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Welfare Creation and Destruction in a Schumpeterian World

by

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Welfare Creation and Destruction in a Schumpeterian World

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Abstract. Economic change, while creating innovation and growth, at the same time generates “gales of creative destruction”. It is still largely unclear what this concept implies for the task of assessing welfare (and, correspondingly, the need for and scope of policy-making) in a novelty-generating, knowledge-based economy. By examining Joseph Schumpeter’s explicit and implicit reasoning on welfare and linking his thoughts to recent ideas, within normative economics, about how to redefine “well-being” when preferences are variable and inconsistent, we argue that in an evolving economy, well-being should not be conceptualized in static preference-satisfaction terms, but rather in partly procedural terms of “effective preference learning”.

Keywords: Welfare Economics, Endogenous Preferences, Joseph Schumpeter, Creative Destruction

JEL codes: D63, D03, B25

1. Introduction

Research on processes of evolutionary change in the realm of industries, firms and technology most often pursues a positive agenda: It tries to explain how novelty comes about, diffuses throughout the economy and how it impacts on economic life. Besides this, there is a growing interest in the field in instrumental issues, i.e., the question what policy-makers can do in order to, e.g., foster innovation in certain areas. Instrumental research of this kind takes some goal and, hence, some implicit criterion of welfare, as *given*. As the present paper will argue, this strongly limits the potential of evolutionary economics to render practical policy advice. For how do we know whether the given goals are plausible and convincing, i.e., whether they relate to what individuals themselves regard as welfare-enhancing? What is more important, though, is an insight that is due to Joseph Schumpeter: In an evolutionary world of qualitative change the individuals' preferences (read: goals) are never "given", but change continuously. In such a world, traditional static notions of welfare cannot be used, and it becomes difficult to find out whether and under which conditions the economic process generates "good" results – what is needed, then, is an evolutionary account of welfare.

Intuitively, the evolutionary approach that Schumpeter pioneered does make a difference in this regard. As Richard Nelson and Sidney Winter point out in their "Evolutionary Theory of Economic Change" (1982, p. 356, italics in the original), "it is apparent that an evolutionary view of what *is* going on in the world of firms and industries strongly influences how one looks at the question of what *should* be going on," leading them to conclude that such a view would require a "rethinking of normative economics" along evolutionary lines. As the present paper argues, the reflections of Schumpeter on normative and welfare issues may serve as a valuable source of inspiration for the development of such an account of welfare – despite the fact that his remarks on these issues turn out to be scattered throughout his work and to be somewhat incoherent. While there is a small, but growing literature examining "Schumpeterian" practical policy recommendations,¹ the underlying ideas on the meaning of welfare have never been explicitly analyzed, neither as a subject interesting in its own right nor for its potential to inspire an evolutionary approach to welfare and, ultimately, policy-making.

¹ see, e.g., Ebner (2006), Dolfsma (2005), and Soete and ter Weel (1999).

The interesting thing about Schumpeter is that he had a clear pre-theoretical grasp of the complexity of the problems involved. His most famous concept revolves around the frequently quoted metaphor of the “perennial gales of creative destruction” which he deemed to be the “*essential* fact about capitalism” (Schumpeter, 1942, p. 83, italics added).² Odd as it is, the notion of “creative destruction” reflects the ambivalent normative dimension of entrepreneurial, innovation-driven growth and of novelty more general: While new products, new modes of production or of organization and new technologies tend to be beneficial in general and in the long run, they also tend to make some individuals or groups of individuals worse off in the short run – maybe even severely so. People may be faced with income losses and risks, or they may see their human capital devalue. They may lose their job and may even see the basis of their self-respect erode.³ This may fuel hostile reactions that constitute a latent challenge to the institutions underlying capitalism (an important theme in Schumpeter’s work). Apart from this politico-economic repercussions, these losses also raise issues of legitimacy. As Baumol (2002, p. 21) rightly notes, by itself the notion of creative destruction “offers no basis on which to judge how far the process should go to serve the public interest most effectively”. Novelty’s welfare implications are ambiguous and concern various dimensions of well-being. Hence, the questions arise (i) whether and, if so, how welfare losses of this kind can be justified, (ii) how a balance can be struck between the costs and benefits involved in economic change, and (iii), most fundamentally, how to conceptualize “costs” and “benefits” in a world of flux where these terms have no longer any constant meaning.

Throughout his work, from the early “Theory of Economic Development” (published in 1911/1912) until his late article on “The Creative Response in Economic History” (1947), Schumpeter shows a deep fascination with the complex normative implications of the evolutionary processes he describes, but shies away from actually exploring these implications. While he appears to be convinced that, in general, capitalist

² See Andersen et al. (2006, pp. 5-9) on the history of thought background and semantic content of the term. McCraw (2007, p. 504) sees “creative destruction” as “the most widely used metaphor in contemporary economic writing”, arguing that “Googling” it yields an astronomical number of references” (ibid.). Google.com yields indeed about 1,500,000 results for this term, much more than, e.g., “invisible hand”, scoring about 900,000 (as of november 13, 2009).

³ on the impact of innovation-induced growth on unemployment, see Boianovsky and Trautwein (2009) and Aghion and Howitt (1998).

development makes people better off – insofar as “better off” could somehow be defined in a way that would fit the peculiarities of an *evolutionary* process – he also realizes that the analytical apparatus offered by (comparative-)static standard welfare economics is unsuited to deal with the intricate issues involved. Lacking any superior alternative concepts, however, he makes frequent use of auxiliary criteria, introduced quite *ad hoc*, that fall squarely within the domain of orthodox theorizing. In the end he is forced to leave the whole issue essentially unresolved, concluding in his 1947 article that

“the question of appraisal of social gains from entrepreneurship ... and of the social costs involved in a system that relies on business interests to carry out its innovations, is so complex and perhaps even hopeless that I beg to excuse myself from entering into it” (Schumpeter, 1947, p. 155, FN 12)

As Heertje (2006, p. 111) argues, there is a “missing link” in Schumpeter’s approach to welfare issues – a fact indicating that while being rightly credited as one of the great economists of the 20th century, Schumpeter eventually did not succeed in transforming his ideas into a systematic and consistent body of theory (see also Witt, 2002).

As the present paper will argue, the time has come to connect these loose ends. Welfare economics, while generally still carrying most of the same static equilibrium-based conceptual ballast it did in Schumpeter’s own days, has nonetheless moved slowly forward, toward the uncharted territory that Schumpeter had descried decades ago: *How can we assess welfare in a non-static, evolutionary world*, i.e., in a world where individual preferences (welfare economics’ key variable) change continuously, albeit not arbitrarily? Hence, welfare economics nowadays offers at least some conceptual tools that can be used to approach this question from a “Schumpeterian” perspective. More specifically, it allows to devise a criterion that reflects individuals’ capacity to learn and to *adjust to change*, rather than some “optimum” level of aggregate social welfare.

The paper is organized as follows: Sections 2 and 3 describe in more detail the way Schumpeter approached the issue of how to evaluate processes of innovation-driven growth. Section 4 takes up his ideas about the methodological status of normative propositions and the limits of individualist utilitarianism and suggests adopting a contractarian perspective to accommodate them. Section 5 shows how the contractarian toolbox can be applied in a Schumpeterian world where preferences are subject to

endogenous change, specifically arguing for approaching the trade-off between innovation and welfare losses in light of a procedural criterion of "effective preference learning". Section 6 concludes.

2. "Playing the Drama": The limits of welfare economics

When it comes to exploring the normative dimension of innovation-driven growth, there is a certain inconsistency in Schumpeter's work. In his early methodological book on "The Nature and Essence of Theoretical Economics" (1908) he not only denies any personal interest in practical policy advice, but also argues in favor of a "pure" economics, purged from any political or ethical considerations, in order to be perfectly free from any "ideological" stain (Swedberg, 1991, pp. 69-71). Throughout his work, he maintains a broadly Weberian position with respect to the relationship between statements of facts and value judgments: They should be clearly marked and kept separate.⁴ In his "Development" paper (Schumpeter [1932] 2005), e.g., he criticizes the German Historical School's "faith in progress" for its "positive valuation of changes", arguing that "[p]recisely because it implies valuation, it has no right of place in science" (ibid., p. 119). At times, Schumpeter seems to go even one step further by adopting the (non-Weberian) position that any statement involving value judgments would in itself be "unscientific", i.e., that normative statements could not be made the subject of rational inquiry.

When it comes to applied work, though, he does in fact not refrain from giving practical policy advice, consistently pushing for "vigorous measures to promote entrepreneurship".⁵ More importantly, due to his ambition to see the social process as "one indivisible whole"⁶ he is repeatedly drawn to those aspects of the process that have strong welfare connotations and that cannot therefore be examined without endorsing at least hypothetical value judgments, including in particular statements on what it is that constitutes "welfare". As we will see, Schumpeter does in fact transgress the self-imposed limits of "pure economics": He often discusses the issues involved in a way that

⁴ see Weber (1949) and, e.g., Schumpeter (1928, p. 382). On Weber's general influence on Schumpeter, see Faucci (2007).

⁵ McCraw (2007, p. 169).

⁶ Schumpeter (1912), as quoted by Swedberg (1991, p. 65).

implies even strong implicit value judgments. Apart from this, in his most important books, the “Theory of Economic Development” (Schumpeter, [1912] 1982; henceforth *TED*) and “Capitalism, Socialism and Democracy” (Schumpeter, 1942; henceforth *CSD*) he uses quite drastic metaphors to picture the empirically observable harmful side-effects generated by processes of economic change. At the same time, though, he effectively takes an agnostic and, at times, even fatalist stance with respect to the welfare implications of these observations. Let’s have a look into what he actually says about these issues.

Already in *TED*, there is a clear fascination with the capacity of the capitalist market economy – its peculiar internal “source of energy”⁷ – to bring about novelty and ongoing change from within. In Schumpeter’s view, this self-renewing capacity is, *on the whole*, clearly beneficial to “society”. At the same time, though, the process of change proceeds unevenly. In this book’s famous 7th chapter,⁸ he paints a particularly bleak picture of the negative “side-effects” involved in processes of economic change:

“[A] process of degeneration, of degradation of large circles (of society) accompanies the upward movement ... Large circles see their economic basis being pulled away. This does not happen abruptly, but gradually. Through generations, the people affected live a deprived existence full of hopelessness. Their moral and intellectual powers dwindle, the more so the more the economic atmosphere they find themselves in is darkening.

An observer from outer space wouldn’t notice these phenomena, so fascinating is the development at large – and those losses are just their reverse. They are due to the fact that the services these agents offered are now being offered in a better way. Even the suffering thus caused serves to get rid of the obsolete and to impel novelty. Those who play the drama, however, as well as those observers close to them, think differently about it. They cannot ignore the shouting of the crunched who are crushed down by the wheels of novelty.” (Schumpeter, [1912] 2006, p. 503)⁹

This seems to reflect the pre-analytic vision behind the metaphor of “creative destruction” which plays such an important role in *CSD*, three decades later. What is most striking in this quote is the distinction between two normative viewpoints: Those individuals who have to bear the costs as well as “observers close to them” perceive the

⁷ Schumpeter in the preface of the Japanese edition of *TED*, as quoted by Swedberg (1991, p. 75).

⁸ on which see Becker and Knudsen (2002). This chapter was dropped from later editions and has only recently been “rediscovered” by the mainstream of Neo-Schumpeterian economics.

⁹ my translation from the German original.

negative welfare effects of innovation very clearly. In contrast to this, a fictitious “observer from outer space” would presumably overlook the negative side effects of innovative growth, since he would be wholly captivated by the “fascinating” development at large.

Let’s focus on the viewpoint of this observer, first. The quote given above may be read as implying that such an observer would either just neglect the negative side-effects of change or that she would offset whatever gains and costs will materialize and focus on the (in Schumpeter’s view, no doubt positive) balance resulting from the process in the long run. Moreover, this observer may insist that the “suffering” itself has, at least partly, a *functional* role to play, i.e., that the potential of an evolving economy to generate welfare is inextricably linked (“is just the reverse”) to the latent risk of confronting losses.

This is so for two reasons: First, endogenous economic change does not reflect the impact of ordinary price competition, but “competition from the new commodity” (Schumpeter 1942, p. 84), whose impact is much more fundamental. This kind of competition comes non-gradually: As Harberger (1950, p. 365) puts it, “[t]he really big changes which shape the course of economic development ... must be forced upon the stationary, circular flow economy in intermittent pushes”, making the fluctuations involved, say, in business cycles an “integral part of the process of economic development” (ibid.). Digging deeper, this can be traced back to the way the economy’s knowledge base develops: “Progress in knowledge is necessarily *non-uniform*” (Metcalf, 2001, p. 24, italics added). For economically relevant knowledge is always prone to be falsified and become obsolete when circumstances change. In an economy that operates outside a state of equilibrium, there are at all times “internally generated reasons for beliefs to change” (ibid.). With the epistemic basis of economic behavior in permanent turmoil, though, it follows that economic change itself necessarily proceeds unevenly: As Metcalfe (ibid., pp. 565f.) concludes, „creative destruction implies the destruction of some activities as a necessary element in the growth of others“ (ibid.).

The second reason for the “functional” quality of losses concerns the psychological basis of economic behavior. Losses do not just occur – they may (partly) be anticipated. As Schumpeter puts it in his “Capitalism” entry to the Encyclopaedia

Britannica (Schumpeter, [1946] 1991), the resulting economic inequality generates a “stimulating atmosphere”: “The lure of big prizes coupled with the threat of complete destitution no doubt [produces] a scheme of motivation of perhaps unique effectiveness” (ibid., p. 204). Extra-normal profits do not only motivate the observing public, but also the entrepreneur herself. As Witt (2002, p. 16) puts it, Schumpeter here envisions a “feedback from the performance of the pioneering entrepreneurs ... to their motivation to trigger further innovative activities”.

In stressing that from the observer’s viewpoint, at least a subset of capitalism’s “dysfunctional proclivities” actually perform a “creative function in industrialization”, Schumpeter stands, of course, in marked contrast to Marx (Elliott, 1980, p. 54). But he also differs strongly from standard welfare economics. From a traditional Pigouvian perspective, welfare can be raised by redistributing income or wealth, as long as the assumption is upheld that the resources involved yield a diminishing marginal utility. As Schumpeter notes, Pigou and his followers neglect the effects this policy may have for the further process of economic evolution (Schumpeter, 1954, p. 1073). This rather vague notion of dynamic efficiency is presumably meant to represent the impact of a certain policy on the degree of innovative activity. Hence, the incentive effects of redistribution with respect to innovative activity have to be taken into account.

Thus, the welfare effects of evolutionary economic change can obviously be assessed from different angles: when we assume losses to be short-term and gains to be long-term, it matters whether the assessment takes a “static” or a more extended, “dynamic” perspective. Not surprisingly, Schumpeter explicitly favors the latter, for instance in *CSD*:

“Since we are dealing with a process whose every element takes considerable time in revealing its true features and ultimate effects, there is no point in appraising the performance of that process *ex visu* of a given point in time; we must judge [the] performance [of the process] over time, as it unfolds through decades or centuries” (Schumpeter, 1942, p. 83, italics in the original).

“[A]ny pro-capitalist argument must rest on long-run considerations. In the short run, it is profits and inefficiencies that dominate the picture ...” (ibid., pp. 144-45).

Hence, a “dynamic” perspective appears to be simply a (very) “long-run” perspective that also acknowledges the functional quality of (at least a subset of) the losses implied by evolutionary change. When evaluating economic processes, it is the system’s secular performance rather than its short-run optimality or non-optimality that should matter. Unsurprisingly, within the normative economics of his time, Schumpeter cannot find any criterion that reflects his intuition about the need for assessing capitalist performance in a way that fits capitalism’s evolutionary character.

What can be discerned at this point, then, are the contours of a specific *normative* research program: Schumpeter searches for a sound basis to justify the capitalist process – a non-trivial task since at the same time he does not overlook the welfare losses associated with it. These losses may well be “functional” – at this very abstract level, such a statement is however obviously not sufficient to fully legitimize any of them. While the contours of a normative principle and a welfare concept that can do this evaluative job remain unclear, it is certain that the process with all its discontents cannot be defended on the grounds of the usual static or comparative-static efficiency criteria.

From Schumpeter’s viewpoint, essentially three objections can be raised against standard welfare economics. First, and most obviously, it lacks a “dynamic” perspective in the sense discussed above. For this reason, Schumpeter dismisses the conceptual apparatus of welfare economics, but also the underlying philosophical approach of utilitarianism itself, due to its neglect of the evolutionary dimension of the *evaluandum*.¹⁰

Second, standard welfare economics does not capture the “functional” quality of (at least some) innovation-induced losses. With respect to this, Schumpeter’s argument is in particular inspired by the problem of how to assess innovation-induced market power and the (hopefully temporary) oligopolistic or monopolistic structures induced thereby. While for the standard Paretian approach to welfare economics, any departure from “perfect competition” is equivalent to market failure, in Schumpeter’s evolutionary perspective this way to define “market failure” does not make sense.¹¹ For “progress” cannot materialize without the continuous attempts by entrepreneurs to challenge, build

¹⁰ see Schumpeter (1954, pp. 1071-1073) – his dismissal of the “Kaldor-Hicks”-criterion – a core concept of welfare economics – comes out clearly in FN 9 on p. 1072 (“a very artificial definition of what is meant by making ‘society’ better off”), his “strong personal aversion” against utilitarianism on p. 1153. See also Schumpeter (1942, pp. 127-129, 248f.).

¹¹ see Metcalfe (2005), Soete and ter Weel (1999).

up and defend market power. Since it is these attempts that actually drive the process of innovative growth, entrepreneurs have to be provided with incentives to go for them. Short-term welfare losses have to be accepted in order to reap the long-term benefits from innovation. As Schumpeter puts it in *CSD*, “as a matter of fact, perfect competition is and always has been temporarily suspended whenever anything new is being introduced” (Schumpeter, 1942, p. 105).

These two objections may already suffice to discredit the applicability of the conceptual apparatus of standard welfare economics in an evolving economy.¹² There is a third point, however: As Schumpeter observes, the ideas behind welfare economics appear to have much support in the population at large, in particular among those individuals who do not share the “observer’s” detached viewpoint, but who “play the drama” of disruptive capitalist development. Schumpeter is rather dismissive here:

“For the masses, it is the short run view that counts ... They feel après nous le deluge, and from the standpoint of individualist utilitarianism they are of course being perfectly rational if they feel like that ... Secular improvement that is taken for granted and coupled with individual insecurity that is acutely resented is of course the best recipe for breeding social unrest” (Schumpeter, 1942, p. 145).

This third objection is most fundamental: As an *individualist* exercise, welfare economics relies on the actual preferences of the individuals affected by socio-economic change – these preferences, though, can be “uninformed”, as it were, by any considerations related to a Schumpeterian concern for the long-run effects of policy-making. Put differently, they may diverge from what would be reasonable from the “outer space” observer standpoint. Schumpeter leaves no doubt that there is indeed a significant divergence: To adopt the observer’s perspective requires, he says, a degree of “insight” and “moral feat” is required (*ibid.*, p. 144) that cannot be expected from those who happen to be made “obsolete” in the course of “creative destruction”.

Why is that? From Schumpeter’s (quite scattered) remarks we can discern that there are at least three factors responsible for this. The first two can be formulated within

¹² see the similarly motivated dismissal of the “whole of so-called ‘welfare economics’” in Hayek (1978, pp. 90-91).

the framework of standard (political) economic theory. The third factor, however, leads us to deeper issues with respect to the normative evaluation of evolutionary change.

The first factor mentioned by Schumpeter reveals a latent elitism on his part: Ordinary individuals may just lack the “insight” required to understand what an evolutionary perspective would imply. Their preferences are based on false beliefs (see above). The second factor is about standard political economy considerations: People’s one-sided focus on “short-term” losses and the “social unrest” and instability that come with it may reflect rational attempts to capture rents, by, e.g., inducing policy-makers to help secure market positions that would otherwise become obsolete in the gales of creative destruction.¹³

The third argument that can be discerned in Schumpeter’s reflections is more complex. It concerns the psychological basis of ordinary people’s preferences. The capitalist process, Schumpeter says, has a fundamental impact on those people’s attitudes. In *CSD*, for instance, he argues that the process reshapes “not only our means of attaining our ends but also these ultimate ends themselves” (Schumpeter, 1942, p. 127). This is in fact a key topic of his sociological speculations about capitalist civilization, seen as a whole: The emergence of large firms, led by a centralized bureaucracy, only reflects the way capitalism spurs materialism, rationalism and, ultimately, “utilitarian ideas about the betterment of mankind”, coupled with a rising willingness on the part of voters and policy-makers alike to support “social legislation”. For Schumpeter, this attitudinal impact helps explain people’s wide-spread unease with the capitalist process. By moulding the individuals’ way to perceive the gains and losses brought about by it, capitalism destroys its own “psychological” foundations.¹⁴

This third factor refers to the malleability and even endogeneity of individual preferences. As Schumpeter hardly elaborates upon it, the argument comes in different ways, not all of them being perfectly consistent with each other. For him, the fact that individuals’ preferences are endogenous leads to the conclusion that they do not qualify

¹³ This political economy dimension of creative destruction is also emphasized in Schumpeter’s book on “Business Cycles” (1939, Vol. I, pp. 240-44), cf. McCraw (2007: 257).

¹⁴ This is of course also a key topic in the more sociologically oriented parts of *CSD*, particularly in chapters 12 and 13, colorfully entitled “Crumbling Walls” and “Growing Hostility”.

as an adequate basis for evaluating the economic process. In the 7th chapter of *TED*, he frames the problem this way:

“We all always approach the new with traditional fixed measures, with measures that have been created under the circumstances of the past. This is particularly the case with social phenomena. And even unconsciously the past is always the judge of the present. And it is the most biased, partisan judge. In this way, the new cannot easily pass, certainly not with those engaged in acting and fighting ... but neither with the one who is observing, who thinks that he is cool and objective” (Schumpeter, 2002, p. 134).

Hence, as they are attuned to what is well-known,¹⁵ preferences are a poor (“biased”) guide to evaluate the unknown, namely, novelty. This may be reframed by arguing that people may actually *lack* the preferences necessary to assess novelty.¹⁶ Hence, the whole basis of utilitarian welfare economics collides, as does the idea that some “common good” (the “will of the people”) may be derived from the individuals’ preferences.¹⁷ As a consequence, they will necessarily reject novelty, i.e., will be unable to appreciate its implications. Interestingly, in *TED* even the scientific “observer” fails to perceive things in an appropriate way! This highly skepticist stance may be taken to mean one of two things.

Either Schumpeter sees a fundamental dilemma in that the fact of a novelty-generating economy does not lend itself to *any* normative assessment by any conceivable “standards” at all, be they based on the individuals’ attitudes or on the observer’s “objective” standards. This, however, would be a logically untenable position. Or he rejects the use – as a “currency of welfare” – of the standards that those individuals have in mind who happen to experience the effects of novelty generation. In that case, he would reject, not the possibility to evaluate economic change, but only the adequacy to do so on individualist grounds. For judging economic change according to the real individuals’ standards would imply using evaluations and measures that are not up to the job.

¹⁵ Schumpeter speculates about the psychological basis of conservative resistance against novelty also when discussing the difficulty of performing the entrepreneurial role, in *TED* (see Fagerberg, 2003, pp. 131f.).

¹⁶ In Schumpeter’s parlance, they may rather hold “an indeterminate bundle of vague impulses” (Schumpeter, 1942, p. 253).

¹⁷ see Schumpeter (1942, pp. 252f., 269) for a blunt rejection of utilitarianism on these grounds.

Hence, we can reconstruct Schumpeter's position as being not only – explicitly – opposed to the utilitarian-welfarist approach to welfare, but also – implicitly – opposed to individualist approaches more general and, thus, to the principle of normative individualism. According to this principle, the evaluation of economic processes and outcomes has to be based (even exclusively so) on the judgments of the individuals affected by these processes and outcomes (Buchanan, 1991).¹⁸ A normative individualist would certainly take seriously individual perceptions of harm and loss and at least respect them in terms of their normative (rather than mere politico-economic) relevance. In chapter 21 of *CSD*, where he sharply criticizes the “classical doctrine of democracy”, Schumpeter is more explicit in dismissing “individualist utilitarianism” and its concept of the common good.¹⁹ In one of his last articles, he criticizes the “uncritical belief that so many seem to harbor in the virtues of consumers' choice” (Schumpeter, 1949: 380, FN 28). Unfortunately, it is not quite clear what alternative non-individualist position he regards as superior.²⁰

Thus, Schumpeter leaves us with a formidable problem to solve. Evolutionary economic change creates gains as well as losses, even necessarily so, making it difficult to evaluate the processes and outcomes involved. Schumpeter however aims at finding a normative basis on which to evaluate and defend capitalism – more precisely, a basis that allows to identify the conditions under which this would be possible. While his obvious interest in these issues leads him to use welfare economic concepts, this work is somehow hanging in the air, since he is unable to find a theoretical foundation for the whole endeavor. While the tools provided by the standard welfare economics of his time are not helpful, he even goes so far as to reject individualist approaches altogether, by pointing to the chance that individual preferences may be uninformed, biased by rent-

¹⁸ Note that this is a far cry from what Schumpeter (1954, p. 888) defines as “Political Individualism” (to be contrasted, in turn, with “Sociological” and “Methodological” Individualism).

¹⁹ see Schumpeter (1942, p. 248).

²⁰ Schumpeter's unease with the principle of normative individualism may have had a lasting impact on the Neo-Schumpeterian community: Hanusch and Pyka (2007a, p. 276), e.g., argue that in an evolving economy, the “normative principle” of policy-makers should be to foster “the future developmental potential of socio-economic systems”; accordingly, policy should try to remove the “constraints limiting the scope of economic development” (ibid.). As it stands, this is obviously a non-individualist position. Interestingly, at the end of the same paper the authors seem to rediscover normative individualism by introducing the Rawlsian “veil of ignorance” as a suitable tool to evaluate evolutionary processes (ibid., p. 284).

seeking considerations, or otherwise distorted. This is a troubling conclusion, to be sure. Hence, we should understand it as a research program to be pursued further, rather than a defeatist statement as to the “impossibility” of evaluating economic change.

3. Judging the drama: What counts as “welfare”?

Looking more closely at Schumpeter’s thoughts on the normative issues raised in the previous section, we can identify three distinct approaches to the problem of how to justify the capitalist process, each of them containing implicit value judgments. While the first two approaches clearly serve the purpose of sidestepping any deeper examination of welfare issues, the third one at least concedes that such examination may be meaningful after all. As we will see, all three approaches contain valuable ideas, though, that may serve as building blocks to construct a consistent “Schumpeterian” account of welfare.

- (a) In *CSD*, Schumpeter sticks to the general intuition, expressed much earlier in *TED* (see above), that economic change is beneficial, the more so, the more unfettered it proceeds. Put differently, he tends to lean towards an “evolutionist” position, arguing that since innovation is the key source of economic “progress” (a term that is sometimes not even defined independently of innovation),²¹ the welfare losses that are necessarily involved in this process have to be tolerated. Someone has to bear the costs, for otherwise the societal benefits of novelty could not be reaped. Thus, in terms of his implicit reasoning on welfare, Schumpeter clearly prefers the viewpoint of the “outer space” observer: Long-run benefits trump short-run costs. It is unclear whether he has in mind some kind of compensation criterion in the Kaldor-Hicks sense – given his dismissal of static welfare economics, he could not endorse it explicitly. In *CSD* he provides a hypothetical case study, though, that could support the guess that he is thinking in terms not of potential but of *factual* compensation of the losers (Schumpeter, 1942, pp. 63-69): He speculates about the future growth trajectory of the US economy. From his 1942 perspective he calculates that, *if* total real output were to continue to grow as it has done in the past (*viz.*, since 1870), *i.e.*, by a “long-run average rate of

²¹ on this, see also Elliott (1991, p. 48).

increase of 2 per cent per year” (ibid., p. 65), then, by the year 1978, the US would see average real income increase to about “1,300 USD of 1928 purchasing power”, an enormous sum (ibid.).²² Moreover, he takes it to be self-evident that the capitalist process will in particular benefit lower income groups: “There are no doubt some things available to the modern workman that Louis XIV himself would have been delighted to have yet was unable to have – modern dentistry for example ... The capitalist achievement does not typically consist in providing more silk stockings for queens but in bringing them within the reach of factory girls” (ibid., p. 67). From the stunning per capita figure of 1,300 USD Schumpeter concludes that in the year 1978 “all the desiderata that have so far been espoused by any social reformers ... either would be fulfilled automatically or could be fulfilled without significant interference with the capitalist process” (ibid., p. 69, italics omitted). The “standard of life of the *masses*” will be raised (Schumpeter, 1942, p. 68).²³ Hence, there would simply be no need to worry about the welfare losses associated with capitalist development, since the process itself would generate the means necessary to materially compensate all harms. In the long run, the “destruction” involved in creative destruction would cease to terrify people.

This optimistic view can be taken to reflect the mature Schumpeter’s main “normative hypothesis” with respect to the capitalist process: As McCraw (2007, p. 501) puts it, “the more he worked on the topic [of capitalism]... the more convinced he became that capitalism’s creative elements outweigh its destructive ones.”

The argument given in *CSD* rests on shaky foundations, though. First, by boldly extrapolating from the economy’s past performance, Schumpeter violates his own methodological standard according to which true “development” is essentially indeterminate, even “in the most profound sense” so (Schumpeter, [1932] 2005, p. 113).

²² It is instructive to compare his extrapolation with the one made by Keynes ([1928] 1963) who famously predicted in 1928 that “the economic problem may be solved, or be at least within sight of solution” by the year 2028, when GDP per capita would be “eight times” higher than in 1928. In fact, seen from today, both Schumpeter and Keynes even underestimated the slope of the growth trajectories (Zilibotti, 2007).

²³ The distribute criterion that is implicit here may be operationalized, for instance, by defining economic progress as a “significant long run increase in (average) per capita real income in all percentiles of the income distribution” (Witt, 1996, p. 116).

Thus, extrapolations are simply illegitimate in the context of a novelty-generating economy – even if the system has performed well against Schumpeter’s own notion of “progress”, we are not entitled to conclude that it will continue do so indefinitely (Witt, 2002, p. 19).²⁴

Second and apart from this logical problem, Schumpeter’s argument is flawed for theoretical reasons. As we have seen, for the sake of measurability, his calculus sticks to a quantitative output-indicator of welfare. Adding an adequate quantitative equivalent for “improvements in quality”, he speculates, would certainly increase rather than decrease his 2 per cent estimate of overall growth (Schumpeter, 1942, p. 66). While this is certainly correct within the confines of his calculus, Schumpeter himself concedes that this calculus fails to account for the fact that “welfare” consists in much more than material growth: “[T]he dignity or intensity or pleasantness of human life - ...all that economists of an earlier generation subsumed under the heading of Satisfaction of Wants – ... is, after all, for us the relevant consideration, the true ‘output’ of capitalist production, the reason why we are interested in the index of production” (ibid., pp. 66-67). This echoes similar statements as to his theoretical normative commitment throughout his work: consumer wants should be the sole “currency of welfare”.²⁵ Things are complicated, though, by Schumpeter’s dismissal of the standard (utilitarian) way of defining “wants” in welfare economics as being too narrow and simplistic (ibid., p. 251). Human values, he argues, cannot be reduced to one unique dimension. Due to this complexity, actual human well-being appears to him to be elusive: In the context of practical down-to-earth arguments, Schumpeter suggests to stay with objective material output notions, i.e., to “keep to our 2 percent” (ibid., p. 67).²⁶

²⁴ cf. also Witt (1996). Doing so would technically be tantamount to committing the “inductive fallacy”, see Sugden (1998).

²⁵ Already in *TED* he had introduced the (positive) idea that it is ultimately the consumers and their wants that drive the economic process – notwithstanding the fact that those wants are themselves partly shaped by the process (see Schumpeter, 1912, pp. 12, 32). Later in *TED*, as well as in *CSD*, he argues in favor of a broad notion of subjective “(consumer) want satisfaction” as the ultimate goal and criterion of economic activity (ibid., p. 65; Schumpeter 1942, pp. 66-67). Interestingly, he seems to be agnostic with respect to the controversial issue of whether it is possible to compare utility levels intra- and interpersonally (ibid.; Schumpeter, 1954, p. 1071; Haberler, 1950, p. 343).

²⁶ Objective criteria of “productive efficiency” are also employed when Schumpeter, in *CSD*, compares the performance of modern (hence, “trustified”) capitalism and socialism, arguing that “we shall call that system relatively more efficient which we see reason to expect would in the long run produce the larger stream of consumers’ goods per equal unit of time” (Schumpeter, 1942, p. 190).

This evasive strategy proves fatal for the point Schumpeter is trying to make. Material output may indeed have increased at staggering rates since 1942, but this does not imply that subjective well-being has increased as well. As he himself puts it (apparently equating want satisfaction with hedonic utility proper), we do not know whether “men are ‘happier’ or even ‘better off’ in the industrial society of today than they were in a medieval manor or village” (ibid., p. 120). Material welfare does not necessarily buy well-being. Paradoxically, as recent research on the determinants of happiness has unveiled, this applies in particular in affluent economies, where all basic needs are largely satisfied (Frey and Stutzer, 2002; Lane, 2000): With higher and higher levels of absolute material wealth, it may get *more*, not less difficult to increase the actual level of people’s life satisfaction.²⁷

What explains this? For assessing actual human well-being, a phenomenon plays a key role that Schumpeter himself repeatedly considers to be fundamental in an evolving economy: Individual preferences change over time. First of all, individuals tend to adjust their aspiration levels upwards when their personal level of well-being increases. Silk stockings made “factory girls” happy when they could first afford them, but now they dream of more sophisticated goods. Second, their aspiration levels are a function of their peers’ well-being, i.e., it is relative, not absolute well-being that counts (Frank, 1999; Layard, 2006). Third, and even more importantly, over time people may create *new* wants that may be harder to satisfy. This is particularly relevant in a Schumpeterian economy, where growth is characterized by *qualitative* change in the product space: “Add as many mail coaches as you please, you will never get a railroad by so doing” (Schumpeter, [1932] 2005, p. 115). Preferences regarding railroads did not exist before – now they have to be learned somehow. New wants however may display different satiation patterns; in particular, they may be harder to satisfy than the old wants. This complicates things: In an evolving economy, it does not make sense to stick to a static notion (and corresponding indicator) of welfare, such as the satisfaction of “given” wants and preferences.

Schumpeter does of course take the variability and endogeneity of preferences seriously. New consumer goods do not only respond to existing preferences; they also

²⁷ on the problem of increasing happiness in an affluent society, see also Scitovsky (1976: ch. 4).

reflect conjectural anticipations of a change in tastes and of the possibility to affect this change. Consumer wants, he argues in *TED* (Schumpeter, [1912] 1982, p. 65) are “educated” and “taught” by producers who initiate economic change. In the 7th chapter of *TED*, he goes on to argue that “the evolution of wants which we observe in reality is a product of the given economic development, rather than its engine ... in principle ... wants are pulled and generated by the process of economic change” (ibid., p. 485).²⁸

Summing up, due to the complexity of the “true” currency of welfare, Schumpeter’s first approach to “solve” the problem of how to evaluate processes of creative destruction does not work out. There is a second approach in his work, though, which is based on Schumpeter’s peculiar way to frame the endogeneity of preferences as a perfectly *passive* reaction to external stimuli. He transforms this idea into an empirical argument about individual values more general, when he speculates about the impact the capitalist process has on people’s habits and attitudes towards the very process itself (Schumpeter, 1942, pp. 248-253). In a sufficiently radical form, this argument may then serve to support a straightforward non-individualist, if somewhat detached, position:

- (b) This is what Schumpeter seems to have in mind when he argues, in *CSD*, that “[w]hether favorable or unfavorable, value judgments about capitalist performance are of little interest. For mankind is not free to choose. This is not only because the mass of people are not in a position to compare alternatives rationally and always accept what they are being told. There is a much deeper reason for it. Things economic and social move by their own momentum and the ensuing situations compel individuals and groups to behave in certain ways *whatever they may wish to do*. – not indeed by destroying their freedom of choice but by shaping the choosing mentalities and by narrowing the list of possibilities from which to choose” (Schumpeter, 1942, pp. 129-130, italics added)

Does this statement, puzzling as it is, match Schumpeter’s own assertions in *TED*, quoted in section 2, above, that there will necessarily always be stubborn resistance against evolutionary change? It does so if we read it as meaning that insofar as this resistance

²⁸ my translation from the German original.

crystallizes in moral disapproval of the capitalist economy (a possibility that is not ruled out), then these judgments are largely irrelevant, because the socio-economic system as a whole – including in particular the “choosing mentalities” it has shaped – simply cannot be changed. What does Schumpeter mean by these “mentalities”? We have to interpret this concept in light of the grand vision of capitalism’s trajectory which is the essential topic of the second half of *CSD*: The capitalist process, it is argued there, “creates a critical frame of mind which, after having destroyed the moral authority of so many other institutions, in the end turns against its own” (Schumpeter, 1942, p. 143). The “rationalist attitude” induced by capitalism’s economic success contributes to spreading a utilitarian interpretation of the common good which eventually leads to a simplistic concept of human values, an “attack” on “private property and the whole scheme of bourgeois values” and to the buildup of an ever growing social welfare state (McCraw, 2007, pp. 436-441). In such a world, there seems to be no place for anything like independent scientific moral reasoning on concepts and criteria of welfare.

The main problems with this position concern (i) its obvious determinism, (ii) the questionable concept of a market economy that is implicitly present in this argument, and (iii) its faulty psychology. As to (i), while reflecting a key theme of Schumpeter’s philosophical vision of the future of capitalism, his deterministic fatalism cannot be squared with the evolutionary thrust of his whole vision of economic life. As to the second point, Schumpeter seems to neglect the fact that there is no such thing as a “pure market” that moves entirely by its “own momentum”. A market is not a natural phenomenon. It is rather constituted by the institutional framework that specifies, e.g., what exactly is meant by “private property” or “freedom of contract”. This framework does not determine economic change, but it certainly channels it in a broad sense. Moreover, it is partly subject to purposeful political design, contradicting Schumpeter’s assertion that the process of change “compels” people to passively accept whatever happens to come out of it. As regards the third – psychological – point, it is certainly correct that economic circumstances have an impact on the values and “choosing mentalities” of people. But it is highly implausible to argue that people cannot help but adapt their preferences so completely as to endorse any new set of circumstances that

they are confronted with. Preference learning is not reducible to the passive adaptation of one's circumstances.

Hence, Schumpeter's second approach aimed at solving the problem of evaluation cannot be upheld either. The most helpful position that can be found in his work is a third one, which happens also to be much more modest: In his "Creative Response" article, Schumpeter applies his general Weberian position on the need to separate positive statements and "any preconceived value judgment" (Schumpeter 1947, p. 153, FN 9) to the entrepreneurial act, which leads him to a pragmatic, if somewhat vague, position:

- (c) Entrepreneurial action, he concludes, should not be seen as "valuable" per se. We cannot know a priori whether some entrepreneurial activity does in fact generate "desirable" or rather harmful results. Rather, "whether a given entrepreneurial success benefits or injures society or a particular group within society is a question that must be decided on the merits of each case" (ibid.) – leaving however the question unsettled how exactly the "merits" should be conceptualized, measured and balanced against the costs.

After several detours through the landscape of welfare notions and criteria, it seems that we are back at square one, though endowed with a clearer perspective on the intricacies involved. What are we to make of Schumpeter's suggestions?

4. How to think about welfare in an evolving economy

In a Schumpeterian world of endogenous qualitative change, individual preferences (Schumpeter prefers to use the term "wants") do not remain fixed, but change by way of learning and adaptation. This immediately raises the question in what sense preferences and the fact that they evolve are relevant for the normative assessment of evolutionary processes. This section examines whether it is possible to construct, in light of Schumpeter's own thoughts about welfare, a basis for an evolutionary ("Schumpeterian") normative approach to welfare.

Let's start with the most fundamental principle for any such approach to welfare, one that Schumpeter himself subscribes to: "[N]o determined value judgment *necessarily*

follows from the facts and relations between facts that I have tried to convey” (Schumpeter, 1942, pp. 129-130, italics added). This reflects Weber’s (and ultimately Hume’s) well-known axiom that there’s a categorical divide between positive and normative statements that does not allow any logical conclusions to be made from the former to the latter (Weber, 1949). Put differently, in order to get from the *input* of some set of positive statements (about the evolutionary character of the economy, say) to the *output* of a normative conclusion, the input has to be complemented by at least one normative statement. Insofar as this is done explicitly, no methodological problems arise. Hence, it would be illegitimate to attach any normative label (such as “good” or “desirable”) to some empirical fact (the phenomenon of economic evolution itself, say, or some of its products) solely on the ground of its existence. Otherwise, something akin to the *naturalistic fallacy* would be committed (Mackie, 1977, ch. 3). Notice that this leaves room for two kinds of scientific inquiry: First, it does not invalidate the possibility of hypothetical statements containing value judgments: If some goal is – hypothetically – assumed to be aimed at by some individuals, then the scientific observer can always devise – hypothetical – statements about how best to achieve this goal.²⁹ Second, it does not preclude the option to examine alternative normative statements (such as those underlying concepts of welfare) as to their practicality and adequacy in a specific context (such as the context of an evolving economy).³⁰

Hence, when constructing a Schumpeterian approach to welfare, we should first of all avoid committing the naturalistic fallacy. In the two arguments classified as (a) and (b) in section 3, above, Schumpeter succeeds in avoiding this trap only at the cost of implicitly endorsing extra value judgments: In (a) he seems to argue along the lines that the losers of economic change will eventually be “compensated”, implying that some

²⁹ These statements should then conveniently be labeled “instrumental” (Keynes, 1917). In his classic distinction between the positive, the normative and the instrumental (“art”) branch of economics, Keynes defines the latter as “a system of rules for the attainment of a given end”, the object of it being “the formulation of precepts” (ibid., pp. 34-35).

³⁰ Schumpeter ([1946] 1991, p. 204) explicitly subscribes to the possibility of making alternative normative statements the subject to scientific discussion. At the same time, though, he adopts an emotivist stance with respect to the status of moral judgments. This is introduced quite *ad hoc*: As to judgments on inequality, he argues that “in itself, disapproval of ... inequality from the standpoint of equalitarian (sic) ideals expresses nothing beyond the critic’s personal feelings of fitness or justice.” (ibid., p. 203) This would rule out the possibility of scientific discussions about any elements of judgments of this kind. As we think that in general, Schumpeter has a Weberian position on these issues, we will disregard this flirtation with emotivism.

compensation in some currency of welfare is a prerequisite for a positive evaluation of the whole process. That is, he first introduces a value judgment – when implicitly requiring material compensation for the process to be legitimate *ex post* – and then hypothesizes (rather boldly) that as a matter of fact the innovation-driven economic process will provide for the compensation required. In (b), he resorts to the strong (and totally unfounded) claim that policy simply cannot change anything about the capitalist process, due to the latter’s overwhelming own “momentum”, and that, consequently, any outcome of this process has to be tolerated, i.e., that any welfare calculus has to be effectively dismissed.

These are revealing assumptions, for both of them obviously serve the auxiliary function to help Schumpeter obtain the desired conclusion that there is no point in digging deeper into the welfare implications of evolutionary change. He harbors the strong intuition that (in the words of McCraw, 2007, p. 501), first, “capitalism’s creative elements outweigh its destructive ones” and that, second, “[d]estruction, *however painful*, is the necessary price of creative progress toward a better material life” (italics added). It is however also safe to assume that when writing *CSD*, he already sensed that to explicitly adopt this second, more radical position would conflict with his Weberian convictions about the imperative of not mixing factual observation and value judgment. The “however painful” insertion in the quote above effectively prejudices the normative assessment of the whole process, thereby leading directly into the naturalistic fallacy: What evolves, is taken to be good *per se*.

The need to avoid just this is explicitly articulated five years later, in his 1947 article on the “Creative Response”: Assessing the “social gains” and “social costs” involved in an evolving market economy would be a cumbersome and “perhaps even hopeless” thing to do (Schumpeter, 1947, p. 155, FN 12).³¹ Nonetheless, this implies no logical “impossibility theorem” or anything that should deter contemporary scholars from trying to take up this challenge.

Given the first principle of normative reasoning sketched above, we have no grounds to assume that the outcome of an evolutionary process will be “good” *per se* in any meaningful sense. Thus, the welfare implications of a Schumpeterian process of

³¹ see also (ibid., pp. 155-156).

growth are not trivial. Essentially, the task is to answer the question “of whether a possible increase in per capita output and living standards through continuing innovativeness is worth the risks involved” (Witt, 1996, p. 114).

We can now go one step further and verify the instrumental dimension of the policy implications of evolutionary change: Given that there is no such thing as the “pure market” but rather, in any given social setting, an institutional framework that constitutes a market economy, and given that some of the institutions are (at least potentially) subject to deliberate design, policy can, by means of rule design, partly influence the direction and intensity of economic change.

This is a positive proposition, i.e., a statement about the factual capacities of policy-makers. We now add the (similarly weak) *normative* proposition that policy (as rule design) *should* ideally be justified and guided by the principle of increasing the well-being of the polity’s citizens, however defined. Given this, the most important step concerns the way how we conceptualize “well-being”.

In traditional welfare economics, individual well-being is of course defined as being about the satisfaction of given preferences. This is ordinarily seen as reflecting an individualist stance, i.e., it is the ordinary individuals themselves whose desires and interests are supposed to guide the whole economic process. As we have seen, Schumpeter is ambivalent as to individualist approaches to welfare. At the same time, he implicitly resorts to (quasi-)individualist arguments in both his arguments (a) and (b): In (a), factual compensation is being referred to as the outcome that appears to legitimize creative destruction (if ex post), while in (b) individual negative value judgments with respect to the market process are at least not denied normative relevance (they are denied factual relevance only because of the *ad hoc* determinism that frames the whole argument). Moreover, as we have seen in section 3, above, Schumpeter is explicitly committed to subjective “want satisfaction” as constituting the framework within which welfare should be defined and measured – provided the variability of wants is somehow accounted for. It is true that he repeatedly (if implicitly) criticizes individualist approaches to social philosophy. But he does so always in the context of more specific attacks on utilitarianism – as one possible individualist approach to human behavior or to well-being – and the utilitarian concept of what constitutes a “good life”. Finally, no

alternatives are being offered: The only “objective” alternative he introduces, viz., “productive efficiency”, does not work beyond the mere instrumental level, and even there proves to be of limited use (see above, section 3).

Thus, it seems that we do not leave Schumpeterian terrain when adopting an individualistic position towards the welfare implications of evolutionary change. Apart from Schumpeter’s own position, it seems that an evolutionary perspective on the economy, with its focus on individual heterogeneity, creativity and the value of diversity more general, would not easily fit with a non-individualist, holistic attitude in matters of welfare assessment.

To be sure, all this does *not* imply sticking to orthodox concepts of “preference satisfaction” when defining welfare. At this point, Schumpeter’s intuitions about (i) the limits of any static welfare calculus and, most importantly, (ii) the need to account for the variability of preferences come to the fore.

Concerning the first issue, it bears emphasis that Schumpeter expresses his unease with normative economics at a time (the 1930s and 1940s) when the latter is really only about the maximization of welfare, narrowly understood as ordinal utility. While his intuition about the limited applicability of this approach is correct when it comes to assessing evolutionary processes, he does not offer any alternative concept except the vague escape to some extremely “long-term” perspective that would, however, presumably still be based on end-state considerations.

As compared to Schumpeter, we are now in a more fortunate position: Initiated by Buchanan and Tullock (1962), published 12 years after Schumpeter’s death, and further stimulated by Rawls’ (1971) seminal work, *contractarian* thinking has been revived within economics.³² Instead of relying solely on the device of Pareto efficiency or social welfare functions, normative economists now have tools available that are tailored to the normative assessment of the general *rules*, rather than the particular outcomes, of the

³² Schumpeter was of course aware of the classic contributions (in particular by Hobbes) to contractarian thought, but did not seem to have any deeper interest in them, as the very cursory remarks in his “History of Economic Analysis” demonstrate (Schumpeter, 1954, pp. 119-26). He appears to strongly reject a view that would take social-contract theory as a descriptive account of policy-making: “The freely voting rational citizen, conscious of his (long-run) interests, and the representative who acts in obedience to them, the government that expresses these volitions – is this not the perfect example of a nursery tale?” (ibid., p. 429). Most modern contractarians would concur. Notice, though, that this does not in any way invalidate the use (e.g., in the present paper) of social contract theory as a *normative* device.

capitalist “market game”. By their very nature, rules are judged according to (i) their procedural aspects (such as their non-discriminatory nature) and (ii) the broad patterns of outcomes they tend to generate over time (Vanberg, 1994). In particular, any derivation of perfect end-states expressing some supra-individual “common good” is avoided. It seems, thus, that the conceptual tools provided by social contract theory are appropriate to support normative reasoning about complex evolutionary processes. Hence, it can be safely assumed that the “dynamic welfare economics” (Heertje, 2006, p. 110)³³ that Schumpeter must have had in mind, can be constructed on the basis of the assessment of alternative rules that channel the process of economic change.

This implies that the assessment of Schumpeterian growth should aim at identifying an appropriate “social contract”. This social contract would be endogenously constructed by catering to the well-considered interests of the individuals affected by processes of creative destruction. A social contract is identified by means of a thought experiment that inquires into what kinds of rules individuals would agree upon from behind a veil of ignorance. Reflecting a universal idea of impartiality, this veil defines the stage of constitutional deliberation and bargaining. Schumpeter’s concerns, quoted in section 2, about the “après nous le deluge” mentality of the “masses” (Schumpeter, 1942, p. 145) can be accounted for by precisely this veil of ignorance concept: When they are put in a situation of uncertainty, without knowing about their future positions and particular interests in the innovative market game that they are about to play, individuals will transcend their narrow self-interest and decide on the basis of “insight” and “moral feat” (ibid., p. 144) that cannot be expected to prevail in their “post-constitutional” day-to-day reasoning.³⁴ The contractarian approach can, thus, accommodate essential elements of Schumpeter’s skepticism towards an individualist notion of welfare.

Standard contractarian economics, though, still operates with the fiction of “given” preferences that passively await their satisfaction. That is why the innovative part of a Schumpeterian approach to welfare consists in reconceptualizing the notion of

³³ see also Dolfsma (2005).

³⁴ Such an “artificial” situation of genuine uncertainty may be particularly adequate in reflecting what goes on in the real world of an evolving economy, where “the uncertainty of innovation processes throws a *veil of ignorance* over the economic actors” (Hanusch and Pyka, 2007a, p. 284, italics added).

individual well-being, within the basic normative framework of social contract theory. This will be the topic of the following section.

5. Towards a Schumpeterian Social Contract

When preferences change endogenously, taking their satisfaction as the measuring rod of the system's performance raises problems of logical circularity, for the standard used to evaluate a system is then not independent of the system itself. This has been a thorny issue for welfare economists for quite some time now (Witt, 2003). Unsurprisingly, it has turned out that overcoming the narrow focus of the profession to the “pure” domain of economics provided the key to solve the problem. In this sense, Schumpeter's own ideas about how to properly separate “pure economics” from neighboring sciences (sociology, say, or psychology) may have impaired his own reasoning about welfare. Inspired by recent insights into the psychological determinants of economic behavior, modern welfare economics has now indeed broadened its focus substantially.³⁵ As a result, there are essentially two options available to the normative economist:

The first option involves skipping preference (or want) satisfaction altogether as a notion and indicator of welfare and focus instead on some alternative criterion that is not subject to circularity issues. Such an alternative criterion has to be more “objective” in order to provide a more robust basis for welfare judgments. The most promising candidates center around the idea of defining well-being in terms of an individual's “chances” to increase her own quality of life. Interestingly, in *CSD*, Schumpeter briefly refers to such a criterion: Capitalism, he says, “provides, to a much greater extent than most of us believe, the ladders for talent to climb” (Schumpeter, 1942, p. 188).³⁶ He then seems to dismiss it, though, on the ground of its character as a “socialist” ideal.

A refined version of this idea has been suggested by Sugden (2004). His approach takes *opportunity* – a criterion reflecting both the degree of negative freedom a person enjoys and her “chances” – as the adequate currency of welfare for an evolving economy. Policy should aim at maximizing the individuals' opportunity sets, i.e., their possibility to

³⁵ as evidenced by contributions such as Sugden (2004), Sen (1996), Elster (1982). See also Witt and Schubert (2008).

³⁶ see also Schumpeter ([1946] 1991, p. 201), Elliott (1980, p. 55).

satisfy whatever preferences they happen to form (rather than the amount of satisfaction actually realized). This policy goal and criterion is explicitly taken to reflect what individuals would agree upon from behind the veil of ignorance. This approach, however, lacks plausibility in that it precludes any option to self-commit: Sugden assumes that at the constitutional stage, individuals will never agree upon binding their own post-constitutional behavior, even when they anticipate the risk of forming ill-informed, irrational and inconsistent preferences when playing the Schumpeterian market game.

The second option involves having a closer look at the process of individual preference formation. Two approaches may be distinguished here: The process may be evaluated either in terms of the degree of individual “autonomy” involved or in terms of the “output” it generates. As to the first, purely procedural criterion, Elster (1982) proposes to sidestep the circularity issue by scrutinizing the historical genesis of an individual’s preferences. The process of preference formation may, e.g., be subject to indoctrination or manipulation, or display unconscious “adaptation” to arbitrary circumstances; in that case the normative weight of the resulting preferences in the welfare calculus might be discounted. Ideally, though, the process displays perfect “autonomy”. When preferences are formed autonomously, it may be conjectured that they will, as a rule, not be “irrational” in the sense of being detrimental to the individual’s well-being. The problem is to find a suitable criterion of autonomy, and this turns out to be a thorny issue (Heath, 2005). Moreover, it may be questioned whether the distinction between autonomous and non-autonomous preferences makes sense in light of the fact that realistically, all preferences are somehow causally formed under the influence of the individual’s environment (Barry, 2008). While preference learning is not a purely passive reaction to external stimuli, man is not perfectly free to choose his preferences either. Elster’s approach may actually overstate the degree of conscious choice involved in this process.

As to the second, output-related criterion, Knight (1923) famously pleads in favor of judging the wants themselves that the economic system tends to bring about: “[T]he social order largely forms as well as gratifies the wants of its members, and the natural consequence [is] that it must be judged ethically rather by the wants which it generates” (ibid., p. 43). While Knight does not elaborate on this, the idea to “judge” the wants that

are formed in the course of the evolutionary process may indeed serve as a starting point to construct a Schumpeterian account of well-being.

We will demonstrate the “Schumpeterian” quality of the account that is to be construed by assuming the following: First, we assume that Schumpeter aims at finding a way to convince individuals that the capitalist process of economic change would effectively increase their well-being, not only in terms of material resources, but in terms of want satisfaction (the “true output” of economic change) more general. Second, we have good reasons to presume that he also wants to convince them that the evolutionary process would make sure that the wants they will acquire during the process itself would be catered to over time. Third, and closely related, given that he repeatedly dismisses utilitarian thinking on the grounds of its overly simplistic view of individuals’ “values” or “quality of life”, we assume that he wishes to conceptualize “want satisfaction” in a (probably multi-dimensional) way that better reflects what real-world individuals care about. To reconcile these three goals obviously requires a criterion of welfare that is more elaborate than simple “want satisfaction”.

On a more basic level and seen from an individualist perspective, the key issue seems to be the following: While in the (sufficiently long!) “long term” any welfare problems will certainly be solved (a point that Schumpeter stresses over and over again), real-world people care about what will happen in the short- to medium-term. From the point of view of the constitutional stage behind the veil of ignorance, they will anticipate that they are going to be affected by discontinuous “gales of creative destruction” in the course of the post-constitutional market game. Given this anticipation, it seems to be implausible to assume them to willingly accept *any* conceivable risk about imbalances occurring in *any* conceivable currency of welfare. Rather, we need to find a currency of welfare that satisfies two conditions: First, it can be effectively “delivered” to the individuals without interfering “too much” with the process of economic change and its general capacity to create welfare; second, it is in fact valuable to the individuals, i.e., it is accepted as a key part of what, for them, constitutes a “good life” (beyond the utilitarian satisfaction of given, possibly uninformed or incomplete wants).

For the purposes of (conjectural) normative theorizing, both conditions will be satisfied if a good case can be made that a concept and “currency” of welfare can be

agreed upon from behind the veil of ignorance. For individuals can be assumed to be interested in dismissing any notion of welfare that violates at least one of the two conditions. By contrast, we may identify a plausible concept of welfare by introducing assumptions about the knowledge that the individuals are endowed with at the constitutional stage. Here, Schumpeter's ideas about the variability of individual preferences in a world of qualitative change enter the stage. Let us assume that behind the veil of ignorance, while being ignorant about their particular future interests, individuals do know that their preferences will change endogenously and that the processes involved in the individual (often highly idiosyncratic) specialization and refinement of wants is only partly subject to conscious control.³⁷ They know that their future preferences will be highly contingent on their specific learning history.³⁸

How does this knowledge affect their deliberation behind the veil? Two aspects seem to be particularly striking. First, the fact that their preferences will change – due to changing external circumstances, say – may indicate that they should not be understood as sacrosanct representations of a person's ultimate goals or definite identity. Rather, individuals can be assumed to perceive and judge their future preferences as *instrumental*. This paves the way towards a critical assessment of the preferences themselves and the way they change, i.e., the way they are acquired and learned over time. As modern research on the determinants of happiness (Frey and Stutzer, 2002) shows, individuals may strive for a variety of goals other than just the satisfaction of any set of preferences they happen to have at a particular moment in time: Examples include, of course, happiness (in the narrow sense of mental-state based pleasurable feelings), but also achievement, freedom, self-esteem and social recognition. The trying out of new preferences may also be valued, independently of any impact on a person's happiness, in terms of the quality and reach of the new knowledge acquired through this process.

Second, given these insights, individuals may be conjectured to harbor a genuine interest in having sufficient opportunities to try out new preferences as to their

³⁷ for a psychologically informed account of preference learning, see Witt (2001).

³⁸ Schumpeter considered this contingency to be of utmost importance for economic theorizing: “[Is] it not time to investigate ... how far the traditional and, in part, advertisement-shaped tastes of people are subject to the qualification that they might prefer other things than those which they want at present as soon as they have acquired familiarity with these other things?” (Schumpeter, 1949, p. 380, FN 28).

effectiveness in achieving the goals listed above.³⁹ This implies that in light of what they know about the endogeneity of their own future preferences, individuals at the constitutional stage will evaluate any rule or policy on the basis of “educated guesses” (Witt, 2003) about how this rule or policy will affect (i) their opportunity to learn new preferences at all, and, more importantly, (ii) their chance to learn new *instrumentally effective* preferences in the future – where “instrumentally effective” refers to the (multiple and multi-dimensional) ultimate goals the individuals will presumably form.

Hence, in an evolutionary setting, and based on Schumpeter’s ideas about the limits of standard welfare economics and the challenges any superior account of human welfare has to meet, individual well-being may be conceptualized as the opportunity to engage in instrumentally effective preference learning over time. Notice that this criterion has two interesting sets of properties:

- (i) Normatively, the criterion comprises a procedural (“opportunity”) and an outcome-oriented component (“instrumentally effective”). It reflects a more complex view of individual “quality of life” than the standard utilitarian view of want satisfaction, in that it is dynamic and relates to a variety of specific human goals. Contrary to standard welfare economics, it implies the value judgment that preference change should not be seen as a source of potential inconsistency and inefficiency (an “anomaly”) but rather as something to be desired and even fostered under the conditions of a “Schumpeterian” economy.
- (ii) Pragmatically, the criterion implies supporting policies that help consumers play their role as “sovereigns” of the economic process, while not interfering with their freedom and motivation to explore new preferences on their own, in an entrepreneurial way, as it were. Put differently, policies should make sure that the “market for preferences” works (Earl and Potts, 2004). Moreover, applying the criterion does not interfere with, but rather helps foster Schumpeterian processes of

³⁹ While the catalog on ultimate human goals offered so far by the research on happiness is by no means conclusive, it may certainly serve as a valuable approximation on the basis of which policy advice may be generated.

growth in implying that the individuals' capacity to acquire new (preference- or want-related) knowledge ought to be enhanced. The capacity of an evolutionary system to process decentralized knowledge and to generate novelty – its internal “source of energy”, to paraphrase Schumpeter – is ultimately based on the effective capacity and motivation of individuals to acquire new wants and preferences. In this sense, the criterion suggested in the present paper can be seen as measuring an economy's capacity to adjust to change in a way that relates to the individuals' well-being.

Note finally that in opening the way towards examining the relationship between gains and losses of evolutionary change, a concept of welfare can accommodate the widespread “unease” with the capitalist “drama” that Schumpeter was so keenly aware (and afraid) of. In this sense, a welfare concept such as the one suggested above may be an essential part of an institutional framework that is open to accept the “challenge from novelty” (Metcalf 2008). Given this, it may allow to manage the complex effects of the capitalist process in such a way that it can “flourish alongside public order and political liberty” (DeLong 2007).

6. Concluding Remarks

Due to his ambition to understand the process of economic evolution as an “indivisible whole”, Schumpeter could not help neglecting the complex normative dimension of this process. This complexity is well reflected in the “stimulating ambiguity” (Baumol, 2002) of the metaphor of “creative destruction”. Torn between, on the one hand, the intricacy of the issues involved and, on the other hand, the poor state of the (perfectly static and deeply positivist) welfare economics of his time, his thinking on the welfare implications of evolutionary change is sometimes hard to reconstruct.

This should however not detract from the fact that Schumpeter, by speculating about how (i.e., in terms of which notion or “currency” of welfare) processes of endogenous change might plausibly be evaluated, turns out to have been far ahead of the welfare economics of his time. His deep skepticism towards utilitarianism and normative

individualism more general reflects a basically correct intuition that in order to construct a concept of welfare that is compatible with an evolutionary view of the economy (in particular with the phenomenon of preference change), we have to move beyond the usual narrow confines of orthodox preference-satisfaction accounts of welfare.

The main difficulty in moving ahead seems not to be the accommodation of preference change in the analytical apparatus of welfare economics. There is now a growing interest among normative economists to tackle this problem. What appears to be much harder, from a specifically evolutionary perspective, is to make sense of the idea that welfare losses may be functionally related to the benefits of innovation (as Schumpeter emphasized), but that at the same time, a balance has to be struck between “acceptable” losses and a less-than-maximum amount of innovation.

Unfortunately, Schumpeter’s legacy may have included a lack of interest in the Neo-Schumpeterian camp to look for the missing links and start exploring the normative dimension of novelty and change. Despite the fact that its practical impact on today’s economies is as great as ever, “creative destruction” remains his most widely quoted metaphor, but maybe also his least understood concept.

References

- Aghion, P., Howitt, P. (Eds.), 1998. *Endogenous Growth Theory*. Cambridge: MIT Press.
- Andersen, E.S., Dahl, M.S., Lundvall, B.-Å., Reichstein, T., 2006. Schumpeter’s process of creative destruction and the Scandinavian systems: a tale of two effects. Paper presented at the DRUID conference, June 2006.
- Barry, B., 2008. Rationality and Want Satisfaction. In: Fleurbaey, M., Salles, M., Weymark, J.A. (Eds.), *Justice, Political Liberalism, and Utilitarianism*. Cambridge: Cambridge University Press, pp. 281-302.
- Baumol, W., 2002. Innovation and Creative Destruction. In: McKnight, L.W., Vaaler, P.M., Katz, R.L. (Eds.), *Creative Destruction: Business Survival Strategies in the Global Internet Economy*. Cambridge: MIT Press, pp. 21-38.
- Becker, M., Knudsen, T., 2002. Schumpeter 1911: Farsighted Visions on Economic Development. *American Journal of Economics and Sociology* 61, 387-403.
- Boianovsky, M., Trautwein, H.-M., 2009. Schumpeter on unemployment. *Journal of Evolutionary Economics*, forthcoming.
- Buchanan, J.M., 1991. The Foundations of Normative Individualism. In: Buchanan, J.M. (Ed.), *Fiscal Theory and Political Economy*. Chapel Hill: University of North Carolina Press, pp. 105-124.

- Buchanan, J.M., Tullock, G., 1962. *The Calculus of Consent*. Ann Arbor: University of Michigan Press.
- DeLong, B., 2007. Creative Destruction's Reconstruction: Joseph Schumpeter Revisited. *The Chronicle of Higher Education* 54, B8.
- Dolfsma, W., 2005. Towards a dynamic (Schumpeterian) welfare economics. *Research Policy* 34, 69-82.
- Earl, P.E., Potts, J., 2004. The market for preferences. *Cambridge Journal of Economics* 28, 619-633
- Ebner, A., 2006. Institutions, entrepreneurship, and the rationale of government: An outline of the Schumpeterian theory of the state. *Journal of Economic Behavior and Organization* 59, 497-515.
- Elliott, J.E., 1980. Marx and Schumpeter on Capitalism's Creative Destruction: A Comparative Restatement. *Quarterly Journal of Economics* 95, 45-68.
- Elliott, J.E., 1991. Schumpeter and the Theory of Capitalist Development. In Wood, J.C. (Ed.), *J.A. Schumpeter. Critical Assessments, Vol. IV*. London: Routledge, pp. 38-70.
- Elster, J., 1982. Sour grapes – utilitarianism and the genesis of wants. In: Sen, A.K., Williams, B. (Eds.), *Utilitarianism and Beyond*. Cambridge: Cambridge University Press, pp. 219–238.
- Fagerberg, J., 2003. Schumpeter and the revival of evolutionary economics: an appraisal of the literature. *Journal of Evolutionary Economics* 13, 125-159.
- Fauci, R., 2007. Max Weber's Influence on Schumpeter. *History of Economic Ideas* 15, 111-133.
- Frank, R., 1999. *Luxury Fever: Money and Happiness in an Era of Excess*. Princeton: Princeton University Press.
- Frey, B.S., Stutzer, A., 2002. What can Economists Learn from Happiness Research? *Journal of Economic Literature* 60, 402-435.
- Haberler, G., 1950. Joseph Alois Schumpeter 1883-1950. *Quarterly Journal of Economics* 64, 333-372.
- Hanusch, H., Pyka, A., 2007a. Principles of Neo-Schumpeterian Economics. *Cambridge Journal of Economics* 31, 275-289.
- Hanusch, H., Pyka, A. (Eds.), 2007b. *Elgar Companion to Neo-Schumpeterian Economics*. Cheltenham: Edward Elgar.
- Hayek, F.A., 1978. The Confusion of Language in Political Thought. In: Hayek, F.A. (Ed.), *New Studies in Philosophy, Politics, Economics and the History of Ideas*. London: Routledge, pp. 71-97.
- Heath, J., 2005. Liberal Autonomy and Consumer Sovereignty. In: Christman, J., Anderson, J. (Eds.), *Autonomy and the Challenges to Liberalism*. Cambridge: Cambridge University Press, pp. 204-225.
- Heertje, A., 2006. Schumpeter on the Economics of Innovation and the Development of Capitalism. Ed. by J. Middendorp. Cheltenham: Edward Elgar.
- Keynes, J.N., 1917. *The Scope and Method of Political Economy*. London: Macmillan.
- Keynes, J.M., [1928] 1963. The Economic Possibilities of our Grandchildren. In: Keynes, J.M. (Ed.), *Essays in Persuasion*. New York: W.W. Norton, pp. 358-373.
- Knight, F.H., 1923. *The Ethics of Competition and other Essays*. Transaction Publishers.
- Lane, R.E., 2000. *The Loss of Happiness in Market Democracies*. New Haven: Yale University Press.

- Layard, R., 2006. Happiness and Public Policy: a challenge to the profession. *Economic Journal* 116, C24-C33.
- Mackie, J.L., 1977. *Ethics. Inventing Right and Wrong*. London: Penguin.
- McCraw, T.K., 2007. *Prophet of Innovation: Joseph Schumpeter and Creative Destruction*. Cambridge: Belknap Press.
- Metcalf, J.S., 2005. Systems failure and the case for innovation policy. In: Llerena, P., Matt, M. (Eds.), *Innovation Policy in a Knowledge-Based Economy*. Berlin, Springer, 47-74.
- Metcalf, J.S., 2008. The broken thread: Marshall, Schumpeter and Hayek on the evolution of capitalism. In: Shionoya, Y., Nishizawa, T. (Eds.), *Marshall and Schumpeter on Evolution*. Cheltenham: Edward Elgar, pp. 116-144.
- Nelson, R.R., Winter, S.G., 1982. *An Evolutionary Theory of Economic Change*. Cambridge: Belknap Press.
- Rawls, J., 1971. *A Theory of Justice*. Cambridge: Belknap Press.
- Schumpeter, J.A., 1908. *Das Wesen und der Hauptinhalt der theoretischen Nationalökonomie*. Berlin: Duncker & Humblot.
- Schumpeter, J.A., [1912] 2006. *Theorie der Wirtschaftlichen Entwicklung*. Facsimile of the 1st edition. Berlin: Duncker & Humblot.
- Schumpeter, J.A., [1912] 1982. *The Theory of Economic Development*. New Brunswick: Transaction Publishers.
- Schumpeter, J.A., 1928. The Instability of Capitalism. *Economic Journal* 38, 361-386.
- Schumpeter, J.A., [1932] 2005. Development - with an introduction by Becker, M.C., Eßlinger, H.U., Hedtke, U., Knudsen, T. *Journal of Economic Literature* 43, 108-120.
- Schumpeter, J.A., 1939. *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process*. London: Macmillan.
- Schumpeter, J.A., 1942. *Capitalism, Socialism and Democracy*. London: Routledge.
- Schumpeter, J.A., [1946] 1991. Capitalism. In: Clemence, R.V. (Ed.), *Essays: On Entrepreneurs, Innovations, business cycles and the Evolution of Capitalism*. New Brunswick: Transaction Publishers, pp. 189-210.
- Schumpeter, J.A., 1947. The creative response in economic history. *Journal of Economic History* 7, 149-159.
- Schumpeter, J.A., 1949. English Economists and the State-Managed Economy. *Journal of Political Economy* 57, 371-382.
- Schumpeter, J.A., 1954. *History of Economic Analysis*. New York: Oxford University Press.
- Schumpeter, J.A., 1980. *Methodological Individualism*. Brussels: Institutum Europaeum.
- Schumpeter, J.A., [1934] 1991. Depressions. Can we learn from past experiences? In: Clemence, R.V. (Ed.), *Essays: On Entrepreneurs, Innovations, business cycles and the Evolution of Capitalism*. New Brunswick: Transaction Publishers, pp. 108-117.
- Schumpeter, J.A., 2002. Seventh Chapter of the Theory of Economic Development, transl. by U. Backhaus. *Industry & Innovation* 9, 93-145.
- Scitovsky, T., 1976. *The Joyless Economy. An Inquiry Into Human Satisfaction and Consumer Dissatisfaction*. New York: Oxford University Press.
- Sen, A.K., 1996. On the Foundations of Welfare Economics: Utility, Capability, and Practical Reason. In: Farina, F., Hahn, F., Vanucci, S. (Eds.), *Ethics, Rationality, and Economic Behavior*. Oxford: Clarendon Press, 50-65

- Sen, A.K., 2009. *The Idea of Justice*. London: Allen Lane.
- Shionoya, Y., 1997. *Schumpeter and the idea of social science*. Cambridge: Cambridge University Press.
- Soete, L., ter Weel, B., 1999. *Schumpeter and the Knowledge-Based Economy: On Technology and Competition Policy*. Research Memoranda 004, MERIT, Maastricht.
- Sugden, R., 1998. The role of inductive reasoning in the evolution of conventions. *Law and Philosophy* 17, 377-410.
- Sugden, R., 2004. The opportunity criterion: Consumer sovereignty without the assumption of coherent preferences. *American Economic Review* 94, 1014-1033.
- Swedberg, R., 1991. Schumpeter's early work. *Journal of Evolutionary Economics* 2, 65-82.
- Vanberg, V.J., 1994. Cultural Evolution, Collective Learning, and Constitutional Design. In: Reisman, D. (Ed.), *Economic Thought and Political Theory*. Boston: Kluwer, pp. 171-204.
- Weber, M., 1949. *The Methodology of the Social Sciences*. Free Press.
- Witt, U., 1996. Innovations, Externalities and the Problem of Economic Progress. *Public Choice* 89, 113-130
- Witt, U., 2001. Learning to Consume – a theory of wants and the growth of demand. *Journal of Evolutionary Economics* 11, 23-36.
- Witt, U., 2002. How evolutionary is Schumpeter's Theory of Economic Development? *Industry and Innovation* 9, 7-22.
- Witt, U., 2003. Economic policy-making in evolutionary perspective. *Journal of Evolutionary Economics* 13, 77-94.
- Witt, U., Schubert, C., 2008. Constitutional Interests in the Face of Innovations: How much do we need to know about Risk Preferences? *Constitutional Political Economy* 19, 203-225.
- Zilibotti, F., 2007. "Economic Possibilities for our Grandchildren" 75 years After: A Global Perspective. Working Paper # 344, Institute for Empirical Research in Economics, University of Zurich.