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ABUNDANCE ECONOMICS FOR SOCIAL SUSTAINABILITY: MACROECONOMIC AND TRANSDISCIPLINARY ANALYSIS MODELS FOR LOCAL AND GLOBAL POLICY PERSPECTIVES

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Abstract

Abundance Economics, also called post-scarcity economics, increasingly attracts attention in macroeconomic research as well as in policy practice, with its relevance predicted to be ever growing. After a historical overview, this article traces that research attention, shows the need and motivation for this investigation, and then predefines and differentiates the concept. Conceptually, abundance and post-scarcity economics is discussed within the frameworks of heterodox and post-Keynesian economics, before examining how writings on abundance economics confront and overcome the scarcity paradigm within economics. Hence the first conceptual contribution of this research is the systematization of abundance economics within classical, heterodox and post-Keynesian economics in a concise yet comprehensive form that does not yet exist in macroeconomic literature. The second conceptual contribution is the investigation of abundance economics as a macroeconomic paradigm shift, together with this paradigm shift's pragmatic advantages in today's world. The third conceptual contribution is the precise definition, itemization and scrutiny of abundance economics within the global macroeconomic system, in a form also not yet existing in the literature. Methodologically, this research evaluates a range of suggested disciplines contributing to, and benefitting from abundance economics, before studying the arguments for their use and introducing its own multidisciplinary approach. Hence its methodological contribution is the consideration, combination and practical application of a coherent multidisciplinary framework for evaluating the macroeconomic potential of abundance economics in 21st century scenarios. Its final and overall contribution is the synthesis, analysis and discussion of eight distinct yet relatable solutions for conceiving and using abundance economics in economic, social, political, ecological and cultural sustainability reflections and recommendations for local practice and global policy.

Keywords: Abundance Economics, Post-Scarcity Economics, Post-Keynesian Economics, Heterodox Economics, Wealth and Welfare.

JEL Classification: B55, E12, E71, O35, P46.

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1. Introduction and Overview

1.1. Recent Research Interest in Abundance or Post-Scarcity Economics

Recent macroeconomic research focuses on the concept and applications of the economics of abundance, or post-scarcity, from various angles. While some ask openly: “Is there an economics of abundance?” (Jennings, 2015, p. 5), others depict it as one of the macroeconomically and socioeconomically most progressive and fulfilling theories to date: “A new philosophy of economics...as an economic theory of the future...*Abundance Economics*, is necessary for the contemporary moment” (Swan, 2017, pp. 19, 25, original emphasis). Others stress its future relevance: “A new economics of abundance is under way and in reach” (Jennings, 2015, p. 7). Still others underline the urgency to understand the concept and to apply it: “The post-scarcity world will put tremendous pressure on current business models, potentially rendering them irrelevant and obsolete in the future....If traditional businesses do not adapt to this emerging world...many of the strong, traditional organizations of the early twenty-first century will cease to exist over the next 50 years” (Aguilar-Millan, Feeney, Oberg and Rudd 2010, p. 36). Some hold that abundance has already arrived in the 21st century, in theory and practice, exemplified by new media applications: “Abundance thinking – understanding the implications of ‘practically free’ – is a core competence of our age. It brought us everything from the iPod (‘what if storage were so cheap you could put your entire music collection in your pocket?’) to Gmail (‘why should you ever have to delete an email?’)” (Peters (2009, p. 10).

1.2. Macroeconomic Need, Motive, and Scope of Research on Abundance

Sheehan (2010, p. vii) describes the need for more exploratory and explanatory research at the intersection of heterodox economics and abundance economics: “Mainstream and heterodox economics...had little to offer to the explanation of...affluent consumers. Other disciplines have taken the topic much more seriously, but with perhaps insufficient appreciation of the general market form in the system of abundance”. Our research directly addresses these research lacunae, fully appreciating the general market, with a macroeconomic analysis focus, and in detailed engagement with heterodox economics, as shown below.

This research respects the lack of material goods by many people in today’s world, yet also acknowledges the generally rising worldwide economic progress over the last two centuries that allowed ever more people to raise their living standards: “Over the past twenty years, the proportion of the global population living in extreme poverty has halved. This is absolutely revolutionary...[and] the most important change that has happened in the world [in the last century]” (Rosling and Rönnlund, 2018, p. 6). This research also acknowledges the rise of “lifestyle diseases” or “diseases of affluence” in developed and industrialized countries, such as “heart attack, hypertension, diabetes and obesity” (Chockalingam and Chockalingam, 2014, p. 5) caused by “overconsumption of sugar, salt, processed foods, meat and meat products, cigarettes and alcohol, combined with a lack of exercise” (Gillespie Cook and Halsall, 2012, pp. 22-23). Yet these potentially negative consequences of abundances should not detract from its positive ones.

Some (Aguilar-Millan, Feeney, Oberg and Rudd, 2010) detail areas of abundance with macroeconomic implications; yet several of these are outside the scope of this research, either because parts of them relate to other academic disciplines (such as sociology, world politics, international relations or international finance), or because of strong microeconomic elements. Some of these areas are: the post-scarcity company (2010, pp. 36-37), post-scarcity society (2010, pp. 37-38); post-scarcity geopolitics (2010, pp. 38-39), or the post-scarcity financial system (2010, pp. 39-40). Likewise beyond the scope of this research are specific challenges of resource abundance for affluent societies, whether they have positive connotations (such as government spending and public investments) or negative ones (such as economic or political mismanagement): “There are still problems in an affluent society. First, there is the problem of poverty or the problem of income distribution. Just because there is enough for everyone on average does not mean that everyone will get enough to survive. Second, there is the problem of public squalor and private affluence” (Pressman, 2011, p. 4). This research focuses on the positive connotations of the concept and practical implications of abundance economics from macroeconomic and sociopolitical perspectives, which can then serve as a sound basis for local and global policy measures and recommendations.

2. Literature Review

2.1. Terminology and Differentiation of Abundance Economics

Some of the current macroeconomic synonyms are “abundance economics” (Shi, 2018, p. 432; Swan, 2016, p. 907); “economy of abundance” (Shi, 2018, p. 425), “post-scarcity economics” (Pressman, 2011, p. 3); or generally “post-scarcity” (Peters, 2009, p. 11). For clarity and consistency, this research only uses the two terms “abundance” and “post-scarcity”, either in connection with “economics” to underline its macroeconomic focus, or in isolation to accentuate the idea of abundance or post-scarcity itself. Specifically, “post-scarcity” is used to point out the effort of, or the success in overcoming real or perceived scarcities, while “abundance” is used to underline either real plentitudes, or at least their potential.

The literature on abundance or post-scarcity economics does not suggest goods to exist or to be obtainable in a form that is unlimited, effortless, without opportunity costs, or promoting laziness: some explicitly do “not equate abundance with infinity” (Saunders, 2015, p. 4). Others clarify: “Abundance does not mean that goods are free. Abundance means adequacy, not satiation. The level of adequacy is not constant, but is relative to the community’s...technological progress... [which] has propelled the human community from the Stone Age to the Space Age” (Dugger and Peach, 2009, p. 3). The literature on abundance also holds that “opportunity cost – the cost of the next best alternative – is indeed a meaningful short-run concept, and everyone faces short-run tradeoffs. Nevertheless, scarcity in the short run obscures rather than illuminates the most important facts, trends, and issues of modern economies” (Dugger and Peach, 2009, p. x). Similarly, abundance is not equated with laziness: “Abundance does not mean that people will ever be able to sit back and do nothing but pluck juicy apples off the tree. There is much work that needs to be done in the world, products to make and services to perform” (Dugger and Peach, 2009, p. xiii).

2.2. Pre-Definition of Abundance Economics

A concise pre-definition of abundance economics facilitates its below historical embedding, detailed macroeconomic definition, and engagement with the scarcity paradigm. Recent writings consider it a combination of economic, political, social, cultural and personal goods: “Abundance means that everyone has adequate health care, nutrition, education, transportation, recreation, housing, self-expression, and personal security” (Shi, 2018, p. 432; Dugger and Peach, 2009, p. 3). It is seen as more than just a theory, namely a practical, lived-in reality: “Abundance is... analysed as an experienced reality rather than an abstract future utopia” (Sheehan, 2010, pp. 2-3). It starts from a material baseline but then transcends into other dimensions: “Abundance...is the eradication of scarcity in terms of having material needs covered, in the notion of recouping a baseline, but...also means open-ended possibility up from baseline, defining the area of social goods that humans need to thrive, not merely survive” (Swan, 2016, p. 905).

Some pre-define abundance concisely in both prose and itemization (Saunders, 2015, p. 8; my numbering below): “There are enough human talents and resources together to satisfy the needs of the inhabitants of the planet...[and] to devise strategies and action plans to ensure that tall human needs are met...[In] an economic regime based on abundance:

- 1) Everyone is able to acquire the material resources that satisfy their needs;
- 2) There are no gaping differences in material holdings between people;
- 3) There are no gaps in social standing related to material possessions;
- 4) People are enriched as they come together;
- 5) The ‘moral distance’ of obscene wealth in the midst of excessive deprivation is removed”.

2.3. Classical and Heterodox Economics as Basis of Abundance Economics

While strongly discussed in recent literature, indications of the idea of abundance or post-scarcity economics are already found in macroeconomic writings as of the second half of the 20th century, even if in isolated and scattered form. As of the restructuring period after the Second World War, sources consolidated themselves around the ideas of technological optimism, employment conditions, democratic management, and peace studies (Peters, 2009, p. 11). Subsequently, interest in the concept and applications of abundance economics has steadily risen until the end of the second decade of the 21st century. Its current relevance is exemplified with the recent property and stock bubbles, resulting credit crunches and national bank bailouts, and their global economic ripple effects of public mistrust and economic recession, parts of which are still with us today (Aguilar-Millan, Feeney, Oberg and Rudd 2010, p. 35). It is further stressed that the post-scarcity world is already challenging our macroeconomic assumptions, exemplified by online information, shopping, advertising and entertainment: “As we enter into the post-scarcity world, we will also be entering a time of significant challenge to the traditional capitalist business models, concepts, and assumptions that have developed over the past 200 years” (Aguilar-Millan, Feeney, Oberg and Rudd, 2010, p. 36).

On that basis, recent macroeconomic writings remind us of classical economists as being forerunners of later heterodox and today’s abundance economics: “Noted economists

such as Adam Smith, Karl Marx, Thorstein Veblen, John Keynes, and more recent thinkers such as R. H. Tawney, John A. Hobson and Eric Zimmerman taught ‘abundance economics’” (Shi, 2018, p. 432; similarly Lavoie, 2014, p. 23). The literature then contrasts “the two wide traditions that exist in economics... heterodox economics and orthodox economics”, calling orthodox economics also “neoclassical”, “old paradigm”, “mainstream” or “marginalism” economics; and heterodox economics also “real-world economics”, “post-classical paradigm”, or “new paradigm economics” (Lavoie, 2014, p. 5). While some hold that “there is no agreed concept of heterodox economics” (Mearman, 2011, p. 481), for others, orthodox schools stress “exchange, allocation, scarcity”, while heterodox schools highlight “production, growth, abundance” (Dugger and Peach, 2009, p. 5). This, finally, leads to associations of orthodox economics with scarcity, and heterodox economics with abundance: “Orthodox economics is...research...of a world of scarcity, [while] heterodox economics is...research...of a world of abundance (sometimes in the midst of poverty)” (Lavoie, 2014, p. 24).

2.4. Post-Keynesian Economics as Refined Basis for Abundance Economics

One of the still most influential schools of heterodox economics is Post-Keynesian economics (see Lavoie, 2014, p. 2; Mearman, 2011, p. 482), based on “the seminal ideas that were developed by the followers of John Maynard Keynes” (Lavoie, 2014, p. 4). Post-Keynesian economics has found recent and staunch support in the wake of the 2008 Global Financial Crisis, in that it should already have been considered after the 1990 Asian Financial crisis that involved Japan and East Asia (Lavoie, 2014, p. 1). Consequently, for our current times, “the necessity of a post-Keynesian alternative” is put forward (Lavoie, 2014, p. 4). Some even suggest post-Keynesian economics as an ecologically sound basis to remedy some of our current, 21st-century environmental challenges and concerns (Lavoie, 2014, pp. 578-580). These stances reflect our research orientation including ecological and cultural sustainability, and focusing on related local practices and global policies.

2.5. Galbraith’s Outlook as Visionary Basis for Abundance Economics

John Kenneth Galbraith is considered as one of the foremost representatives of Post-Keynesianism. In his seminal book, *The Affluent Society*, Galbraith pointed out that the world had moved past the epochs of considering its resources purely in terms of economic scarcity, since “the economic ideas which once interpreted the world of mass poverty...[need] adjustment to the world of affluence” (1958, pp. 1-2). He urged research to address “the economics of affluence of the world in which we live” (1958, p. 131), and concluded with these two pleas: to “put elimination of poverty in the affluent society strongly, even centrally, on the social and political agenda”, and to “protect our affluence from...destructive tendencies” (1958, p. 263). Both pleas explicitly state affluence as a reality already during his days and in parts of the world. Recent literature confirms Galbraith’s contributions to the macroeconomic theory and practice of abundance economics: for theory, in that “Galbraith has provided...a Post Keynesian approach to key macroeconomic issues” (Pressman, 2011, p. 1; similarly Lavoie, 2014, p. 4; Lloyd, 1980, p. 377); for practice, by regretting that “Galbraith’s challenge has sadly been ignored by economists for the last 50 years...[namely] constructing a

different type of economics – the economics of abundance... [which] puts aside the conventional wisdom of universal scarcity” (Sheehan, 2010, p. 1).

2.6. Abundance Economics Confronting the Scarcity Paradigm

According to often-used definitions, scarcity is an integral element of economics as “the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses” (Robbins, 1932, p. 15; also Backhouse and Medema, 2009, p. 805; Zinam, 1982, p. 61), or of economics as a system “engaged in the production and distribution of scarce material goods” (Swan, 2017, p. 25). Hence for some, “abundance is defined relative to...scarcity and sufficiency” (Sheehan, 2010, p. 3); while others see them “at two ends of a single continuum of value and distribution” (Jennings, 2015, p. 7; similarly Zinam, 1982, p. 61), while finally others differentiate, in that abundance is an “alleviation of scarcity...but it is also more” (Swan, 2017, p. 26; similarly 2016, p. 905).

In relation to needs and wants, scarcity “is based on the assumption that we have unlimited wants and desires and there are limited or insufficient resources to satisfy these wants and desires” (Saunders, 2015, p. 10). Some bluntly summarize the last two centuries of industrialization thus: “Scarcity is the dominant driver of the industrial age. Scarce resources, scarce machines, scarce labor and scarce shelf space” (Godin, 2012, p. 12). For the future, some even hold that “the world between 2010 and 2050 is likely to be characterized by scarcities...of credit...of food...of energy...of water, and...of mineral resources” (Aguilar-Millan, Feeney, Oberg and Rudd, 2010, p. 35). Some differentiate between absolute scarcity, where “people are condemned to conflict and poverty” and relative scarcity, which is merely “irrational as each person tries to consume more than everyone else” (Dugger and Peach, 2009, p. 4). Our research acknowledges those past and present shortages, and those who suffer from them, but tries to offer conceptual solution models and practical alternatives based on current worldwide developments.

Some take the dichotomy between scarcity and abundance to the theoretical extreme, pondering whether “abundance has no economics, since there is enough for all: the economic problem is solved” (Jennings, 2015, p. 6), or whether “universal scarcity excludes abundance from economics”, since “the clash of abundance and scarcity...suggests that they are irreconcilable” (Jennings, 2015, p. 6). Some stress the utopian nature of abundance: “Abundance economics might be overly optimistic and unrealistic to achieve...how to accomplish this in practice is not clear” (Swan, 2017, p. 29). This research addresses both the relationship between scarcity and abundance as well as its practical realizability, by developing a range of concrete solution models in the analysis and discussion part below.

Others mention that a minimum of costs will always be there, given that “ideas, materials, innovation, and time are all necessary to produce the first of anything, and that these are costs to creators...[which] can never be fully eliminated”. Yet even they concede that “the transition to the ‘free’ business model is already being made...successfully” (Aguilar-Millan, Feeney, Oberg and Rudd, 2010, p. 37), giving examples of online companies and the elimination of margin costs once the first exemplar of a new type of online product has been created and launched.

Finally, some argue that even under conditions of material abundance and ever increasing technological progress, there will always be scarcity, at least of “time”: “Human beings [might not] have unlimited time to make decisions...Time is scarce, and it grows scarcer by the day as the tempo of life increases...Digitization does make a difference to economic and social behaviours, but it does not eliminate the limit of time” (Peters, 2009, pp. 11-13). However, even this stance only holds the *non-material* element of time to be scarce, and does not contest the potential or already existing abundance of *material* goods. Hence our solution suggestions below aim to reconcile the factor of time (which, at least in principle, is equal for all) with abundance in other areas (whether material or non-material).

2.7. Abundance Economics Overcoming the Scarcity Paradigm

A wide part of the macroeconomic literature then tries to overcome the limitations of the scarcity paradigm from conceptual and practical perspectives, criticizing it as either having negative macroeconomic implications, or as preventing positive ones. These arguments are condensed and enumerated below in twelve key points, in a way that does not yet exist in this form in the macroeconomic literature:

- 1) Conceptually, considering scarcity as the only, or main criterion for material evaluation, already bars any *theoretical* contributions of abundance: “Scarcity issues appear right at the core of economics...which begins and ends with insatiable wants against limited means, with trade-offs inherent to human existence...and seldom mention abundance” (Jennings, 2015, pp. 5-6).
- 2) Logically, strict scarcity thinking excludes any positive *practical* potential of abundance: “To define economics as the study of scarcity...assume[s] that the current institutional arrangements that promote scarcity cannot change. This...denies the possibility of abundance...[and] is too narrow. Economics should include the study of abundance” (Dugger and Peach, 2009, pp. ix-x).
- 3) Historically, scarcity ignores the evolution in human productivity: “Scarcity economics...misses the remarkable technological and institutional changes associated with...the...ongoing...industrial revolution. The world’s capacity to produce goods and services has increased dramatically over the last few centuries and is continuing to increase” (Dugger and Peach, 2009, p. x).
- 4) Treating scarcity as a one-fit-all category is unsuitable to the changed global macroeconomic and social realities: “The mainstream definition of scarcity...is a constraint on resources relative to the scale of wants (or demand)...[It] universalizes scarcity...[in a] fixation with what people *lack*” (Sheehan, 2010, pp. 3-4, original emphasis; similarly Zinam, 1982, p. 61).
- 5) Scarcity economics only looks at original human needs and wants, ignoring man-made, artificial ones: “Economics is the study of how people allocate their limited resources...to satisfy their unlimited wants. I advance here a different thesis: human beings have limited wants and needs, but capitalist institutions seek to continuously generate new forms of scarcity by creating ever new needs” (Hoeschele, 2010, pp. 1, 3).
- 6) Scarcity, as a zero-sum-game, is limiting: “‘The scarcity mentality is the zero-sum paradigm of life’ where people ‘see life as having only so much’. So whatever anyone gets, there is less for anyone else...Conversely, the abundance mentality

asserts that there is enough for all: ‘It results in sharing prestige, of recognition, of profits, of decision making. It opens possibilities, options, alternatives, and creativity’...The psychological distance between these two mind-sets is significant” (Jennings, 2015, p. 5, citing Covey).

- 7) Scarcity is not a problem of material resources, but of limited human ingenuity and sociopolitical will: “Today's food, energy...scarcities are not caused by limitations of the earth's material endowments, but rather follow from man's limited horizons and...performance. There is ample scope for continuous progress...The real problem is the political will of man...to create economic, legal and social conditions that encourage...productive activity...[so as] to contribute to national progress” (Malenbaum, 1975, p. 72).
- 8) Scarcity is already an outdated notion in many economic and industrial fields, such as the automation economy, or digital goods (for instance social robotics, or software and digital images): “A central focus on the production and distribution of scarce resources is no longer the case in all economic systems...since there is...evidence of situations in the world where scarcity is...not the governing parameter” (Swan, 2016, p. 905).
- 9) Scarcity favors producers, while it disadvantages consumers: “An economic system that favors producers will emphasize scarcity, while ‘the interest of the consumer runs parallel with the public interest’ in seeking abundance” (Jennings, 2015, p. 6, citing Pinto, Bastiat and Rusch). “Scarcity...enables producers to charge a price for the goods and services they provide...Without scarcity...charging a price to consumers as a means of generating revenue will be unworkable” (Aguilar-Millan, Feeney, Oberg and Rudd, 2010, p. 37).
- 10) Scarcity then creates artificial high-price politics, mainly for-profit purposes: “Prices...are supposed to provide all the information required to make the market system function efficiently, because prices are the measure of scarcity, so that the knowledge of prices allows agents to respond to changes in scarce resources” (Lavoie, 2014, p. 22). Yet this has become a problem where “prices did misallocate financial resources”, as exemplified by the recent 21st century stock market crashes, real estate bubbles, and accelerating unemployment and inflation rates (Lavoie, 2014, p. 22-23). “Scarcity, then, is a means towards the end of profit maximization” (Hoeschele, 2010, pp. 1-2).
- 11) Scarcity poses an ecological danger on national and international levels, as it limits biodiversity with implications for local and global food supply, such as when “cash crops” are cultivated for macroeconomic profit, willfully ignoring the needs of the national population: “The scarcity economy is inclined to reduce diversity in the name of efficiency...[which means] producing at the lowest possible cost...[via] standardisation and homogeneity...where communities cease growing crops conducive to their environments and plant for exporting to richer nations” (Saunders, 2015, p. 18).
- 12) Finally, scarcity poses a range of sociopolitical dangers worldwide, due to social and income inequality: “The modern world needs an economics based on modern notions of widespread abundance and equality rather than concepts of scarcity and inequality” (Dugger and Peach, 2009, p. x). “Income inequality refers to the uneven distribution of income within a society...It is a worsening global problem that has both economic and social consequences...These include violence, mental illness,

drug addiction, obesity, imprisonment, and poorer social conditions for children” (Swan, 2017, p. 24).

2.8. Abundance Economics as a Macroeconomic Paradigm Shift

Progressive voices try to move past scarcity towards a new abundance paradigm. They are analyzed below in a form that also does not yet exist in the literature. Macroeconomic writings insist that “abundance economics...is...an alternative paradigm” (Shi, 2018, p. 432), or that “a new philosophy of economics that is an abundance theory of flourishing can be developed by articulating the social goods that might be produced for humans” (Swan, 2016, p. 906). This paradigm shift from scarcity to abundance could be summarized in a nutshell as “seeing the world’s resources in a paradigm of availability as opposed to paucity” (Swan, 2017, p. 26), to “enable a movement from competition to collaboration, from self-interest to shared interest, and from greed to generosity” (Shi, 2018, pp. 425-426), all based on the “fundamental assumption that *there is enough; there is abundance*”, which means that “economics becomes the study of how we allocate abundant resources” (Saunders, 2015, pp. 22-23, original emphasis).

Some exemplify this paradigm shift as an already workable, helpful reality in very specific economic contexts, such as digital goods or the music industry: “When goods become digital and available online then scarcity disappears. They are non-rivalrous so that if a copy is taken, it is still available for others” (Weller, 2011, p. 85). Others uphold the same idea for other digital and intangible goods, calling for “a new philosophy of economic theory”: “A broad share of the goods valorized in the contemporary economy are intangible. These include non-monetary currencies such as reputation, intention, attention, access, influence, choice, autonomy, recognition, and creativity. Intangible goods have properties that are different from material goods; they are often complementary and non-rival, and they can make more of themselves when consumed...they can agglomerate. Thus a new philosophy of economic theory is needed to make sense of digital economics” (Swan, 2017, p. 25; similarly 2016, p. 905). Finally, for some, abundance flows out of “disruptive technologies”, examples being 21st-century hard- and software innovations such as the iPod, Gmail or Amazon, which lowered storage cost and space to almost zero: “Disruptive technologies...take a scarcity assumption and, thanks to some technology that generates abundance, simply turn it on its head” (Peters (2009, p. 10), meaning in those cases that “storage space...was no longer a limiting factor...[but] available at the click of a mouse” (Weller, 2011, p. 86).

2.9. Advantages of the Macroeconomic Paradigm Shift towards Abundance

The literature mentions a range of macroeconomic advantages of the abundance paradigm over the scarcity paradigm. Some sum up these advantages in a nutshell by stressing social goods: “Abundance economics...focuses on social goods production in addition to material goods production...While material goods attend to survival, social goods attend to thriving” (Swan, 2016, pp. 905, 907). Others emphasize broader socio-political gains such as freedom, justice, or equality: “For a post-scarcity society to develop in such a way that it adds to net human freedom, justice, and well-being, we need more than ever to reinforce the principles of equality, generosity, tolerance, compassion, and mutual interdependence” (Aguilar-Millan, Feeney, Oberg and Rudd,

2010: 39). Some even see abundance economics as solving most of the current global productivity and employment challenges: “If all 200 million [currently worldwide] unemployed people went to work at a living wage...[the] additional production would transform the global economy in a generation” (Dugger and Peach, 2009, p. xiii). Finally, some stress the point of individual and societal well-being in considerable detail: “Abundance does not rely merely on price and money evaluations [but on] the neighbour who voluntarily cares for a child while his mother is on a job is providing care, safety, and stability...Abundance does not necessarily require more, but it may require better...Not...more food...[but] better, tastier, and nutritious food...Not another car, but...better transportation” (Saunders, 2015, p. 20).

On a global level, the abundance paradigm results in a more balanced, responsible and sustainable interaction between people and the planet: “An abundant economy should be characterised by its tendency towards balance...[to] take into account not only the needs of today but also the needs of and consequences for tomorrow...[and] to act and interact with others and the planet with integrity and stewardship in the present as well as for the future” (Saunders (2015, p. 22). In the same vein, some hold abundance to overcome competition via cooperation and connection: “The abundance model...promulgates social harmony and generosity in its sharing of value with others and supporting common property measures and distributional equity...based on connection, ongoing change, and a process of cocreation” (Jennings, 2015, p. 7). Others even consider the social goods of psychological safety and emotional well-being, leading to individual and social fulfilment at the top levels of Maslow’s hierarchy of needs: “Abundance invoke[s] the social goods of certainty and reliance about the real-time availability of resources for need fulfillment...related to liberation such as self-respect, self-esteem, and self-realization” (Swan, 2016, p. 906).

2.10. The Global Macroeconomic System of Abundance Economics

Based on the idea of “relative, rather than absolute, abundance”, Sheehan (2010, pp. 3-4) differentiates between “three economic systems”, focuses on conditions and the people within them, and then defines each in relation to the other two. He begins broadly, highlighting: “Relative abundance...concentrates on what people have; the unequal distribution of what people have; and the different reasons why different peoples want more”. He then stresses what he calls “the symbiosis of the three economic systems”: “The three economic systems – scarcity, sufficiency and abundance – recognise no national boundary or city limits...[They] cut across the boundaries of formal organisations such as transnational corporations, informal social networks...and even large categories such as a national workforce...Each system interacts with the others, as they are all symbiotically interconnected...[in] a wider global community” (2010, p. 12). These three economic systems are then labeled as being of the “people of poverty”, the “people of adequacy”, and the “people of plenty”, and defined in relation to each other like this (2010, pp. 2-3):

- 1) “The people of poverty [are] living within the system of scarcity which has an extremely limited productive capacity...The people of poverty appreciate that the people of adequacy have somewhat more than them, although the differences are not extreme, because the latter can access a slightly more productive economic system with some more opportunities for betterment”.

- 2) “The people of adequacy...whose existence is passable enough with all the essentials to get by...have ...access to the necessities and some decencies that make life bearable plus the occasional treat, and the opportunity to make some limited economic progress...Nevertheless...the standards of living, and the economic system, experienced by the people of plenty are significantly, often vastly, different from their own”.
- 3) “The people of plenty [are] living in an economic system that has solved the problem of production...indeed the people of plenty seem to live in a different world...[They] realise that there are members of the global community who are significantly poorer than they are – the people of adequacy – and then those who live in wretched conditions...the people of poverty”.

Sheehan (2010, pp. 7-9) then specifically details the third system, of the “people of plenty” (a term however already used in Potter’s 1954 eponymous book). The central items of this system are condensed and enumerated below in fifteen key points that also do not yet exist in this concise form in macroeconomic literature:

- 1) Roughly 30% of the world population, or around 2 billion people, experience the “system of abundance”; they are the “people of plenty”;
- 2) Compared to the other two systems (of poverty and of sufficiency), they enjoy much higher living standards, with a lot more of everything;
- 3) There are no national boundaries to this system; it is a global community that stretches across geography and classes of society;
- 4) It is a phenomenon of industrialized societies such as Western Europe, most of Central Europe and parts of Eastern Europe; the United States; Canada and Australia; urban concentrations in the Middle East and Russia, South and South-East Asia; and the Eastern seaboard of China and Latin America;
- 5) These people live in a world saturated by branded products, which inhabit every aspect of their daily practical lives;
- 6) Entrepreneurial production and distribution channels are mostly in the hands of global corporations, constantly using and investing in the most updated technologies, most educated workers, and latest organizational systems;
- 7) The system of abundance has solved the problem of production, turning out a near limitless number and variety of products around the clock;
- 8) This economic system is founded and run on the maximum advance of the three basic capitalist principles of entrepreneurship, investment, and growth;
- 9) All the necessities and decencies of life are provided, including for instance education, health care, housing, water, electricity, etc.;
- 10) Beyond that, people enjoy affluent lifestyles with clothing, cars, refrigerators, washing machines, dish washers, electronic equipment, multimedia access, and sophisticated financial systems;
- 11) Other available services include for example cleaners, doctors, lawyers, personal assistants, trainers, bodyguards, etc.;
- 12) Even the less well-off among those 30% of the world population can be called to live in a “culture of contentment” (term from Galbraith, 1992, p. 1);
- 13) Even the least well off in this group, for instance those living on welfare payments, still have access to more than enough food, acceptable housing, free education and health care, various possessions, and occasional holidays;

- 14) Consumption is paramount; as the problem of production has been overcome, consumption remains the main economic driver of this system;
- 15) Continuous consumption requires spending, which in turn relies on ceaseless promotion, propaganda and marketing of products and services.

3. Research Methodology

3.1. Abundance Economics Calling on Specific Academic Disciplines

Recent writings on abundance economics (Yamash'ta, Tadashi and Hill, 2018, p. 6) favor a methodological approach "in developing our critique of current global economic thought and practice" that can "draw from the full spectrum of human and academic knowledge...[such as] from philosophy...political economics... politics...across their dividing boundaries". Similarly, some mention a catalog of academic disciplines that can be enriched by the insights of abundance economics: "Anthropology, economic and social history, sociology, social psychology, sustainable development, architecture, art and design, marketing and cultural studies...will...embrace its ideas" (Sheehan, 2010, p. vii). Drawing the circle of fields that can benefit from abundance economics even wider, some point out that "discussions of scarcity and abundance are not confined to the field of economics; they can occur in theology, among psychologists and social theorists...[and] influence personal growth and business management" (Jennings, 2015, p. 5).

These stances find support in the historical development of abundance economics within the disciplinary square of economics, politics, sociology and philosophy: already Galbraith drew attention to the repercussions of abundance economics for the theory and practice of politics and sociology: "The effect of affluence goes beyond economics to influence politics and political behavior...[and] political theory" (1958, pp. 261-262). In his footsteps, others considered the field of socioeconomics: "We must become highly aware of abundance now. This can only be done if we develop out of economics into socioeconomics" (Theobald, 1970, p. 10). Commenting on Galbraith's work, some even combine economics, politics and history, lamenting that across the second half of the twentieth century "the study of economics and the study of politics have been severed from their historical and philosophical dimensions, separated from each other, and carefully subdivided into distinct internal fields of specialization...[while once] concerned with what is good for human beings" (Lloyd, 1980, pp. 368-369).

3.2. Abundance Economics Calling for Multidisciplinary Research Approaches

Based on those calls on a range of academic disciplines, recent macroeconomic writings favor multidisciplinary research approaches for abundance economics. For instance, some provide several "suggestions" within a package of "advice for heterodox or post-Keynesian economists", indirectly calling for multidisciplinary approaches, such as "cooperate with other social sciences" or "be eclectic and cooperate with other heterodox schools of thought" (Lavoie, 2014, p. 577). Others explicitly define the "multidisciplinary" nature of abundance economics in terms of embedded in heterodox economics as a "multidisciplinary process...to extract some of the best of what other disciplines have had to offer to develop a distinctive heterodox economic perspective"

(Sheehan, 2010, p. vii). Finally, some advocate the great academic divide between social and natural sciences to be bridged, to overcome the scarcity paradigm with the abundance paradigm: “It is necessary to develop a new approach, consistent with advances in other social and natural sciences, which...aims at putting an end to scarcity by creating abundance” (Hoeschele, 2010, p. 2). Correspondingly, the methodological contribution of this research lies in unifying and using these calls for multidisciplinary approaches in a new methodological framework: for the hitherto conceptual analysis, for the following analysis and synthesis of different solution models, and finally for the discussion and development of suggestions for local practice and global policy.

4. Analysis and Discussion

The solution models in this section are ordered from some that could be said to be already part of our lives (at least for the “people of plenty”), over others which are immediately applicable (and would require only relatively small modifications in current legislation, political orientation, work organization, consumer attitudes, or economic outlooks), up to more esoteric ones that would involve considerable individual, communal or societal changes, or even new philosophies of life (such as adopting more caring attitudinal and behavioral patterns). This is also the main contribution of our research, in that it combines conceptual elements and practical application: first synthesizing all currently advocated solution models related to abundance economics, then logically and creatively structuring them on several levels of economic, social, political, ecological, cultural and personal realization and implementation, and all this consistent with our aim of making conceptually sound and practically useful suggestions for local practice and global policy.

The solution models are ordered on three levels of increasing progressiveness: the first level (solutions 1-3) ranges from merely not wasting the already existing and abundant resources (solution 1) over the case of digital or free goods (solution 2) to contributory knowledge use (solution 3). The second level (solutions 4-6) aims at either relieving people from work via the automation economy (solution 4), or modifying their working patterns (solution 5) or even the nature of their work, such as working for fulfilment instead of sustenance (solution 6). Finally, the third level (solutions 7 and 8) aims as high as a new, spiritual form of macroeconomy that includes education for abundance, or a creative or connection economy that redefines scarcity, for a completely new era and understanding of abundance or post-scarcity economics. To facilitate applying these solutions to macroeconomic and political reality as well as social and personal practice, alternative headings (in brackets) sum up each main heading in form of a slogan or catchphrase. Further developed in the conclusions, these solutions can also be creatively combined.

4.1. Solution 1: Tomato Economics (Avoiding Waste)

One claim is that there is enough vital material for all (food, raw materials, natural and man-made resources etc.), and if it were evenly distributed, everyone would get a fair share. The example given (and that names this model) is that of the global production of tomatoes, which, although limited to a few localities, could nourish all the people around the world who wanted them (Saunders, 2015). One notable (or even notorious) example

is the annual tomato festival “La Tomatina” in the town of Buñol in the Spanish central eastern region of Valencia, where during just one hour of one day, the public uses to destroys over a hundred tons of tomatoes by throwing them at each other. While there are several theories about the roots of this festival, none has to do with a celebration of the tomato harvest; the most frequent explanations go back to a public riot that ensued when several youngsters were excluded from participating in a procession (Ávila López, 2016, pp. 339-340). This festival has inspired a range of imitations around the world, from North America over South America to South Asia. However, as an example of cultural and administrative reactions, “India has placed multiple barriers to host similar events in Delhi and Bangalore where local government officials have cancelled and banned such events because they consider them a huge waste of food, which is badly needed in other towns with poor populations” (Fandino, 2014, p. 309).

4.2. Solution 2: Digital or Free Goods (Sharing What is Already There)

Linking up with our discussion of the abundance paradigm, it is invoked that “the evolution toward free goods and a lack of scarcity is...already under way, thanks primarily to technologies (such as computers and the Internet) that have enabled and driven the growth of digitization over the last 20 years” (Jennings, 2015, p. 6). Furthermore, and in a complete reversal of scarcity economics, it is held that “in the digital world...when one item is used (copied, connected to another) there is at least one more item available (thus decreasing scarcity)...[which] explains exactly how digitization is driving an age of free goods and removing scarcity” (Aguilar-Millan, Feeney, Oberg and Rudd, 2010, p. 37). A range of examples of such digital or free goods is given, attributed to free online services and providers, which are held to be commercially successful because they “are all making money from free goods” (Aguilar-Millan, Feeney, Oberg and Rudd, 2010, p. 37). The most well-known of these examples are mentioned below (with own numbering, paraphrasing and additions, ordered from near-limitless service providers or space storage applications, up to specific site providers, such as individual newspapers):

- 1) Online search devices, such as Google or Yahoo;
- 2) Online marketplaces, such as Amazon or eBay;
- 3) Downloadable books and other reading material;
- 4) Email with unlimited storage, such as Gmail;
- 5) Music downloads, often from the artists themselves;
- 6) Photo-sharing services, such as provided by Flickr;
- 7) Information and collation websites, such as Wikipedia;
- 8) Local classifieds and forums, such as Craigslist; or
- 9) Single-provider and information sites, such as The Wall Street Journal.

4.3. Solution 3: Contributory Resource Use (Growing by Sharing)

Given that goods are not offered completely free, “a blended business model, such as charging fees for premium versions of free goods and services” is argued for: even in an abundance economy, there will not be exclusive government provision of goods or services, but instead always a degree of private property and personal ownership. The specific character of ownership and consumption will depend on “both the availability of resources and the materials used” (Aguilar-Millan, Feeney, Oberg and Rudd, 2010, p.

37). Hence the following macroeconomic reorientations are recommended (own ordering, numbering and paraphrasing):

- 1) Planned obsolescence (as it is, still widespread for calculating manufactured goods' durability and thus production cycles) should itself become obsolete;
- 2) Cradle-to-cradle manufacturing (that is, a kind of closed-cycle manufacturing without waste production) is expected to become more widespread;
- 3) Leasing of goods (with the manufacturer responsible for repair, replacement, or recycling of the item) is recommended to be more in demand.

As a special case, "one of the most important contributory resource uses is the free use of knowledge. The more people use a specific kind of knowledge, the more of that knowledge is...available". In practice, "to ensure that innovation can proceed is to ensure that everyone seeking knowledge has access to it" (Hoeschele, 2010, p. 150). The main restriction for such free knowledge access is seen in the current patent regime that is focused on scarcity and profit, both counter-productive as they create even more scarcity and thus unbalanced research, such as "expensive medicines over healthy practices available to everyone, software monopolized by a few corporations over free sharing of innovations by a community of computer users, and ever new chemicals with unknown environmental impacts over ecological research". By contrast, it is pointed out that "many fields of knowledge (including the humanities, the social sciences, and large parts of the nature sciences) advance in the total absence of any patent protection, motivated by...the intellectual joy of discovery, the satisfaction of imparting new knowledge to others and thereby making a positive contribution to society, and the prestige of being recognized for advancing one's field of study". The suggested solution is thus either national funding or curbing or even abolishing patent privileges: "The state as well as private foundations and individual donors could increase their support for innovation by offering grants and other supports to people with innovative ideas, to help put those ideas into practice" (Hoeschele, 2010, p. 152).

4.4. Solution 4: The Automation Economy (Delegating Work to Machines)

The arguments of the automation economy are based on technological and social innovations that include the interconnected areas of artificial intelligence, social robotics, and nanotechnology. Convinced that "there is no economic law that producing a good or service must require human labor", it is argued that "technology has supplemented or replaced non-elective human labor" (Swan, 2017, p. 27). Thus "the automation economy is concerned not just with human survival, but an improved quality of live such that humans can thrive" (Swan, 2016, p. 905). Fitting with the shift to the abundance paradigm, it is held that "the automation economy...is accommodated more congruently with an economics of abundance than with an economics of scarcity" (Swan, 2016, p. 905), which in the process might stimulate significant changes in social and individual mindsets: "The magnitude of a rapid shift towards the automation economy could simultaneously engender a rethinking of economic principles, with significant shifts in mindset, for example from...exclusively human agents to multiple forms of intelligent and emotional agents comprising society" (Swan, 2016, p. 908).

Correspondingly, social robotics is predicted to "figure prominently in both an automation economy that focuses on reduced requirements for human labor and an

abundance economy that targets improved quality of life...since social robotics implies a much closer connection between humans and technology than other platforms” (Swan, 2016, p. 903). Linking automation, abundance and human nature, this is seen as especially helpful since “there should be a balance between ‘hard’ and ‘soft’ tasks in social robotics, connecting with both the mechanical labor-saving and the emotional side of human needs...to facilitate shifts to situations such as the post-labor automation economy and improved human quality of life in a social goods economy of abundance” (Swan, 2016, p. 907).

Nanotechnology promises to accomplish such work on a highly specialized level, in many and varied forms, but all equally embedded in an abundance framework: “The case for a ‘postscarcity economy’ of abundance stands on advances in nanotechnology...Self-replicating automated mining of asteroids, energy from nuclear fusion or solar-powered satellites, and products from personal nanofactories or fabrication laboratories automated through artificial intelligence all are invoked to imagine economies of abundance” (Jennings, 2015, p. 6). Similarly, “scientists...emphasize the benefits of nanotechnology with an abundance of raw material and self-replicating technologies” (Peters, 2009, p. 11).

Finally, futuristic outlooks on artificial intelligence are found both in research and fiction. Recent research asks for instance: “Why not...[use] AI personal robots, creating a digital utopia that everyone can enjoy?...[An] AI-drive economy would not only eliminate stress and drudgery and produce an abundance of everything we want today, but would also supply a bounty of wonderful products and services that today’s consumers haven’t yet realized that they want” (Tegmark, 2017, p. 119). Finally and interestingly, similar (even if as of yet still fictional) models of ongoing research into artificial intelligence are increasingly featured in globally bestselling novels or Hollywood movies, such as Dan Brown’s 2017 novel *Origin*, or the 2004 Will Smith movie *I, Robot*, in which the fusion of man and machine creates a new species on earth, a crossing between humans and technology, called for instance “technium”, which both assists and transforms humans, and lets them accomplish hitherto unimaginable tasks (see Brown, 2017, pp. 408-413).

4.5. Solution 5: Changing Work Patterns (Working Differently)

Increasingly scrutinized is a range of possible macroeconomic changes in working patterns (see Aguilar-Millan, Feeney, Oberg and Rudd, 2010, pp. 37-38). Work might still be done largely from outside the home, so the suggested changes regard mainly the nature and the quality of the work. These changes could be summarized as a ten-point catalog as follows (own numbering, ordering and paraphrasing):

- 1) One of the few constants is that work might remain to be done from outside the home, even if home-stay work and shorter hours are ever more in demand.
- 2) Given that many countries are developing economically, working hours are in that process, at least initially, set to increase.
- 3) These countries will then however experience resource shortages, which are bound to neutralize that rise in working time.
- 4) Increased efficiency and better resource reuse and recycling mean less overall consumption, therefore less production, and maybe also higher prices.

- 5) Countries' increased populations will also increase their numbers of working people, which might fortuitously reduce or even eliminate child labor.
- 6) Women 's increased and improved access to education and work might reduce the number of children who are required to work outside the home.
- 7) Progress in health care and quality of life lets people work up to a higher age; this would especially benefit the already developed countries, where birthrates have typically declined as countries have advanced economically.
- 8) With increased populations and people working longer along their lifetimes, the higher number of working people might force governments to mandate reduced working hours and part-time work, to create more jobs.
- 9) Workplace interactions across distances will increasingly be done virtually by means of technology, such as online communication or conference calls.
- 10) Increasing environmental and ecological awareness in combination with technological advances might lead to more low-cost and low-impact travel.

A recently much-debated suggestion of working differently, equally based on the abundance model and on the consideration that “many countries are becoming rich enough”, is “decoupling labor-based work from sustenance-remuneration”, and “to pay individuals a guaranteed basic income to cover basic survival needs” (Swan, 2016, p. 905). Already being tested in several European countries and in Canada, these pilot programs and test cases are praised as “a practical response to the inefficiencies of welfare systems”. Any public resistance is considered as less directed against their benefits, but against them attracting immigrants – which however “only serves to confirm their perceived value” (Swan, 2017, p. 28).

4.6. Solution 6: The Actualization Economy (Working for Fulfilment)

The relationship between work and leisure is suggested to be redefined at the top level of Maslow's hierarchy of needs, namely to work less for survival and rather for self-actualization and fulfilment: “In the labor-to-fulfillment mindset shift, work becomes...optional productive engagement for the purpose of personal fulfillment”. As the predicted macroeconomic gain, “beyond work for pay, these opportunities for meaningful engagement could create as much work as needed, and produce many valuable social goods”. This model is as well embedded in abundance thinking: “In abundance economics...the good life expands to a fuller multi-category experience...with an orientation to both social and material goods production” (Swan, 2017, pp. 27-28). Correspondingly, some of the suggested activities are these (own numbering, paraphrasing, and detailing; ordered from formal, work-related scopes and actions to more informal, leisure-related ones):

- 1) Continuous, lifelong learning (for example soft skills, such as languages);
- 2) Altruistic vocations and voluntary work (such as coaching or mentoring);
- 3) Community engagement (at political or social, civic, local or grassroot levels);
- 4) Voluntary collaboration (development aid; material or monetary donations);
- 5) Health and sports activities (exercise with team and league participations);
- 6) Creative arts, activities and expressions (art, music, singing, or filmmaking);
- 7) Social entertainment (discovery or exploration tours or their facilitation); or
- 8) Spiritual and mindfulness activities (group retreats, happenings, meditations).

The danger of complacency is noted, for instance due to basic income guarantees, in that “there might be little incentive for anyone to be interested in the production of any goods, whether social or material”. Yet it is countered that “complacency is already a social good (or social pathology) produced by many economies, even if mostly as an unintended consequence” (Swan, 2017, p. 29). On that basis, there could be “many fulfilling and remunerative employment categories of the future”, such as the following (in own numbering and order, from professions with familiar elements yet in fresh combinations, to entirely novel types of professions):

- 1) Urban farmer;
- 2) Smart-home handyperson;
- 3) Freelance professor;
- 4) Remote health care specialist;
- 5) Neuroimplant technician;
- 6) 3D printing specialist;
- 7) Blockchain smart-contract writers;
- 8) Audio interface designers;
- 9) Virtual reality experience designer;
- 10) Social robotics interaction specialist.

4.7. Solution 7: Spiritual Macroeconomy (Education for Abundance)

One solution that wishes to forge a “spiritual macroeconomy” is also firmly based on the abundance paradigm, in that “limitations and scarcity...[are] inconsistent with...spiritual principles” (Saunders, 2015, p. 38). By contrast, “[in] abundance economics...commodity is merit or endless human virtues. Progress is now measured in more intangible terms where the harmony of individual self-interests may be achieved in today’s market mechanism” (Shi, 2018, p. 432). Such spiritual principles are based on clearly outlined economic and sociopolitical dangers, for instance some of the current human practices causing ecological disasters: “The world’s current globalized economic systems are...leading humanity towards... the edge of ecological disaster for the...profit of some but not all; divisiveness that must inevitably lead to conflict and war; and loss of shared meaning...[This is] impoverishing...our shared spiritual core and ultimate potential” (Hill, 2018, p. 33). Yet solution offers remain still general in concept and application, ranging for instance from an “intertextual milieu of economics, community, humanity and the spiritual” as a “moral community” (Arrington and Gonzalez Basurto, 2018, p. 89), to applying humanist ideals such as social harmony and human virtue across sectors of society and economy: “‘social harmony’...will need to start from...all spheres of the economy and its governance...[to access] our spirituality...of what humanity is and can aspire to” (Yamash’ta, Yagi and Hill, 2018, pp. 4-5).

One version of spiritual macroeconomy, a “socially-engaged Buddhist economic model”, invokes that “the Buddhist philosophy of formlessness, selflessness and desirelessness assumes an abundant world that is inexhaustible, boundless and infinite” (Shi, 2018, p. 426). While values that are “both tangible and intangible (such as wisdom and virtues), play an important role”, one of this model’s central socioeconomic tenets is that “stability and harmony in society arise from equality and fair distribution of wealth” (Shi, 2018, p. 429). Applying empirical insights from a Buddhist community, the merit that is found in altruism and collaboration on a small scale could solve problems on a

global scale: “Merit is measured by the extent of one’s altruism: how far-reaching the benefits are to others and into the future...[while] collaborative community-building can lead to social harmony and world peace...[as] an example in generating positive socio-economic impact through spiritual practices in human enterprises” (2018, p. 432). Such a “growth of such intangible, inexhaustible capital” is favored over “economic growth at the expense of non-renewable resources” (2018, p. 426). Most importantly for the aim of operationalizable alternatives for local and global policy measures, this opinion stresses the importance of education for paradigm shifts, especially the one that is advocated in the reorientation from scarcity to abundance economics: “Education is the key to shifting paradigms, worldviews and value systems” (2018, p. 432).

4.8. Solution 8: The Creative or Connection Economy (Redefining Scarcity)

Finally, models are developed at the threshold between abundance economics and art economics, invoking that in the 21st century, the discourse about scarcity and abundance should be continued on a different level altogether, or at least with flipped indicators: a productive view and application of scarcity and abundance becomes the trademark of a skillfully and artfully led life: “One kind of scarcity involves effort...Another kind of scarcity involves physical resources...The third, new kind of scarcity is the emotional labor of art...involved in digging deep to connect and surprise...to build trust...to say, ‘I made this’” (Godin, 2012, p. 12). Regarding these new types or levels of scarcity, it is maintained: “Scarcity and abundance have been flipped. High-quality work is no longer scarce. Competence is no longer scarce, either. We have too many good choices – there’s an abundance of things to buy and people to hire. What’s scarce is trust, connection, and surprise. There are three elements in the work of a successful artist” (Godin, 2012, p. 18). This new macroeconomic environment is then called the “connection economy”: “The connection economy thrives on abundance. Connection creates more connection. Trust creates more trust. Ideas create more ideas” (Godin, 2012, p. 26). Finally, examples are given of how to realize this connection economy’s new abundance: “The Internet doesn’t have a firewall. We’re all able to connect. The network connects people to one another, people to organizations, and best of all, people to ideas. This new network celebrates art, enables connections, helps tribes to form, amplifies weirdness, and spreads ideas” (Godin, 2012, p. 38).

5. Conclusions

There is an ever-growing interest in finding, and an ever more interestingly found variety, breadth and depth of models and approaches for conceiving and practicing abundance economics. What they all share is a new outlook on today’s world’s plentitude of material goods, their repercussions for economic, sociopolitical, ecological and cultural aspects of our lives, and the suggested requirements for change to allow them to happen. The discussed solution models are evaluated one by one below, connecting them meaningfully in a way that summarizes ongoing efforts while either opening or pointing towards roads of future investigations.

Tomato economics reflects a concern that has been held in developed parts of the world since the economic reconstruction and political achievements of the second part of the twentieth century, namely to counteract the frequently wasteful ways in which we

consider and consume goods such as food or industrial products. Whether or not one is a partisan of abundance economics, following this solution's precepts in one's daily life and actions can only benefit individual consumers, societies, nations and the global community, including the planet's biodiversity.

Digital or free goods enjoy the practical advantage of having been familiar to, and embraced by virtually everyone within the "societies of plenty" for a generation, having become part of their people's personal and social fabric in their private and professional lives. As those goods are under constant and intense market share and price pressures, their economic development is very transparent for all, which could make them one of the most accessible and agreeable products of abundance economics. Similarly, the notion of changed consumption patterns by constructing or designing consumer goods in a way that does not already plan for their fast and profitable obsolescence (as widely wooed for instance by car or computer owners) could lead not only to longer-lasting and thus more abundant goods, but to a host of positive side effects, such as reduction of waste and pollution, and therefore of health or environmental hazards, let alone the savings on constant reacquisitions.

Compared to digital or free goods as a relatively recent form of abundance or post-scarcity, contributory resource use, especially in the form of knowledge sharing, has long historical and humanistic roots: since Classical Greek Antiquity, the inscription over the Oracle at Delphi that reads "Know Thyself" stands for the quest to push the boundaries of knowledge, and to inspire others on that voyage. These two models could thus enrich each other to great benefit: if the technology of digital or free goods were used with the motivation of letting others partake in the abundance of human ideas and progress, then a larger share of those societies described as the "people of adequacy" and "people of poverty" could partake in, benefit from, and themselves multiply those riches. The idea of either abolishing or fundamentally changing the current patent regime deserves consideration: on the one hand, the presence of patents is one of the main arguments of industrialized societies against efforts from developing nations to copy their innovations without having to invest in research and development themselves; on the other hand, the benefits of freely sharing those innovations without hoarding them in the hands and for the benefits for few (already well-endowed people) has the argumentative strength of global fairness, development aid, and international idealism on its side.

The automation economy, social robotics and nanotechnology, while being fields that still seem reserved for cutting-edge technologies and the most specialized of professions, have nevertheless found their way even into entertainment, such as in recent bestselling novels or popular movies. This level of acceptance in the media reveals that those three solutions have already steeped the societies of the "people of plenty" with their imagery and shaped widespread expectations for industry, business and lifestyles in ways that promise to become as commonplace within the next generation as digital or free goods have become over the last.

Changes in the way we consider and do work have become part of our professional parlance, from "ergonomic workstations" to "work-life balance". The suggested abundance models take those discussions several steps further, reorienting and redefining our entire professional existence and purpose. Working not just to live, but

instead for personal fulfilment, has found concrete and traceable, conceptual and empirical support in socioeconomic proposals and implementations of fixed minimum wages. While the jury as to the results and desirability of minimum wage proposals and implementations is still out there, it seems relatively safe to say that, of all people and places, those who can call themselves “of plenty” should be the first to provide all with more data and generalizable results on their success. If the minimum wage model proves workable, it could solve a host of issues, from chronic unemployment that ravages even the societies of plenty (especially the hopes and dreams of much of their youths), over worldwide levels of productivity, up to the creation of new professions, and the concomitant release of pressure on individuals and groups to follow certain career path mainly out of the motivation of making a living. Especially interesting here is that some of the names and types of those new professions are still hard just to visualize, much more to substantiate, but – if the development of professional labels, activities and impacts of the digital revolution is anything to go by – might soon become household names.

Spiritual or Buddhist economics might be religiously well thought-through and even empirically tested for some cases and places, but it is still hard to imagine prescribing, or just offering this model and its indispensable philosophical basis to economic communities outside of its Eastern geographical and traditional remit. Even if that were possible, the notions of “desirelessness” and the related absence of many of the physical goods that make our modern life so convenient – and that we have become used to, or at least learned to appreciate precisely because of that abundance which the new macroeconomic paradigm now pursues – might be still an overly long stretch of the imagination – and thus “hard sell” – in today’s world.

The connection economy, or creative economy, is currently the latest and most progressive model of possible abundance and post-scarcity economics systems and scenarios, mindsets and philosophies. The examples given by their proponents of how to realize the connection or creative economy however still resemble the ones for digital goods or free goods, or of contributory resource use in the form of knowledge, or of the actualization economy in the form of working not for a living but for professional self-realization and personal fulfilment.

The latter insight carries with it revelations and implications on several levels: it highlights the interlinked nature of the solutions, underlines the potential infinity of ways how to conceive and use abundance, and offers a strong underlying thread to link those notions and their motives, in theory and practice. These insights and their interconnectedness allow for many ways to adopt abundance for one’s own needs and practices. This then gives hope for these way’s solidity and realizability: on the one hand, if abundance economics were not workable, it is hard to imagine how so many qualified thinkers and practitioners could all agree on its desirability and general shape. On the other hand, these voices could hardly have reached the same goal on so many different yet seemingly suitable pathways, if the advantages of abundance economics could not be implemented, in practice and with great gain, by many different people and groups worldwide, suitable for their respective economic, social, political, ecological and cultural frameworks and situations.

Abundance economics or post-scarcity economics might, in pure or absolute form, never be attainable, but then as such might neither be desirable or required. As is already implied in the terms themselves, as soon as we can confirm, and as long as we can celebrate the existence of abundance and post-scarcity in our societies (respecting and assisting those for whom their conditions are still distant or under development), then the goal is already half reached (or the glass half full): once we have abundance of basic things, there should be no more need to compete over what has ceded to be scarce. The point would then less be whether we are (already) there, but whether we have already enough to stop worrying whether we are there, because for all accounts and purposes we have (already more than) enough, and sharing it becomes less a luxury, or even an act of generosity, but rather the most suitable way of allocating this abundance for each other's benefit and even profit.

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