forces of finance and information. As more cities are drawn into the evolving competition of urban entrepreneurialism -- the irresistible mirage that every town, urban investor, and creative-class code jockey can win through accumulation by information -- city neighborhoods become the interfaces between localized processes of social reproduction, the multiply-rescaled relations of political geographies, human migration, and movements of fixed capital, and the new "non-place urban realm" of the "massive communication system" (Webber, 1964) of cognitive-cultural capital accumulation. The varied and semiautonomous elements of this system develop and interact to shape the context in which intensified human competition quite literally takes place. The class transformation of urban space is creating a new "cognitive Darwinism" -- but in a capitalist space-economy that has replaced Turner's disappearing American frontiers and the industrial urbanization of Dewey, Park, and the Chicago School with today's cosmopolitan yet starkly unequal planetary discourse of a knowledge economy driven by the meritocracies of education and creativity. Gentrification is evolving through intensified competition at the urban interface to planetary circuits of communication and learning -- the noösphere that inspired human evolutionary aspirations of Sexton's Global Network University. The fine-grained localized patterns we've learned to recognize in the gentrification of particular city neighborhoods are alternately reinforced and dissolved by gentrification as a dimension of planetary urbanization. Understanding this process

requires us to *expand* our imagination of gentrification -- not to *provincialize* it to particular nations, cities, or neighborhoods in the Anglo-American Global North (Maloutas, 2011).

The evidence in support of this interpretation comes from several quarters. First, the “exponential rise” (Hodgson, 2009, p. xxii) of Darwinism in economics has paralleled and reinforced the neoliberalization of space, of urban theory and policy (Peck and Tickell, 2002). Edward Wilson’s ‘sociobiology’ has coalesced with Gary Becker’s (1976) suggestion of a “genetic determination of ... human behavior modelled along neoclassical lines,” Arthur Robson’s (2009) attempt to “show how Darwinian evolution would lead to utility-maximizing behavior consistent with the standard axioms of rationality,” and Kenneth Binmore’s (2005) use of game theory to build an “evolutionary theory of morality and natural justice, while retaining utility-maximizing agents” (all quotes from Hodgson, 2009, p. xxiii, xxv, xxv). The “explosion of research in economics inspired by evolutionary thinking” (Dopfer, 2005, p. 3) has been so intoxicating for the possibility of hacking the source code of *homo sapiens oeconomicus* (HSO) as “the basic unit of an evolutionary” paradigm that economists have become uncharacteristically reflexive on the secrets of their success:

“What are the factors that may conceivably account for the present dynamism of evolutionary economics? We get a first hint when we consider that, in their field of study, orthodox economists encounter decreasing marginal returns with respect to new theoretical findings per additional unit of research effort or research time. Linking this with the conjecture that creative minds are attracted by new opportunities for developing their theory enables us to obtain a hypothesis that

accounts for the phenomenon that outstanding neoclassical economists are increasingly turning to research areas that can be linked to evolutionary ideas.”

(Dopfer, 2005, p. 3).

strange parallel with social justice and the city

[put this earlier] Gentrification is the upward class transformation of urban space, under conditions of entrenched or worsening structured social inequality.

cognitive rent

if I describe the post-Tiananmen revanchist urbanism with Chinese Characteristics, the question is not will the natural-language processors allow [insert his name] to understand what I'm saying; the algorithms are now clear -- anything that gets an audience of more than 500 views gives the author legal liability, and so I have the deepest respect for anyone capable of translating these words to talk about the relocation meeting the five Vs for verified identities

pivot to Silicon Valley -- the relocation is now protected by corporate-capitalist alliance with Silicon Valley

In the 2011 Time 100 Poll - the most influential people in the world, includes Mark Zuckerberg, Ray Kurzweil, and Steve Jobs.

The escalating competition has inspired a new wave of apocalyptic commentary. William Deresiewicz, a former English professor at Yale, describes the students of America's Ivy League as "Super People," an "alien species" of "bionic hamsters" (quoted in Heller, 2014, p. 68). At my university, one of the recently-admitted students is a fifteen-year old who completed high school in two years; along the way, he invented an environmentally friendly soap made from waste oil and created a handwriting recognition software application, before winning a nationwide competition for a lucrative scholarship (Chan, 2014). At the same time, one of my students searching for an apartment in Vancouver's turbocharged rental housing market arrived to one viewing only to find fifteen other students, all presented with application forms printed with a question that transformed the advertised monthly rent into a bidding war: "How much *more* are you willing to pay per month?" Elsewhere in the city, one of the restaurants in the rapidly-gentrifying epicenter of poverty and disinvestment sells tokens that can be given to the local homeless and panhandlers to redeem for a free sandwich; the "idealistic" entrepreneur's "quest to make an impact on the neighbourhood" is chronicled in a "docu-reality" series featured on the Oprah Winfrey Network (see Aiello, 2014). Another restaurant on the gentrification frontier features a \$0.50 menu item with a promise to donate half the proceeds to local charities: "misfortune cookies." On the other side of a downtown transformed by multiple generations of urban renewal, the latest celebrity-architect trophy-tower includes today's trending accessory for the socially-conscious condo buyer:

"Vancouver House residents will also be connected to the global community through World Housing, which helps build houses for Third World families living in garbage dumps. For every suite purchased at Vancouver House, a new home

will be donated to a family in Cambodia. Strengthening the connection, each Vancouver House resident will be able to meet the family it assisted, either on paper or online.” (Stone, 2014, p. G6).

Bjarke Ingels, the young starchitect of Vancouver House who has declared that architecture should be properly understood as “Worldcraft” -- turning “surreal dreams into inhabitable space” -- has gone on to submit one of the designs under consideration for Google’s new headquarters campus in Mountain View, California. The plan would replace an existing patchwork of 7.5 million square feet of leased office space with a new landscape for which Google would be its own developer, creating the equivalent of four Empire State Buildings’ worth of office space in large, transparent canopies that will be movable “like furniture” (Dougherty, 2015).

### **Notes to keep**

Third, these embedded assumptions were built into the architecture of transnational financialization as neoliberalism governed the emergence of Lefebvre’s planetary urbanization since the 1970s; at the same time, the military innovations of the Cold War built the systems allowing Silicon Valley to create -- to map, measure, and monetize -- the extraordinary new frontiers of digitized planetary human communication. Fourth, all of these trends have coalesced to weave the old localized material realities of urban land rent into a globalizing acceleration of the processes that Harvey (1989) has diagnosed as the “urbanization of consciousness.” Turner’s frontier thesis now describes the advancing waves of colonization and capitalization of the Teilhardian noosphere that John Sexton named to describe the very real competition amongst

‘creative’ workers, informational entrepreneurs, and students in contemporary cognitive capitalism. This competition is a carefully choreographed meritocracy -- with a cosmopolitan fairness that ensures its durability -- but it creates especially harsh competition in education, labor, and housing. World urban networks are now conditioned by these intensifying meritocracies of the best of the best, creating a world urban system of localized class transformations of urban space -- yielding distinctive geographical frontiers suited to particular contexts of culture and society. Such contextual adaptation is explicitly evolutionary, and many of the architects of the noösphere are convinced that this is a very good thing.

Note in relation to Sheppard and Barnes’ point on regression and eugenics. Barnes’ emphasis that regression can be used in a variety of ways, progressive to retrograde, applied most crucially in the era of Fordist social-science research, when quantitative research required considerable human labor and active intervention along multiple stages of the research enterprise.

As more and more of this research becomes embedded into software systems, apps, and the evolving interaction effects of networked Big Data socio-metrics, it is even more essential to examine the foundations of these techniques and how they are applied. And this is always about social ranking for the purposes of competition -- drawing distinction.

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