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Entrepreneurship, innovation, and human flourishing

Magnus Henrekson

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Abstract This essay uses Edmund Phelps' new book *Mass Flourishing: How Grassroots Innovation Created Jobs, Challenge, and Change* (Phelps 2013) as inspiration to discuss innovation and entrepreneurship. The book is laudable for its discussion of what constitutes a "good life". Phelps argues that true life satisfaction cannot be achieved through a purposeless quest for wealth and material consumption, but rather through adventure, entrepreneurship, and creative endeavors. Weaknesses of the book include an overly glossy characterization of the period before World War II, a niggardly evaluation of European innovation, and the lack of convincing empirical evidence for the claim that the rate of innovation has slowed. These flaws are regrettable given the importance of the book's main message: innovation and creative entrepreneurship are not merely the keys to economic growth, but to life satisfaction as well. This essay discusses topics in entrepreneurship research linked to the book, including the link between innovation and entrepreneurship, the role of institutions for entrepreneurship, and the tendency of national accounts to under-record the social value of innovation and entrepreneurship. If the measures used do not capture the full social value of innovation, we are likely to underestimate the genuine rate of innovation. Government policy may also be misguided. Finally, the challenge to entrepreneurial capitalism posed by the postmodernist research paradigm is discussed.

Keywords Innovation · Entrepreneurship · Institutions · Culture · Modernism · Postmodernism · Values

JEL Classification L26 · M14 · P47 · Z13

M. Henrekson (✉)
Research Institute of Industrial Economics (IFN),
P.O. Box 55665, 102 15 Stockholm, Sweden
e-mail: magnus.henrekson@ifn.se

When policymakers and other observers emphasize the role of entrepreneurship, they almost exclusively focus on its role as a generator of jobs, economic growth, and wealth. Implicitly or explicitly, the focus is on the material contribution of entrepreneurship to consumption and wealth. The jobs created by entrepreneurs are in this view seen as important because they provide income to the employee, income that can be used as a means to derive utility from consumption. The importance of creativity and entrepreneurship for more intrinsic humanist values such as self-actualization is often neglected by economists.

Entrepreneurship came to the fore in the public policy discussion in the 1990s. Silicon Valley was in the limelight, seen as a role model to be emulated, providing the way forward towards even higher prosperity in the West. Then the IT-crash struck in 2000–2001, and, in the aftermath, entrepreneurship and the individual entrepreneur could no longer serve

as the unrivalled protagonists in the political gospel painting Utopia around the next corner. Entrepreneurship had been overexploited by politicians in the same way as they had put physical capital formation on a pedestal in the 1950s and 1960s, after it had been singled out as the prime driver of growth by leading development economists.

At present, policymakers are busy overselling yet another concept: innovation. The US launched its national innovation strategy in 2009, and, not unexpectedly, the goals were lofty: "President Obama's *Strategy for American Innovation* seeks to harness the ingenuity of the American people to ensure economic growth that is rapid, broad-based, and sustained. This economic growth will bring greater income, higher quality jobs, and improved quality of life to all Americans."[1] The OECD launched its innovation strategy the following year (OECD 2010), and this has been followed by *OECD Reviews of Innovation Policy* for the individual member countries (e.g., OECD 2013). In the European Union, the so-called Innovation Union has been launched as a key component in the EU 2020 initiative. Here, the tone is one of urgency, verging on desperation: "We need to do much better at turning our research into new and better services and products if we are to remain competitive in the global marketplace and improve the quality of life in Europe. We are facing a situation of '**innovation emergency**'."[2]

Unfortunately, when a certain concept is pushed heavily by politicians, they seldom refrain from acquiring and touting measures aimed at promoting it, through legislation and various programs. This resulted until the 1970s in investment subsidies and extremely generous rules for depreciation allowances, an extreme expansion of the state-financed university sector in the 1980s and 1990s in many countries, and a plethora of measures encouraging self-employment and small firms in the 1990s and 2000s. The focus on innovation is currently resulting in a host of policy measures. These include patent box systems offering lower corporate tax rates on patent income, reduced social security contributions for R&D workers, reduced tax rates in the early phase for R&D-intensive startups, subsidized loans, and loan guarantees to high-tech startups, etc.

But should economic growth—whether primarily fuelled by physical or human capital investment, entrepreneurship, or innovation—be the main goal for policymakers? Would not an equally worthy challenge be to strive to create an ecology within which free individuals through their own choices can create a good life for themselves and their fellow humans? How can that be done? What then constitutes a good life? Is it almost solely about making money in order to get the means to acquire consumption goods and engaging in leisure activities? Do people attempt to innovate and create companies merely to make money? In Sweden alone, more than 3,000 songs are submitted annually to the contest where artists compete to represent the country in the international Eurovision Song Contest. Do people write these songs mainly in the hope of receiving royalties? Is this the main motivation for the artists? These are crucial questions. Economists are rarely if ever prepared to answer these questions with an unqualified "Yes", but an affirmative answer is implicit in many analyses.

Edmund Phelps, the 2006 Nobel Laureate in Economics and Director of the Center for Capitalism & Society at Columbia University, has written a thought provoking and ambitious book: *Mass Flourishing: How Grassroots Innovation Created Jobs, Challenge, and Change* (Phelps 2013). Unlike the vast majority of economists who shy away from the above questions, Phelps tackles them head on. Innovation and entrepreneurship are central to his story. The purpose of this essay is twofold: (1) to review Phelps' book, and (2) against the backdrop of the book's analysis, to suggest further areas for future research in entrepreneurship.

1 Three valuable contributions

Phelps convincingly argues that the ideas and ideals that sprang from the Enlightenment were a prerequisite for the extraordinary material and personal growth that the world has experienced since the industrial revolution. The world population in the year 1800 had not yet reached one billion. The vast majority was doomed to lives best described as nasty, brutish, and short. Two centuries later, there are more than seven

[1] Cited from http://www.whitehouse.gov/issues/economy/innovation. Accessed November 14, 2013.

[2] Cited from http://ec.europa.eu/research/innovation-union/index_en.cfm?pg=why. Accessed November 14, 2013. Bold emphasis in the original.

billion people, and a large and rapidly growing share of them live under decent or very good conditions. Most people in the West enjoy a standard of living and level of comfort far exceeding that of the most powerful rulers just a few hundred years ago.

There is little doubt that individualism was important for the unleashing of innovation and the ensuing growth. Gorodnichenko and Roland (2010) show that more individualist cultures are more innovative and have faster economic growth. Further evidence is provided by Taylor and Wilson (2012) in their thorough analysis of several independent datasets of culture and innovation from 62 countries spanning more than two decades. They find that most measures of individualism have a strong, significant, and positive effect on innovation. The authors, however, also suggest that the simple traditional–modern dichotomy is insufficient to understand the role of culture. They argue that innovation at the national level can be fostered by patriotism and nationalism, while both familism and localism diminish innovation rates. Thus, although it seems clear that individualism encourages innovation, certain aspects of collectivism may also be essential.

Second, Phelps frequently stresses that "the good life" cannot be achieved through material consumption alone. On the contrary, a meaningful life is largely achieved through the flourishing of an individual as a producer of offspring, goods, and services, as an actor who solves problems, faces challenges, and discovers, creates, and acts upon opportunities. Hence, people do not care exclusively about outcomes, they also value the procedures that lead to the outcomes. Frey et al. (2004) refer to this as "procedural utility". This holistic emphasis is also in line with evidence that the self-employed typically report greater job satisfaction and happiness than do employees, despite working longer hours (e.g., Blanchflower and Oswald 1998; Benz and Frey 2004). Similar findings are reported by Csíkszentmihályi (1990), who even found that most people were, in fact, happier at work than at rest. He also argued that people tended to think they were happier in their free time, and would choose to have more free time than work, even though it made them unhappier.

If facing challenges, discovering, creating, and acting upon opportunities is fundamental for an individual who wants to have a good life, we may note that this is often labeled entrepreneurship. However, there is no rule requiring it to be enacted in the economic sphere. It may be social, political, religious, and even institutional in character. Institutional entrepreneurship is exceedingly important, but often overlooked (Henrekson and Sanandaji 2012). Deng Xiaoping was one of the most important institutional entrepreneurs in recent history. The forces unleashed through his reform efforts have had an immense impact and perhaps even changed the overall tide of world history. The many aspects of entrepreneurship is also reflected in the development of entrepreneurship research "in many subfields within several disciplines" (Carlsson et al. 2013, p. 913).

A third valuable contribution of Phelps' book is that he tirelessly drives home the point that the ultimate source of prosperity is not more work, physical investment, or research. The real source is innovation and the ensuing dynamism through entrepreneurship. In this dynamic process, investment opportunities arise, jobs of higher productivity are created, and the rate of return on human capital increases, spurring people to acquire useful and highly valued knowledge both through formal schooling and at work.

Unfortunately, Phelps does not build his argument by referring to the literature and studies on entrepreneurship and innovation. By and large, he ignores what scholars have painstakingly compiled, showing the importance of entrepreneurship, innovation, and startup activity for economic performance. See Van Praag and Versloot (2008) and Braunerhjelm (2012) for overviews of the extensive literature.

For the most penetrating analysis demonstrating why innovation is the real source of growth, I would recommend William Baumol's recent book *The Microtheory of Innovative Entrepreneurship* (Baumol 2010). According to Baumol's calculations more than nine-tenths of the rise in GDP per capita since 1870 can be attributed to innovation. This does not imply that investment in education and physical capacity is unimportant, only that these outlays were made possible and worthwhile because of the resources and opportunities provided by the innovations. If this analysis is correct, it follows that innovators cannot capture more than a minute share of the value that flows from their innovations; spillovers are enormous (more on this below). If Baumol's calculations are correct, spillovers exceed 90 %.

If innovations are so important, this complicates the analysis of innovation in mainstream economics. First, it is obvious that comprehensive innovation and R&D activities are carried out despite the inability of

innovators to capture more than a mere fraction of the value. Second, it would be practically impossible to fully compensate innovators for the spillovers, because "if the innovators of recent centuries had not lost any of the benefits they generated—that is, if spillovers had been zero, real wages today would be barely higher than their levels before the Industrial Revolution" (Baumol 2010, p. 81). Moreover, I dare say that innovations could not become so valuable had there not been large spillovers resulting in substantial gains in real income of people not involved in the innovative activity. The very spillovers that many economists lament provide most of the basis for the ensuing entrepreneurship through which the potential value of an innovation materializes.

One important challenge for entrepreneurship scholars is to better explain that, while innovation may be the ultimate source of growth, innovation per se is not sufficient for growth. An innovation, however novel and inherently valuable, contributes very little to the general welfare unless it is mediated and leveraged through productive entrepreneurship. The current overuse of innovation as a panacea for virtually all ailing problems runs the risk of forgetting that without entrepreneurship, especially of the high-impact variety, the inherent social value of innovation will not materialize.

This is not to deny that there may be a tradeoff between the increase in innovative activity and the diversion of these benefits through spillovers. But the tradeoff is likely to be far less severe than what is customarily assumed by many mainstream economists. It is an important research issue to learn more about this tradeoff and how it may vary across industries and over time.

2 Questionable claims

Despite the strong points of Phelps' book, I am not ultimately convinced by his central thesis about the decline of innovation and the causes he suggests. In this section, I will try to explain why. Along the way, I will also give suggestions for future research.

2.1 Values are important, but Phelps paints an overly simplistic picture

Phelps gives the impression that the modernist ethos of individualism, thinking for oneself, experimenting, overcoming obstacles, the will to compete, and making a mark largely prevailed in the West from roughly 1850 until 1970.

This is an oversimplification, inasmuch as there was enormous opposition to the flourishing of the individual throughout those years. This took various forms, ranging from religious opposition and labor union activism to democratic socialism and dictatorial fascism and communism. America was in no way immune to these tendencies. After the Great Depression and the blow it administered to the classical liberal faith in the efficiency of the market economy, and after World War II with its de facto planned economy in many areas, the US was to a large extent a heavily regulated economy. For instance, the highest marginal tax rate peaked at 91 % in the period 1952–1963 (Slemrod and Bakija 2008). Even in Sweden, the highest tax rate never surpassed 85 %, though a higher share of earners were effectively subject to these taxes in Sweden than the US (Stenkula et al. 2014). Many important industries in the US were heavily regulated, including airlines, interstate trucking, banking, and telecommunications. In fact, it was not until the Presidency of Jimmy Carter (1977–1980), and even more markedly under Ronald Reagan (1981–1988), that these tendencies were rolled back. Note that the Reagan Presidency was well after the 1850–1970 era identified by Phelps as the least interventionist in history.

Moreover, is it really true that values have become more traditionalist since the 1970s? Admittedly, there are pockets of fervent religiosity, and small but vocal minorities in all Western countries that long for conservatism and a return to pre-modernist values. But I believe the overall tide is heading in the reverse direction, into the late modern. No doubt, late-modernism is not totally devoid of traditional (retro) values, most notably a longing for the natural and genuine. Almost everywhere in the West there is an emphasis on the local community, including local production and a rising demand for participation in decision making in economic and political life (Jönsson et al. 2014). These strands run parallel to a tendency towards increased individualism that is stronger than ever. It is true that the family and religiosity continue to decline in importance, as evidenced by lower fertility, more out-of-wedlock births, and increased divorce rates. There has, however, emerged an exceptional and now legitimate

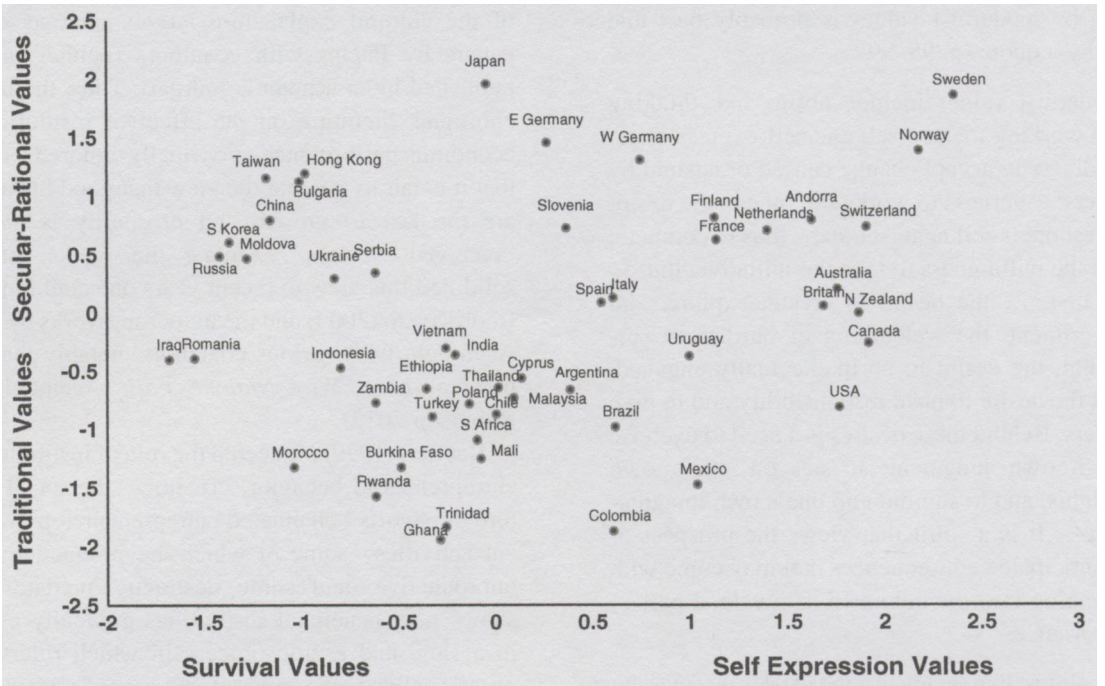

Fig. 1 Values and culture as measured by World Values Survey (in 2006). *Source* World Values Survey, http://www.worldvaluessurvey.org/

diversity in lifestyles and life choices, a variety that would have appeared appalling to a majority of the population a mere generation ago (Norris and Inglehart 2004; Bauman 2007).

To help get a handle on this transformation, there is a highly respected two-dimensional value scale developed by Ronald Inglehart and a number of collaborators at the World Values Survey (e.g., Inglehart and Welzel 2010). Figure 1 depicts the positions of the 60 countries that participated in the 2006 survey. The traditional/secular-rational values dimension captures the degree to which religion is important. Societies near the traditional pole emphasize the importance of parent–child ties and deference to authority, along with absolute standards and traditional family values, and reject divorce, abortion etc. Societies with secular-rational values have the opposite preferences on these issues.

The second dimension of cross-cultural variation is linked with the transition from industrial to post-industrial societies, evidenced in a polarization between survival and self-expression values. The latter give high priority to environmental protection, tolerance of diversity, and rising demands for participation in decision making in economic and political life.

Figure 1 clearly shows that the US does not score at the top in either of these two dimensions. Although it places fairly high in terms of self-expression values, it leans strongly towards the traditional pole in the traditional/secular-rational values dimension, where it is on the same level as countries like Thailand, Argentina, Poland, and Indonesia.

Thus, the dichotomy traditional/modern is neither sufficiently nuanced to capture cross-country differences nor changes in values over time. As a corollary, it is very unlikely that such blunt characterizations of different cultures can explain differences in innovativeness, creativity, and entrepreneurship. This is also in line with Taylor and Wilson's (2012) findings reported above.

Despite the lack of nuance in Phelps' discussion of values and culture, he ends up with a very strong conclusion (p. 104): "In accounting for how nations rank, it seems that we can get along with cultural data alone, because the economic institutions are merely expressions of the economic culture."

A closely related issue is the implicitly normative judgment made by Phelps. He appears to take for granted that everybody would like to be "modern", that this is *the* way to attain "the good life". What he

means by modernist values is probably best understood by a quote (p. 98–99):

> Modernist values include norms like thinking and working for yourself and self-expression ... readiness to accept change caused or desired by others; eagerness to work with others; the desire to test one's self against others, thus to compete; and the willingness to take the initiative, thus to go first. ... the desire to create, explore, and experiment, the welcoming of hurdles to surmount, the desire to be intellectually engaged, and the desire to have responsibility and to give orders. Behind these desires is a need to exercise one's own judgment, to act on one's own insights, and to summon up one's own imagination. ...It is a spirit that views the prospect of unanticipated consequences that may come with voyaging into the unknown as a valued part of experience.

This is almost like saying that the ideal is that everybody is entrepreneurial. But that is unlikely to be a recipe for increased welfare and economic growth. Rather, empirical evidence indicates that a small number of high-growth firms ("Gazelles") and high-impact entrepreneurs are crucial for net job creation and economic growth (Henrekson and Johansson 2010). Thus, in an institutional environment favorable for high-impact entrepreneurship, many more jobs will be created where innovativeness, creativity, and an entrepreneurial spirit is *not* a requirement for most people. This is probably more in line with the actual preference of most people (e.g., Hakim 2000). From a social perspective, it is likely that society would function better if most people in their role as producers found a purpose in striving for excellence irrespective of what goals one pursues; for instance, to find one's good life by being appreciated as an excellent plumber or an excellent village school teacher and not just a sublime musician, sports star, business executive, or billionaire entrepreneur in the global village (Gardner 1961).

2.2 Culture versus institutions as explanations

The only qualification Phelps (p. 104) acknowledges to the primacy of culture in explaining differences in the wealth of nations is the degree to which institutions offer economic freedom "to invest, innovate, compete and enter." The direct evidence cited in favor of the cultural explanation largely consists of two papers by Phelps with coauthors (neither of them published in an academic journal). Thus, the by now enormous literature on the effect of institutions on economic performance is virtually ignored., despite that it is fair to say that the view that good institutions are the key to growth and prosperity is the new "received wisdom". Among the works that has solidified this view in recent years one could mention Rodrik et al. (2004) and the numerous works by Daron Acemoglu with various coauthors, notably the monumental book *Why Nations Fail* (Acemoglu and Robinson 2012).

Baumol (1990) pioneered the role of institutions for entrepreneurial behavior, viz. how "the social structure of payoffs" channeled entrepreneurship to different activities—some of which are productive, some unproductive, and some destructive/predatory. He shows how beneficial institutions gradually evolved in a slow and erratic process in which rulers were occasionally forced to grant and reconfirm privileges to their subjects. This provided the seed for productive entrepreneurship. When this proved to be wealth enhancing, and since there was institutional competition between cities and small states across Europe, a process of institutional change could gain momentum, eventually leading to an institutional setup characterized by the rule of law, democracy, secure property rights, and a number of other characteristics amenable to productive economic activity (North and Thomas 1973).

In my judgment, felicitous historical circumstances provided the seed for institutional change. Because these initial changes turned out to provide the basis for wealth-enhancing entrepreneurship, further institutional improvements were demanded by the public. Fierce institutional competition among rulers in Europe made those rulers more prone to grant such improvements. In my reading of the evidence, these changes preceded the cultural ideas highlighted by Phelps. As emphasized by Smith (2003), people have a clear tendency to be ecologically rational. In our context, this means that moral standards and cultural beliefs tend to adapt to current opportunities and practices. This is further suggested by the fact that poor people who emigrate from a country with unfavorable to one with propitious institutions are often quick to adjust their behavior and boost their own productivity (Olson 1996). Another salient

example is the rapid change in values and beliefs in contemporary China. Moreover, per capita income is more than 50 times higher in the US than in countries like Sierra Leone and Haiti, despite the fact that those cultural ideas and norms that, according to Phelps, are the main determinants of cross-country income differences are also known or at least knowable in those countries.

In short, attitudes and norms in a society are to a great extent likely to be a codified product of the social structure of payoffs. In a long-term perspective, attitudes and institutions cause each other in complex ways (Alesina and Giuliano 2013), but, in my view, the evidence suggests that, if current institutions encourage welfare-enhancing entrepreneurship, it is more likely that the electorate will vote for further institutional reform strengthening the entrepreneurial climate, and vice versa (Khalil 1995). This is good news. It is far easier to change taxes and other pertinent institutions than to try to directly influence attitudes to entrepreneurship and free enterprise. Still, a favorable and inclusive institutional setup is a social construction. History proves that it was extremely difficult to invent and to sustain as a social equilibrium. If it had not delivered increased prosperity, it would not have survived.

Boettke and Coyne (2009) and Henrekson and Stenkula (2010), among others, discuss at some length which institutions and policies that are important in creating an ecology favoring innovation and productive entrepreneurship. But in order to convince policymakers and mainstream economists, carefully designed microeconomic studies are called for. One pioneering example is Kortum and Lerner (2000), who convincingly show that an important policy reform in the US in 1979 paved the way for the modern venture capital-financed innovation sector. Another example is the well-identified work showing that the 2003 tax reform in the US facilitated the reallocation of resources from mature firms and industries to growth firms (Chetty and Saez 2005).

Thus, much more research in this respect is called for to gain a fuller understanding both qualitatively—which are the key institutions and how do they interact with one another?—and quantitatively. To be able to quantify the effect of changes in a specific institution, such as a key tax rate or specific details of the employment security legislation, empirical research requires heterogeneity of institutions as in cross-country comparisons or instances of "clean" changes in a particular institution.[3]

Moreover, many published findings regarding the determinants of entrepreneurship have used self-employment (or a similar measure of small-business activity such as the startup rate or the business ownership rate) as the measure of entrepreneurship. This has resulted in a great deal of confusion, since most self-employed are not and do not self-report to be entrepreneurial (Hurst and Pugsley 2011; Sanandaji 2010). In particular, they have no ambition to employ anybody in addition to themselves.

Henrekson and Sanandaji (2014) show that high-impact entrepreneurship and small business activity relate in markedly different ways to the institutional environment. Countries with better institutions and more business-friendly policies have fewer low-quality firms and more high-quality entrepreneurs. Self-employment is also strongly negatively linked to per capita income levels among the OECD countries, and US self-employment rates are the lowest in Silicon Valley and Boston, generally considered the most entrepreneurial parts of the country.

Hence, it is hardly surprising that, when self-employment (or similar metrics) are used to measure entrepreneurship, no effect of taxes or regulation on entrepreneurial activity is found.[4] Taxes, combined with the differential opportunities for evasion, may increase small-scale self-employment while reducing high-impact entrepreneurship. Since small firms constitute the overwhelming majority of the observations in micro- and macro-datasets, they will dominate the result of any empirical estimation that does not distinguish between the self-employed and high-impact entrepreneurs, giving rise to spurious results for that subsample. The relationship between regulations and entrepreneurship has parallels to taxation. The self-employed and small firms can more easily evade regulations than employees of large firms. In most countries, small firms below a certain threshold are exempt from many burdensome regulations.

These inconclusive results have led some scholars to side with Phelps' view that institutions are second to

[3] Here, empirical labor economics offers a useful template, where considerable knowledge has been gained from the study of quasi experiments, often using instrumental variable techniques (Angrist and Krueger 2001).

[4] See Schuetze and Bruce (2004) for an overview of research on the effect of taxes on self-employment.

culture in explaining innovation and entrepreneurship (Hwang and Powell 2005). But to the extent that this conclusion emanates from statistical analyses where entrepreneurship is mis-measured, correction is called for. Here, a great deal of work remains to be done.

2.3 Has the rate of innovation really declined?

Phelps asserts that innovation dropped to low levels, compared to what it was before 1970, and that it has remained there since, substantially cutting the rate of growth in income and wellbeing compared to earlier periods. The cause, he points out, has not simply been excessive regulation, unfunded entitlements, and the depletion of low-hanging fruits available for exploitation by innovators. On the contrary, he claims it is largely caused by a change in values away from modernist to more traditional values. By more traditional values, he includes corporatist attitudes hostile to individualism and capitalism, as well as a devotion to solidarity, social protection, and security, which gives rise to a demand for a spectrum of underfunded entitlements. Again, I find this argument unconvincing.

A first problem with this claim is that Phelps does not present an objective way to measure an economy's innovativeness. For example, he measures an economy's capacity for innovation by the ratio of the market capitalization of a nation's equity market to GDP. This is biased by the fact that the stock market is more important in the US than in the Continental European economies. The Continental European model historically relied more on bank lending and non-public equity to finance investments (Hall and Soskice 2001). Phelps ignores the fact that this difference has little to do with the rate of innovation. Nor are asset bubbles and temporarily overvalued equity prices such as those preceding many financial crises any indication of innovativeness.

Without a doubt, the rate of growth is lower, and problems have been greater, since the financial crisis erupted in 2007–2008. Perhaps even the rate of innovation is lower, but that is in no way certain. However, what I definitely question is the claim that the rate of innovation was not on a par with earlier periods in the quarter century from the early 1980s until the onset of the 2007–2008 crisis. This was the period when the digital/ICT revolution (computers, the web, mobile phones) and globalization changed the way we live and communicate, and we have seen dramatic changes in how we spend our income and time. This view is confirmed by recent work by Gordon (2012), who expresses doubts that the high rate of innovation can be sustained. Other highly profiled scholars who speculate about future innovation, such as Kurzweil (2005) and Brynjolfsson and McAfee (2011), instead claim that the rate of innovation and change will accelerate in the future based on new general purpose technologies such as nanotechnology and bioengineering.

Closely related to the assertion that the rate of innovation, broadly construed, increased rather than slowed down, is the break in the previous trend of a growing predominance of giant corporations and the waning importance of small (and often entrepreneurial) firms. The average firm and establishment size began to decrease and the individual entrepreneur once again came to play an important role in economic development (Loveman and Sengenberger 1991).

Technical change no longer seemed to give rise to economies of scale in production the way it used to. On numerous occasions, small scale, flexibility, and customer proximity led to superior performance in smaller production units (Audretsch and Thurik 2000). Moreover, the comprehensive changes in technologies and market conditions gave rise to new business opportunities that could often be most suitably exploited within newly formed business organizations (Baldwin and Johnson 1999; Acs and Audretsch 1990). Finally, it is likely that the deregulatory process that was initiated towards the end of the 1970s in the leading countries undermined the monopoly position of many of the large corporations at the time, which spurred innovation and created new business opportunities for small firms and new entrants (Carlsson 1999). These fundamental changes were famously dubbed "The Second Industrial Divide" by Piore and Sabel (1984).

Acs and Audretsch (1988) document that these changes were associated with high rates of innovation, in particular in small and new firms. Baumol (2002, 2004) and Norbäck and Persson (2009) showed that there may indeed be a cost-efficient division of labor in innovative activity between small and large firms, where the small firms are more likely to pursue high-risk innovation projects while the large firms excel in incremental innovation. These are just a few examples of the by now enormous literature on the economics of

innovation and how that is intimately connected to entrepreneurship.[5]

Phelps shows no awareness of this enormous and ongoing research effort. If he had, I believe he would have been less likely to assert the following (p. 264): "While the rate of innovation [in the US] fluctuates it has been subdued most of the time over most of the business sectors since the early 1970s." On the other hand, in line with his modernist thesis and without quoting any real evidence in its favor he claims (p. 283): "In the 1930s, undeterred by the Great Depression, [America] posted a record-breaking rate of innovation."

The fact that Phelps both claims that the rate of innovation has dropped since the 1960s and that no European countries can be said to be truly innovative, in combination with the lack of a credible operationalization of innovation, undercuts the other virtues of the book. Phelps cannot blame this oversight on a lack of current or previous efforts to measure innovation (see Gault 2013; Smith 2005; OECD 2010 for overviews). In fact, he totally overlooks the virtual explosion of the literature aiming at capturing and measuring the various (and often elusive) facets of innovation. In the long reference list, there is not a single reference to pioneers in innovation research such as Keith Pavitt, Zvi Griliches Bronwyn Hall, Adam Jaffe, Chris Freeman, Charles Hulten, or Bart van Ark; the list could have been made longer.[6]

Under the auspices of the OECD (see OECD 2010 and the ensuing country reviews) and the European Union (European Commission 2013), enormous efforts are currently underway to measure innovation more broadly and comprehensively including increasingly refined measures intended to capture innovation activity at the firm level. In addition to traditional measures such as patenting and R&D spending, these measures aim at capturing non-technological activities such as collaborations, organizational, and marketing innovations, and include service and low-tech industries.

As soon as these data become available researchers will immediately start using them. This is both a challenge and an opportunity for entrepreneurship scholars. Neither new knowledge nor even innovation per se is sufficient to sustain long-term economic growth. First, a large part of new knowledge is not of potential economic value. Second, and more importantly, some agent(s) must distinguish the subset of economically relevant knowledge, while filtering out the rest (Braunerhjelm et al. 2010), and use the new knowledge in combination with other inputs to efficiently produce valuable goods and services. This requires entrepreneurship and "venturesomeness" (Bhidé 2008). Unless entrepreneurship scholars do their job in showing this in carefully designed and conducted studies using the new data, there is a risk that policy will be geared towards targeting innovation per se rather than towards creating an entrepreneurial ecology where innovation is *one* core activity.

2.4 Does Europe lack creativity?

Phelps throughout argues that despite the decline of modernism and dynamism in America, it remains far more innovative than any other place on earth. In contrast, he maintains that European countries are largely ossified and sclerotic (p. 309): "Europe continues to operate a stultifying corporatist economy under the tyranny of traditionalist values." Neither does he show much sympathy for what is going on in Scandinavia (p. 320): "The relatively good performance of Sweden and Norway does not refute this proposition, since on most evidence they possess little dynamism and not a great deal of satisfaction either." And more specifically about Sweden (p. 198) as having "a unique mixture of capitalism and welfarism with little dynamism." This may have been true about Sweden 25 years ago, but since then the economic system has been comprehensively reformed and the scope of government has been downsized (Bergh 2014; Braunerhjelm and Henrekson 2013).

More generally, the claim of US exceptionalism flies in the face of the findings of several of the commonly used measures of national innovativeness. The top 12 countries for the latest available year are ranked in Table 1 according to what I believe are the six most frequently used indicators. The US comes out on top in the IMD ranking, but is only ranked in fifth place by the World Economic Forum and the annual

[5] See, for instance, the collection of articles in *Handbook of Research on Innovation and Entrepreneurship* (Audretsch et al. 2011).

[6] There is one reference to Richard Nelson, but only to an unpublished working paper from 2008. Strangely enough, Phelps does not even cite Hall (2011), which would give some support for him using productivity growth as the main proxy for the rate of innovation.

Table 1 Country ranking according to six commonly used measures of national innovativeness, top-twelve countries and latest available year

Rank	IMD World Competitiveness Ranking 2013	WEF Global Competitiveness Index 2013–2014	Global Innovation Index 2013 (INSEAD, Cornell, WIPO)	No. of triadic patents per capita 2010	R&D spending as a share of GDP 2011	EU Composite Indicator of Innovation Output 2011
1	USA	Switzerland	Switzerland	Japan	Israel	Japan
2	Switzerland	Singapore	Sweden	Switzerland	South Korea	Sweden
3	Hong Kong	Finland	UK	Sweden	Finland	Germany
4	Sweden	Germany	Netherlands	Germany	Japan	Ireland
5	Singapore	USA	USA	Finland	Sweden	Switzerland
6	Norway	Sweden	Finland	Denmark	Iceland[a]	Luxemburg
7	Canada	Hong Kong	Hong Kong	Netherlands	Denmark	Denmark
8	UAE	Netherlands	Singapore	Austria	Taiwan	Finland
9	Germany	Japan	Denmark	USA	Germany	UK
10	Quatar	UK	Ireland	Israel	Switzerland[b]	France
11	Taiwan	Norway	Canada	South Korea	USA	USA
12	Denmark	Taiwan	Luxembourg	France	Austria	Belgium

Sources IMD World Competitiveness Yearbook 2013; World Economic Forum, *Global Competitiveness Report 2013–2014*; *The Global Innovation Index 2013—the Local Dynamics of Innovation* (INSEAD, Cornell University and WIPO); *OECD Factbook 2013: Economic, Environmental and Social Statistics*; OECD Stat; and European Commission (2013)

[a] 2009

[b] 2008

Global Innovation Index produced by INSEAD, WIPO and Cornell.[7] Thus, while the US to be sure is in the top group, it is in no way outstanding. Small European countries like Switzerland, Sweden and Finland achieve high marks, as do Singapore and Hong Kong.

Should the consensus evident in these rankings be dismissed as blatantly misguided and unsound? As reported in Table 1, less subjective measures testify against the claim that the US is uniquely innovative. Phelps entirely ignores the fact that Sweden, Finland, Switzerland, and several other countries have more quality-adjusted (triadic) patents[8] per capita and higher R&D expenditure as a share of GDP than the US. The sixth measure is a new composite index developed by the European Union. Here Sweden ranks number two and the US ends up in 11th place. Several smaller countries such as Switzerland and Israel have also received more scientific Nobel Prizes per capita than the US.

It is of course important to acknowledge the inherent methodological problem of comparing small outliers in Europe with the entire United States. Comparing Western Europe as a whole with the US as a whole does show that America is indeed significantly more innovative. Similarly, if the US was broken down into smaller entities, we would find that Massachusetts, Minnesota, or New York dominate even smaller European countries. That said, it is still impossible to deny that many European countries characterized by the culture and policies Phelps criticizes are among the most innovative in the world.

Moreover, few would deny that the US has a more vibrant and innovative startup sector than technologically leading countries in Europe and Asia. It has been documented (U.S. Small Business Administration 1995; Scherer 1984) that a large part of American

[7] See Dutta (2012) for details about this index. In the 2012 ranking, the US is in 10th place, superseded by no less than seven European countries along with Singapore and Hong Kong.

[8] Triadic patent families are a set of patents filed at three of the major patent offices: the European Patent Office (EPO), the Japan Patent Office (JPO), and the United States Patent and Trademark Office (USPTO). Patents included in the triadic family are typically of higher economic value: patentees only take on the additional burden of extending the protection of their invention to other countries if they deem it worthwhile.

breakthrough innovations are made by small firms or even single individuals, which has inspired Baumol (2004) to talk about a "David–Goliath symbiosis", with different distinctive roles for small and large firms, where the latter are largely responsible for incremental innovations.

But given that so many other countries score higher than or as high as the US according to the most commonly used indicators, large firms may be more innovative in these countries. Or does innovation to a greater extent take place in non-profit organizations such as universities and research institutes? Are we in fact observing different "varieties of capitalism" (Hall and Soskice 2001), where the entire set of institutional arrangements in the respective countries tends to push its firms toward particular kinds of corporate strategies? At any rate, more research is needed in order to reconcile the large inconsistencies between the view that the US is the most innovative economy and the fact that several other countries score as high or higher according to several indicators. Here, it is important to focus on entrepreneurship as a function, not as something defined by the legal entity in which it is pursued. One promising avenue seems to be the current work on corporate entrepreneurship (Eisenhardt 2012; Stam 2013).

Finally, there is a strange tension throughout Phelps' discussion of the norms and values that are required for a high rate of innovation. Even when looking back in history more than a century, he ends up concluding that the US is after all the only country that has demonstrated true innovativeness, and even in the US this is now said to be on the decline. This is a somewhat elitist definition of innovation. It appears that Phelps believes that innovation is primarily of interest for high-tech firms in advanced economies. However, this is misleading. The received view today is rather the opposite; innovation can take place anywhere, and it is equally important in developing countries (Fagerberg et al. 2010).

2.5 The real standard of living may have increased substantially after all

It is useful at this point to spell out my skepticism regarding the often heard claim that median income began to stagnate in the 1970s. It is taken for granted that the rise in the standard of living except for the top deciles, and in particular for the top percentile, has been negligible ever since. Phelps evidently concurs with this view (p. 310): "Most Western economies have been nearly stagnant—America since the mid-1970s... Employee compensation has barely grown [except for the period 1996–2004]."

These estimates are complicated by declining household size, the increase of fringe benefits such as health care, and difficulties in estimating inflation. Studies by the Congressional Budget Office and by scholars such as Bruce Meyer and James X. Sullivan (Meyer and Sullivan 2012), who adjust for such factors, find that the American middle class have experienced around a 50 % increase in real income since 1970. This growth is less than either the contemporaneous rise of the income of the affluent or that of the Golden Age of 1946–1973, but is demonstrably far from stagnation.

Given the changes in the composition of production and consumption, price level changes are progressively more difficult to gauge properly. Even the fairly conservative estimates by the Boskin Commission (Boskin 1998) concluded that the CPI greatly overestimates inflation (which leads to an underestimation of growth). This is because the CPI cannot fully capture technology-driven quality improvement, the value of completely new products, and the role of cheaper outlets such as Wal-Mart. Thus, had we measured price changes differently, we would also have drawn different conclusions about the rate of innovation. Furthermore, as documented by Broda and Romalis (2009), the rate of inflation of the consumption basket of low-income people has been sizably lower than the consumption basket of high-income people. Much of the rise of measured income inequality has thus been offset by a relative decline in the prices of products that poorer consumers buy.

Successful innovators and entrepreneurs earn rents, i.e. above normal returns as long as they can retain their competitive edge. Rents decay rapidly when they are based on activities that are easy to imitate and when the knowledge or skill is not embodied in a specific individual or organization. Normally, imitating competitors enter the market, which increases the supply and lowers the price. Alternatively, the original entrepreneur cuts prices in order to deter entry. According to rough estimates by Nordhaus (2004), innovators retain on average a mere 2.2 % of the surplus generated by their activities. Even initially the innovator's appropriability rate is estimated to be

below 10 % and it decays rapidly. Thus, the externalities of the innovation process are enormous. With the exception of a small fraction, the benefits flow to consumers in the form of lower prices.

Moreover, even the Boskin Commission may overestimate the rate of inflation for a slightly different reason. The kind of goods and services we produce are increasingly taking on a public goods character, which gives rise to a growing wedge between the value of the good to the consumer and its market price (which is what is measured in GDP). Until recently, most of our income was spent on tangible objects such as automobiles, housing, TV sets, household appliances, groceries, etc. All these goods are rival and excludable. If I use them, someone else cannot, and I also may exclude others from using them when I do not (by locking my car, etc.). Against that backdrop, it is obvious that much of contemporary consumption and time use is very different. It is indisputable that people spend a large part of their time everyday consuming online services (games, entertainment, news consumption, social media, etc.). While these services tend to have a high upfront production cost, the marginal cost is very low or even zero. They are also nonrival: the fact that one person consumes an Internet service does not preclude its (concurrent) consumption by someone else. Judging by how we spend our time, we value these new services dearly, and what we pay for them tends to be a mere fraction of their value to us.[9]

Likewise, many health care services such as hip operations and psychiatric treatments can nowadays offer a person who was previously incapacitated a satisfactory life. Were we to dare to put a price tag on the value of an additional year of life enjoying good health, it easily amounts to US$50,000 or more in today's wealthiest countries. But the treatment (i.e., the service) would likely cost no more than a fraction of that. And what is the value of the work of a nurse? Or, for that matter, the value of the work of a great teacher? Given the positive externalities of human capital, the value is likely to far exceed what gets recorded in official statistics, such as GDP.

Finally, urbanization has powerful agglomeration effects that are not yet depleted (Moretti 2012). It is by now well known that density spurs innovation, and, in densely populated areas, a greater variety of services can be supplied, and capacity utilization can be higher in service sectors characterized by non-storability (Jansson 2013).

Given that some two-thirds of all production consists of services not amenable to measurement, it is becoming increasingly difficult to assess the evolution of the real standard of living. Since the latter is also used by Phelps as a proxy for innovation (he uses productivity growth, but in his analysis there is implicitly a very close correspondence between productivity and standard of living), we cannot be sure that the slowdown in innovation is not simply a statistical artifact.

To sum up, because nonrival goods are increasing in importance, a growing wedge between the value of what we pay for many products and what they cost to produce, increasing network externalities and positive agglomeration effects, we tend to underestimate the increase in the standard of living in recent decades. On top of these problems, we should add that, even initially, innovators are unlikely to charge more than a mere fraction of the added value of the innovation. And the more competitive and the more transparent the markets are, the more likely that a large share of the value of an innovation will be captured by consumers. Once we acknowledge the interplay and cumulative effects of these factors, it is but a small step to an important and fundamental corollary: we also tend to underestimate the genuine rate of innovation.

Given the discussion above, it is not unreasonable to conjecture that an increasing share of valuable activities defies conventional measurement. But "the way we measure the economy does have a decisive effect on how governments shape policy and indeed on our own decisions about what to consume and what to save" (Coyle 2011, p. 187). The implication is straightforward: a great deal of research and applied work is called for in order to account for the full value of innovation and entrepreneurship.

3 The postmodernist challenge to entrepreneurial capitalism

Phelps points out a number of challenges for politics, and therefore for all of us collectively. Some of the most important of these are systemic issues such as implementing environmentally sustainable lifestyles, reducing welfare entitlements to sustainable levels and

[9] See Coyle (2011) for a more thorough discussion of the increasing importance of this phenomenon.

a change of focus from the individual pursuit of material ends (mindless consumerism and greed) towards more worthy personal goals.

Why is such a change of focus so difficult to achieve? Mainstream economics should probably accept part of the blame, with its dominant presumption that the sole rationale for working is that it supplies an income so one can derive utility from consumption (Frank et al. 1993). Phelps' cogent and consistent argument, that most utility and meaning emanates from people assuming the role of innovator, problem solver, and entrepreneur/producer, provides an important corrective to this one-sided view.

But there is also an ideological dimension to the current state of affairs with lower job satisfaction, less interest in politics, and less overall interest, it seems, in finding meaning by trying to "make a difference", by working for the common good with less focus on one's own material benefits. In my view, the missing piece is entirely absent from Phelps' analysis, namely the rise of postmodernism and what it signifies. The postmodernist paradigm is part of a long line of attempts to discredit the optimistic Enlightenment view of the human condition (Bloom 1987).

The postmodernist outlook should not be underestimated; it is a potent challenge to the notion that reason, the pursuit of knowledge and individual freedom are the well-springs of progress, change and a decent social order.[10]

Moreover, leading and extraordinarily sophisticated postmodernist scholars claim that there is no objective knowledge, that if you thoroughly deconstruct any claim you will uncover a person's or group's self-interest. In such a landscape, it becomes impossible to arrive at a firmly grounded ethics, since "each society creates its own codes for the benefit of the same oppressive forces" (Wilson 1998, p. 43).

If there is neither objective knowledge per se nor an epistemology that we can agree on, then it becomes impossible to uphold a meritocracy with broad legitimacy. Lacking that, there will be no legitimate and esteemed way for the highly capable and conscientious to strive and vie for positions of leadership and the pursuit of the common good. Hence, if there is no arena where individuals can transcend their own narrow and egotistical strivings, and literally become public servants, they have little choice but to retreat into their own small circle or subgroup.

Postmodernist thought also tends to sap meaning out of collectivities such as the family, voluntary associations, religious communities, and schools, without pointing to alternative ones that can function as substitutes. As a result, it becomes more difficult for individuals to find contexts that encourage them to seek and strive for a cause that transcends narrow self-interest, let alone to understand why that would be highly rewarding both personally and for society at large. Cooperation in teams or networks is fundamental in a well-functioning, highly sophisticated and innovative economy, but the arenas where cooperative skills can be learned and taught are increasingly circumscribed and called into question, thereby becoming less attractive.

My chief concern is that the postmodernist paradigm in its various forms has become dominant in academia, the media, and public discussion. I believe it is an important reason why—as documented by Phelps—a growing number of persons experience decreased job satisfaction, a lack of purpose, and a sense of meaninglessness in their lives.

Consider a person who is truly doing her best to flourish by working for the common good, for something transcending her own narrow self-interest. But, according to the by now entrenched postmodernist interpretation, this is just a clever ruse to hide the real motivation and rationale. In this cultural climate, the wings of lofty ideals are severely curtailed or may even be severed. I believe this missing piece makes it more understandable why the phenomena identified by Phelps (Ch. 10) as the most urgent problems facing contemporary capitalism have surfaced: a money culture where wealth seeking crowds out innovation seeking; financial institutions and institutional investors that are speculative, short-termist, and risk averse at the same time, which benefits marginal incumbents relative to startups; and an obsessive focus on money resulting in a rising litigiousness.

According to Phelps (248): "This culture depreciates the moral qualities that high-achieving people generally have—determination, judgment, and care—and puts a harsh light on the way in which they are ordinary or worse—their everyday habits and their peccadilloes." Yes, but that is exactly what we would expect if events are interpreted through the leans of the postmodernist paradigm.

[10] For a cogent and incisive discussion of the postmodernist research paradigm and its implications, the reader is referred to Wilson (1998, Ch. 3) and Pinker (2002, Ch. 12).

Acs and Phillips (2002) have pointed to an important element of the capitalist system without which it might have lost its political legitimacy long ago: philanthropy. Imagine what would have happened if the wealth of John D. Rockefeller, Andrew Carnegie, and the like had been inherited in full by their descendants, generation after generation, instead of being used to build universities, to grant scholarships to talented students, or to fund research and culture. Dynamic capitalism is not just about the creation of wealth through entrepreneurship but also requires the reconstitution of wealth through philanthropy. "Indeed, philanthropic efforts may be the mechanism through which capitalism sustains itself" (McGrath and Desai 2010, p. 654). Philanthropy is also about doing something for the common good, "giving back" and showing gratitude for having been so fortunate. But this is also endangered by postmodernist thinking, since it may be interpreted as purely self-serving. Or worse, that affluent people are using their money to steer academia and culture in order to favor their own class interests to the detriment of the unprivileged.

In Europe, the culture of philanthropy was crowded out by the massive build-up of welfare states in the postwar period, and it never really rebounded. In the US, it did rebound following deregulation of financial and product markets and the massive private fortunes created in its wake.

Phelps is extremely critical of how matters have evolved (p. 236): "The result was a sick society, an electorate to whom political leaders did not dare to speak the truth. This state of affairs need not have followed the Great Slowdown." But is it really true that politicians did not dare to speak the truth? It is more likely that if a politician had spoken the truth (s)he would have been thrown out of office or never have been elected. It is also more likely that a politician would prefer to be elected because (s)he spoke the truth. That would make things easier when in office. But in an era permeated by the notion that there exists no objective knowledge, why should we vote for a politician pointing to a multitude of serious problems that requires austerity and sacrifices?

The irony of it all has been brilliantly summarized by evolutionary psychologist Pinker (2002, pp. 426–427):

> It is ironic that a philosophy [postmodernism] that prides itself on deconstructing the accoutrements of power should embrace a relativism that makes challenges to power impossible, because it denies that there are objective benchmarks against which the deceptions of the powerful can be evaluated. ... Without a notion of objective truth, intellectual life degenerates into a struggle of who can best exercise the raw force to "control the past".

So what are the challenges and opportunities for entrepreneurship scholars raised by postmodernism?

First, it is only by measuring, documenting, and showing beneficial effects of innovation, entrepreneurship, and the decentralized market economy that we can ensure its long-term survival as the engine of prosperity and personal growth. This is the only way we know that has the potential for providing the platform upon which people may or may not pursue "the good life" that Phelps so cogently describes and advocates.

Second, it is important to examine whether the extremely low interest rates after the IT crash and the ensuing behavior in financial markets administered a near fatal blow to the entrepreneurial economy by diverting creative people from innovation seeking towards wealth seeking. And if it did, what are the underlying mechanisms? Is something missing in the central bank models used for gauging the aggregate effect of monetary policy? How could and should that be incorporated? This leads us to the deeper question of how to obtain even more persuasive evidence that entrepreneurship matters for aggregate economic performance, i.e., that it may be fruitful to see it as a factor of production on par with labor and (human and physical) capital.

4 Concluding remarks

Edmund Phelps has written a book aspiring to be a must-read "for anyone who cares about the sources of prosperity and the future of the West." The book is laudable for its emphasis on innovation and its insistence that true life satisfaction is not the fruit of a mindless quest for monetary rewards that enable unlimited consumption of goods and services. The book is insightful in its emphasis on creativity, innovativeness, and the producer side of our lives. A society that permits consumption to trump production, and distribution to trump entrepreneurship, has

produced a recipe of conditions encouraging growing frustration and redistributional conflict. In this sense, Phelps reminds us that economics cannot be separated from humanistic individualism—the individual and their ideas constitute the ultimate engine of growth.

But it is impossible to ignore that there are unsound premises interwoven throughout Phelps' account. His romanticizing of the period between the American Civil War and World War II as opposed to the post-1980 period is implausible for a host of reasons. The derogatory evaluation of the performance of the Continental European and Scandinavian economies seems lacking in depth. The absence of empirical indicators actually showing that the rate of innovation has dropped jumps out at the astute reader. All this sounds suspiciously familiar, and is compounded by the book's sustained use of the traditional–modernist dichotomy which time and again has been shown to be too restrictive for understanding what may have gone wrong in the West. A fair share of our problems may just as well emanate from the contribution of the growing focus on me-centered self-expression rather than to a weakening of core traditional values. Creativity and self-centeredness are not sufficient to attain the good life; normally a sense of belonging and collective responsibility are also required.

As I stressed at the outset, these lapses are particularly regrettable because of the substance of the book's main message. In an increasingly atomized and consumerist age, Phelps makes a compelling case for creative entrepreneurship being not merely the key to economic growth but also to life satisfaction. Yet it is also a message that would have been more convincing were it delivered with more rigor and actually grounded in measuring innovation, less American exceptionalism, and a less saccharine view of the past.

Despite its shortcomings, Phelps' book provides useful food for thought for entrepreneurship and innovation scholars. I have tried to point out what I see as fruitful avenues for future research. Let me briefly reiterate the most important of these in this concluding section.

First, although there is no doubt that the message that innovation is important for growth is correct, few policymakers are aware that, in order to reap the full benefits of innovation, entrepreneurs need to commercialize the innovations in new or incumbent firms. Much more research is called for to document this crucial link. The benefits accrue to the population largely through spillovers; users on average only pay a small fraction of the value of an innovation. Due to the large spillovers, it is still the dominant view among mainstream economists that we get too little innovation. But is this really true? What do the incentives for innovation look like? Should innovative activity (and the requisite entrepreneurship) really be subsidized? If yes, how and to what extent?

Second, Phelps sides with culture rather than institutions as the main explanation for the innovativeness of a country despite weak evidence relative to the rival institutional explanation. While the cultural explanation leads to defeatism—culture is largely impervious to policy—institutional explanations strike a more optimistic chord; institutions can be changed through democratic decision making. One swallow does not make a summer as the saying goes, and neither does one study, however brilliantly conceived and conducted. A whole corpus of studies is needed to change the general conception of how the economic system works and how it can be improved. Knowledge about the role of institutions can be gained through studies at all levels of aggregation and detail from cross-country studies to detailed microeconomic studies.

Third, the OECD, the European Union, national agencies, and individual scholars are currently making extensive efforts to measure innovation. This is good news. Unless a phenomenon is measured and quantified, it is unlikely to receive proper long-run attention from policymakers. Large amounts of data are now becoming available for empirical research including measures of aspects of the innovation process previously unmeasured. This gives enormous potential for important work on innovation, but there are also risks of mis-measurement and erroneous conclusions.

Fourth, the real value of a good is the sum of the consumer and producer surpluses. However, the value of a good to a consumer in excess of what she pays for it remains unrecorded. Evidence suggests that this tends to grossly underestimate the social value of innovation and entrepreneurship. More work in the vein of Nordhaus' (2004) seminal contribution is needed to arrive at the true value of these activities, especially since the wedge between the consumer valuation and the market price/marginal cost appears to be increasing for many services.

Finally, high-quality research—conceptually and quantitatively—is the only way we can combat the

postmodernist attack on the ideas and ideals that sprang from the Enlightenment and the ensuing Modernism. If we become oblivious to these ideas, a prerequisite for continued welfare development and personal growth is lost.

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References

Acemoglu, D., & Robinson, J. A. (2012). *Why nations fail: The origins of power, prosperity, and poverty*. New York: Crown.

Acs, Z. J., & Audretsch, D. B. (1988). Innovation in large and small firms: An empirical analysis. *American Economic Review, 78*(4), 678–690.

Acs, Z. J., & Audretsch, D. B. (1990). *Innovation and small firms*. Cambridge, MA: MIT Press.

Acs, Z. J., & Phillips, R. J. (2002). Entrepreneurship and philanthropy in American capitalism. *Small Business Economics, 19*(3), 189–204.

Alesina, A., & Giuliano, P. (2013). Culture and institutions. NBER working paper no. 19750. Cambridge, MA: National Bureau of Economic Research.

Angrist, J. D., & Krueger, A. B. (2001). Instrumental variables and the search for identification: From supply and demand to natural experiments. *Journal of Economic Perspectives, 15*(4), 69–85.

Audretsch, D. B., Falck, O., Heblich, S., & Lederer, A. (Eds.). (2011). *Handbook of research on innovation and entrepreneurship*. Cheltenham: Edward Elgar.

Audretsch, D. B., & Thurik, A. R. (2000). Capitalism and democracy in the 21st century: From the managed to the entrepreneurial economy. *Journal of Evolutionary Economics, 19*(1), 17–34.

Baldwin, J. R., & Johnson, J. (1999). Entry, Innovation and firm growth". In Z. J. Acs (Ed.), *Are small firms important? Their role and impact* (pp. 51–77). Dordrecht: Kluwer.

Bauman, Z. (2007). *Liquid times*. Cambridge: Polity.

Baumol, W. J. (1990). Entrepreneurship: Productive, unproductive, and destructive. *Journal of Political Economy, 98*(5), 893–921.

Baumol, W. J. (2002). *The free-market innovation machine: Analyzing the growth miracle of capitalism*. Princeton, NJ: Princeton University Press.

Baumol, W. J. (2004). Entrepreneurial enterprises, large established firms and other components of the free-market growth machine. *Small Business Economics, 23*(1), 9–23.

Baumol, W. J. (2010). *The microtheory of innovative entrepreneurship*. Princeton, NJ: Princeton University Press.

Benz, M., & Frey, B. S. (2004). Being independent raises happiness at work. *Swedish Economic Policy Review, 11*(2), 95–134.

Bergh, A. (2014). The rise, fall and revival of a capitalist welfare state: What are the policy lessons from Sweden? *New Political Economy* (forthcoming).

Bhidé, A. (2008). *The venturesome economy: How innovation sustains prosperity in a more connected world*. Princeton, NJ: Princeton University Press.

Blanchflower, D. G., & Oswald, A. J. (1998). What makes an entrepreneur? *Journal of Labor Economics, 16*(1), 26–60.

Bloom, A. (1987). *The closing of the American mind*. New York: Simon & Schuster.

Boettke, P. J., & Coyne, C. J. (2009). Context matters: Institutions and entrepreneurship. *Foundations and Trends in Entrepreneurship, 5*(3), 135–209.

Boskin, M. (1998). Consumer prices, the consumer price index, and the cost of living. *Journal of Economic Perspectives, 12*(1), 3–26.

Braunerhjelm, P. (2012). Innovation and growth". In M. Andersson, B. Johansson, & H. Lööf (Eds.), *Innovation and growth: From R&D strategies of innovating firms to economy-wide technological change* (pp. 286–316). London: Oxford University Press.

Braunerhjelm, P., Acs, Z. J., Audretsch, D. B., & Carlsson, B. (2010). The missing link: Knowledge diffusion and entrepreneurship in endogenous growth. *Small Business Economics, 34*(2), 105–125.

Braunerhjelm, P., & Henrekson, M. (2013). Entrepreneurship, institutions and economic dynamism: Lessons from a comparison of the United States and Sweden. *Industrial and Corporate Change, 22*(1), 107–130.

Broda, C., & Romalis, J. (2009). *The welfare implications of rising price dispersion*. Mimeo: Graduate School of Business, University of Chicago.

Brynjolfsson, E., & McAfee, A. (2011). *Race against the machine: How the digital revolution is accelerating innovation, driving productivity, and irreversibly transforming employment and the economy*. Lexington, MA: Digital Frontier Press.

Carlsson, B. (1999). Small business, entrepreneurship, and industrial dynamics. In Z. J. Acs (Ed.), *Are small firms important? Their role and impact* (pp. 99–110). Dordrecht: Kluwer.

Carlsson, B., Braunerhjelm, P., McKelvey, M., Olofsson, C., Persson, L., & Ylinenpää, H. (2013). The evolving domain of entrepreneurship research. *Small Business Economics, 41*(4), 913–930.

Chetty, R., & Saez, E. (2005). Dividend taxes and corporate behavior: Evidence from the 2003 dividend tax cut. *Quarterly Journal of Economics, 120*(3), 791–833.

Coyle, D. (2011). *The economics of enough: How to run the economy as if the future matters*. Princeton: Princeton University Press.

Csíkszentmihályi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper & Row.

Dutta, S. (Ed.). (2012). *The Global Innovation Index 2012: Stronger linkages for global growth*. Paris: INSEAD.

Eisenhardt, K. M. (2012). Top management teams and the performance of entrepreneurial firms. *Small Business Economics, 40*(4), 805–816.

European Commission. (2013). Measuring innovation output in Europe: Towards a new indicator. Online at: http://ec.europa.eu/research/press/2013/pdf/indicator_of_innovation_output.pdf. Accessed January 8, 2014.

Fagerberg, J., Srholec, M., & Verspagen, B. (2010). The role of innovation in development. *Review of Economics and Institutions, 1*(2) (Article 2), 1–29.

Frank, R. H., Gilovich, T., & Regan, D. T. (1993). Does studying economics inhibit cooperation? *Journal of Economic Perspectives, 7*(2), 159–171.

Frey, B. S., Benz, M., & Stutzer, A. (2004). Introducing procedural utility: Not only what, but also how matters. *Journal of Institutional and Theoretical Economics, 160*(3), 377–401.

Gardner, J. W. (1961). *Excellence: Can we be equal and excellent too?*. New York: Harper & Row.

Gault, F. (2013). Innovation indicators and measurement: An overview. In F. Gault (Ed.), *Handbook of innovation indicators and measurement* (pp. 3–37). Cheltenham: Edward Elgar.

Gordon, R. J. (2012). Is U.S. economic growth over? Faltering innovation confronts the six headwinds. NBER working paper no. 18315. Cambridge, MA: National Bureau of Economic Research.

Gorodnichenko, Y., & Roland, G. (2010). Culture, institutions and the wealth of nations. NBER working paper no. 16368. Cambridge, MA: National Bureau of Economic Research.

Hakim, C. (2000). *Work–lifestyle choices in the 21st century*. Oxford: Oxford University Press.

Hall, B. H. (2011). *Using productivity growth as an innovation indicator. Report for the high level panel on measuring innovation*. Brussels: DG Research, European Commission.

Hall, P. A., & Soskice, D. (Eds.). (2001). *Varieties of capitalism: The institutional foundations of comparative advantage*. Oxford: Oxford University Press.

Henrekson, M., & Johansson, D. (2010). Gazelles as job creators—A survey and interpretation of the evidence. *Small Business Economics, 35*(2), 227–244.

Henrekson, M., & Sanandaji, T. (2012). Introduction. In M. Henrekson & T. Sanandaji, (Eds.), *Institutional entrepreneurship*. The International Library of Entrepreneurship Series 24 (pp. xi–xxvii). Cheltenham: Edward Elgar.

Henrekson, M., & Sanandaji, T. (2014). Small business activity does not measure entrepreneurship. *Proceedings of the National Academy of Sciences of the United States of America (PNAS), 111*(5), 1760–1765.

Henrekson, M., & Stenkula, M. (2010). Entrepreneurship and public policy. In Z. J. Acs & D. B. Audretsch (Eds.), *Handbook of entrepreneurship research* (pp. 595–638). New York: Springer.

Hurst E., & Pugsley, B. (2011). What do small businesses do?. *Brookings Papers on Economic Activity*, Fall, 73–118.

Hwang, H., & Powell, W. W. (2005). Institutions and entrepreneurship. In M. Woywode, R. Kalmbach, & S. A. Alvarez (Eds.), *Handbook of entrepreneurship research: Disciplinary perspectives* (pp. 179–210). New York: Springer.

Inglehart, R., & Welzel, C. (2010). Changing mass priorities: The link between modernization and democracy. *Perspectives on Politics, 8*(2), 551–567.

Jansson, J. O. (2013). *The economics of services: Microfoundations, development and policy* (2nd ed.). Cheltenham: Edward Elgar.

Jönsson, H., Wikström, S., & L'Espoir Decosta, P. (2014). A clash of modernities: Developing a value-based new framework to understand the mismatch between production and consumption. *Journal of Consumer Culture* (forthcoming).

Khalil, Elias L. (1995). Organizations versus institutions. *Journal of Institutional and Theoretical Economics, 151*(3), 445–466.

Kortum, S., & Lerner, J. (2000). Assessing the contribution of venture capital to innovation. *RAND Journal of Economics, 31*(4), 674–692.

Kurzweil, R. (2005). *The singularity is near: When humans transcend biology*. New York: Viking.

Loveman, G., & Sengenberger, W. (1991). The re-emergence of small-scale production: An international comparison. *Small Business Economics, 3*(1), 1–37.

McGrath, R. G., & Desai, S. (2010). Connecting the study of entrepreneurship and theories of capitalist progress: An epilog. In Z. J. Acs & D. B. Audretsch (Eds.), *Handbook of entrepreneurship research* (pp. 639–660). New York and London: Springer.

Meyer, B., & Sullivan, J. X. (2012). Winning the war: Poverty from the Great Society to the Great Recession. *Brookings Papers on Economic Activity*, Fall, 133–183.

Moretti, E. (2012). *The new geography of jobs*. New York: Houghton Mifflin Harcourt.

Norbäck, P.-J., & Persson, L. (2009). The organization of the innovation industry: entrepreneurs, venture capitalists, and oligopolists. *Journal of the European Economic Association, 7*(6), 1261–1290.

Nordhaus, W. D. (2004). Schumpeterian profits in the American economy: Theory and measurement. NBER working paper no. 10433. Cambridge, MA: National Bureau of Economic Research.

Norris, P., & Inglehart, R. (2004). *Sacred and secular: Religion and politics worldwide*. Cambridge: Cambridge University Press.

North, D. C., & Thomas, R. P. (1973). *The rise of the western world: A new economic history*. Cambridge: Cambridge University Press.

OECD. (2010). *The OECD innovation strategy: Getting a head start on tomorrow*. Paris: OECD.

OECD. (2013). *OECD reviews of innovation policy: Sweden 2012*. Paris: OECD.

Olson, M. (1996). Distinguished lecture on economics in government: Big bills left on the sidewalk: Why some nations are rich, and others poor. *Journal of Economic Perspectives, 10*(2), 3–24.

Phelps, E. (2013). *Mass flourishing: How grassroots innovation created jobs, challenge, and change*. Princeton, NJ: Princeton University Press.

Pinker, S. (2002). *The blank slate: The modern denial of human nature*. New York: Viking.

Piore, M., & Sabel, C. (1984). *The second industrial divide—Possibilities for prosperity*. New York: Basic.

Rodrik, D., Subramanian, A., & Trebbi, F. (2004). Institutions rule: The primacy of institutions over geography and integration in economic development. *Journal of Economic Growth, 9*(2), 131–165.

Sanandaji, T. (2010). Self-employment does not measure entrepreneurship. Working Paper. Irving B. Harris School of Public Policy, University of Chicago.

Scherer, F. M. (1984). *Industrial structure and market performance* (2nd ed.). Chicago, IL: Rand McNally.

Schuetze, H., & Bruce, D. (2004). Tax policy and entrepreneurship. *Swedish Economic Policy Review, 11*(2), 233–265.

Slemrod, J., & Bakija, J. (2008). *Taxing ourselves*. Cambridge, MA: MIT Press.

Smith, V. L. (2003). Constructivist and ecological rationality in economics. *American Economic Review, 93*(3), 465–508.

Smith, K. H. (2005). Measuring innovation. In J. Fagerberg, D. C. Mowery, & R. R. Nelson (Eds.), *The Oxford handbook of innovation* (pp. 148–177). New York: Oxford University Press.

Stam, E. (2013). Knowledge and entrepreneurial employees: A country-level analysis. *Small Business Economics, 41*(4), 887–898.

Stenkula, M., Johansson, D., & Du Rietz, G. (2014). Marginal taxation on labor income in Sweden from 1862 to 2010. *Scandinavian Economic History Review* (forthcoming).

Taylor, M. Z., & Wilson, S. (2012). Does culture still matter? The effects of individualism on national innovation rates. *Journal of Business Venturing, 27*(2), 234–247.

U.S. Small Business Administration. (1995). *The state of small business: A report of the president 1994*. Washington, DC: U.S. Government Printing Office.

Van Praag, C. M., & Versloot, P. (2008). The benefits and costs of entrepreneurship? A review of the research. *Foundations and Trends in Entrepreneurship, 4*(2), 65–154.

Wilson, E. O. (1998). *Consilience: The unity of knowledge*. New York: Alfred Knopf.