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Wolfgang Fellner, Benedikt Goehmann

Human Needs and the Measurement of Welfare

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Wolfgang J. Fellner* and Benedikt Goehmann†

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Abstract

Adam Smith considered consumption the sole end and purpose of all production. Concerning the measurement of welfare, this requires a sound understanding of the connection between consumption and welfare. The consumerist conceptualization of this connection implies that the amount of consumption equals welfare and the level of production can be an indicator for welfare. The limits and problems of production measures are widely accepted. Yet, indicators like GDP remain the focus of mainstream economic theory and policy. We trace the origin of this lock-in back to the economic model of behaviour and the concept of agency in mainstream economics. The suggested alternative stems from literature about human needs in heterodox economics and psychology. This literature incorporates the relevance of social aspects and cultural change for welfare. It turns out that consumerism can be a threat to well-being and welfare rather than a requirement for it.

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*Vienna University of Economics and Business, Department Socioeconomics, Welthandelsplatz 1, 1020 Vienna, Austria, Phone +43/1/31336/4779, Fax +43/1/31336/904779, E-Mail:wolfgang.fellner@wu.ac.at

†Kingston University & Université Paris 13, E-Mail:b.goehmann@outlook.com

1 Introduction

Recent debates about the measurement of welfare in economics have stressed the limits of production indicators (e.g. OECD, 2011; Stiglitz et al., 2009). Yet, economic theory and policy is still predominantly focused on production and consumption. This poses a serious open issue which calls for a reorientation of economic theory, capable of tackling the critique, in order to analyze the connection between economic activity and welfare, and draw the resulting policy implications.

We use the term welfare in the sense of what a society might want to achieve. In this sense welfare relates to, or coincides with terms like well-being, standard of living, human flourishing, the good life, or Eudaimonia.

In this paper we distinguish two types of approaches to welfare: preference based approaches (neoclassical welfare economics, happiness economics, and the capabilities approach; section 2) and human need based approaches (section 3).

Based on utilitarian ethics, commensurability and liberalism, preferences based approaches refrain from statements about the relevance and qualitative relations of different elements of welfare. Contrary to that, human need based approaches specify a set of needs determining welfare. They deal with the relations of needs and thresholds of need satisfaction.

Human need based approaches can be found in the discourse about development (Max-Neef, 1992; Alkire, 2002), and more recently, the discourse about sustainability (O'Neill, 2011; Gough, 2015). They criticise and reject economic preference theory and the concept of agency in mainstream economics, since preference theory excludes any social influences on behaviour and welfare. Preference theory also excludes the effects of adaptive phenomena and cultural change, which might change preferences (Gough, 2015, p.1193). The necessity for a methodological framework which is able to incorporate these phenomena has been a key issue in heterodox economics (Hodgson, 1988; Zizzo, 2003; Rodrigues, 2004).

We look for a model of behaviour and a concept of agency capable of taking the effects of social and adaptive phenomena into account. Our paper indicates that a human need based approach to welfare can provide such concepts, which are able to tackle some of the main objections against prefe-

rence based approaches to welfare. Drawing on Self-determination theory, a hugely influential framework in psychological research about human needs, the paper facilitates a deeper understanding of the connection between economic activity and welfare.

This adds to a longstanding discussion about the relation between psychology and economics (Kahneman, 2003; Earl, 2005; Hands, 2010; Glaze, 2016). This article contributes to closing the gap between heterodox economics and psychology (Earl, 2005) and stresses the importance of looking at what kind of psychology economics is engaging with (Hands, 2010).

2 Preference Based Approaches to Welfare

2.1 Neoclassical Economics and Commodity Welfare

This section illustrates from a history of economic thought perspective the rationale for conceiving commodities as welfare in neoclassical economics. Measures like GDP per capita became the predominant indicator for *commodity welfare*. Commodity welfare is the result of several major shifts in the concept of welfare in neoclassical economics. In order to illustrate this, we depict the evolution of the definition of economics, beginning with William Stanley Jevons, to Alfred Marshall, to Lionel Robbins.

Human action for Jevons simply follows the *human need to maximise pleasure*:

"The theory which follows is entirely based on a calculus of pleasure and pain; and the object of Economics is to maximise happiness by purchasing pleasure." (Jevons, 1871, p.23)

Jevons does not believe that a more exact definition is needed. Humans act to maximize pleasure, and every action follows the goal of increasing utility. There is no limit to its satisfaction. "But the more refined and intellectual our needs become, the less are they capable of satiety. To the desire for articles of taste, science, or curiosity, when once excited, there is hardly a limit." (Jevons, 1871, p.53) Jevons explicitly develops this *model of behaviour* in the tradition of Bentham (Jevons, 1871, p.38).

Alfred Marshall, the father of the term *Economics*, is already less explicit about the Benthamite roots of orthodox economic methodology. In *Principles of Economics* Marshall defines economics:

"Political economy or economics is a study of mankind in the ordinary business of life; it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of wellbeing. Thus it is on the one side a study of wealth; and on the other, and more important side, a part of the study of man." (Marshall, 1890, p.1)

Human needs are split into two dimensions: material and immaterial, with economics only being interested in the first. Human needs, limited to the material sphere, as well as the human being itself, are central to economic analysis. Wealth is seen as the answer only to the material side of human needs. Marshall departs from Jevons and distances economics from the utilitarian tradition, accepting other influences on human action than the mere pursuit of wealth (p.17). Human behaviour and human needs, to him, are more complicated and not reducible to a mere pursuit of pleasure and avoidance of pain. But this has no consequence for the economic model of behaviour. It remains dependent on human action to follow the simple logic of Bentham. In order to reconcile the explicit renouncement of utilitarianism and his continued use of the utilitarian logic, he claims it to be a proxy which on average is correct (p.24-26). In the end, Marshall's humility towards the validity of the psychological foundations of economic methodology is no more than a smoke-screen around the assumptions about values and human behaviour to make the mechanics of economic methodology work.

Marshall's approach to economics was further refined by Lionel Robbins, whose definition is widely accepted today. Economics, he argues, should be broader in the sense that it is not only limited to the material sphere (Robbins, 1932, p.6f). For Robbins all of human behaviour is subject of and can be explained by economics (p.12f), because, human life is characterized by scarce means to multiple ends: "Every act which involves time and scarce means for the achievement of one end involves the relinquishment of their use for the achievement of another. It has an economic aspect." (p.14). He

consequentially derives what is today widely accepted as the definition of economics:

"Economics is the science which studies human behavior as a relationship between ends and scarce means which have alternative uses." (Robbins, 1932, p.16)

Marshall's idea that the satisfaction of human needs is to be seen as more complex than just utility maximizing is dropped. This is done in line with Marshall's avoidance of invoking any of Jevons' psychological foundations.

Marshall installs a smoke-screen around Jevons' psychological foundation, to take a more humble position on its reach. Robbins departs from the humble position, while keeping the smoke-screen. Lionel Robbins dismisses both the psychological foundations and the acceptance of limitations in explanatory power. The economic model of behaviour does not change, but what changes radically is the perception of the model. Following Robbins' definition it is not the object of study which defines economics but its method.

While Jevons and Marshall still refer to human needs, Robbins shifts the issue into a sphere which is not to be touched upon by economics. By describing human needs as "attaching values", they are seen to be subjective to the individual, and therefore not relevant. With this trick, Robbins claims to have removed any normative aspects, in particular utilitarianism. He creates the illusion of economics as a positivist science, which may not discuss human needs, as they are purely subjective to the individual.

The psychological foundation of the economic model of behaviour becomes hidden. Hans Albert (1998, p.179) calls this the "expulsion" (Hinauswurf) and Tibor Scitovsky (1976, p.15) the "expurgation" of psychology. The consequence however, is not the removal of the utilitarian mechanics, but the depletion of the concept of utility. After removing the explicit links to Bentham it is not clear anymore what utility actually stands for. Hans Albert takes this to argue that whenever there is debate of human needs in relation to the economic model of behaviour, it is empty talk (1998, p.181). Scitovsky sees the debate reduced to "logical implications of the assumption of man's rationality" (1976, p.15). Utility can now only be interpreted as the satisfaction of choice.

A social vacuum is created around the model by confining values to the market sphere and effectively ridding human behaviour of its social character. In this vacuum the economic model of behaviour can be applied to explain everything, from crime to drug use to marriage (Becker, 1968; Becker et al., 1991; Becker, 1973). All values can be commodified and integrated into a market. The existence of markets has to be presupposed (Becker, 1978, p.5f). If it is not marketable it can not be valuable, or reversed, if it is valuable, there is a market for it. Values become consumer preferences, they become the choice between products, the choice between multiple options. Consequently, welfare is measured in terms of commodities. Agency is conceived as the optimization of an exogenously given and stable preference function for commodities. No power issues can arise in the process of preference satisfaction due to the axioms of stable preferences and consumer sovereignty (Fellner and Spash, 2015; Galbraith, 1970).

2.2 Happiness Economics

As the name suggests, according to happiness economics welfare is conceptualised as feelings of happiness. Using happiness as an indicator for welfare, two different approaches within happiness economics can be found:

- a) happiness economics as a critique of commodity welfare and economic growth (Easterlin, 2001, 1974)
- b) happiness economics as a validation of neoclassical welfare economics (Di Tella and MacCulloch, 2009)

Both approaches conceive decision taking as the maximization of happiness. The conclusions drawn, however, could not be further apart. Easterlin (1974) empirically shows that total subjective happiness rises in line with total income only up to a certain point. After this threshold has been passed, happiness does not increase with total income. This is dubbed the Easterlin Paradox, as it is not accommodated within the economic model of behaviour, in which growing income comes with growing utility and therefore growing happiness. Easterlin's explanation for this is what he calls life aspirations (Easterlin, 2001). Parallel to growing income, aspirations regarding material goods rise, requiring a higher level of consumption for the

same level of utility or happiness. This explanation poses a contradiction since changes in aspirations constitute an adaptive phenomenon, excluded by economic preference theory which happiness economics generally approves. The conclusion, drawn from the Easterlin Paradox, suggests economic growth can only contribute to the maximization of happiness until a certain level.

Di Tella and MacCulloch (2009), proponents of approach b), argue that happiness economics confirms the economic model of behaviour. While they briefly mention the Easterlin paradox as contradicting the economic model of behaviour, they come to the conclusion that "happiness and life satisfaction scores are related to true internal utility with some noise" (Di Tella and MacCulloch, 2009). An explanation for the Easterlin Paradox is not given.

Both approaches however are united by the idea of welfare as hedonic happiness. The maximization of happiness follows as an appropriate goal. There are several problems with this. As Amartya Sen argues, happiness can not be used to compare the level of welfare of individuals (Sen, 2009, p.282f). Reported happiness does not follow the same scale across individuals when people tend to adapt their expectations to their situation. So it is possible and rational for an objectively deprived person to report the same level of happiness as a very well-off person. Also is it conceivable to find a deprived population being lulled into happiness through propaganda. A happy person, deprived of her subsistence means, can never be a wealthy person by any sensible account. Further, any valid measure of welfare must allow for the possibility of unhappiness. Being happy in the face of a tragedy does not seem to be an appropriate response. Happiness in the face of the death of a loved one for example, is neither healthy nor a morally sensible reaction. Measuring welfare purely in terms of summing up pleasure does not allow for unhappiness. Skidelsky and Skidelsky (2012) write that to be happy without having reason to be happy is delusion. This delusion is also known as ideology to conceal oppression (Skidelsky and Skidelsky, 2012, p.123). It is therefore necessary to specify the human needs, or as Skildeskys put it: "Our proper goal, as individuals and as citizens, is not just to be happy but to have reason to be happy." (p.123).

2.3 Capability Approach

Amartya Sen largely accepts preference theory but takes issue with the concept of utility and especially the aggregation of individual utilities to measure total welfare. He writes: "We must conclude that none of the interpretations of utility (pleasure, desire-fulfillment, choice) takes us very far in pinning down well-being or the living standard." (Sen and Hawthorn, 1988, p.13) In his reluctance to break with the economic model of behaviour, Sen refrains from using the word welfare and uses living standard, or well-being, instead. It should not be forgotten that what proponents of the economic model of behaviour have in mind when they are talking about welfare is in fact the standard of living. Both concepts are referred to as the ultimate goal of economic activity. Sen's problem with utility is essentially its character of total commodification of human life. He argues it to be necessary to go beyond the mere accounting of commodities as a measure for welfare (Sen and Hawthorn, 1988, p.15). This is the point where he introduces the Capability Approach.

Welfare for Sen needs to be regarded as functionings and capabilities instead of mere opulence of commodities (p.16). Functionings refer to the various conditions of living. Capabilities describe the ability to achieve the aspired outcome of these functionings. Sen illustrates his reasoning by describing two men with different levels of food consumption. The man with the higher intake of food however, has also a significantly higher metabolic rate and a parasitic condition, which means he is actually undernourished and therefore worse-off despite his higher level of consumption (p.15). The measure of welfare should not be the level of goods consumption, but the kind of life the person leads. Commodities are a means to an end, therefore it is necessary to judge the ends and not the means. Welfare in the capability approach is conceptualized as real opportunities available to the individual (Sen, 2009, p.235).

This approach originally developed by Sen, was then further advanced in collaboration with Martha Nussbaum. For both, the opportunities to achieve, ergo the capabilities, are welfare. This is in order to allow the individual to preserve her freedom by allowing for choice (Sen, 2009, p.238), (Nussbaum, 2000, p.69). Nussbaum, in contrast to Sen, lays forward a list

of central capabilities which should be open to every individual (Nussbaum, 2000, p.70). Sen argues a list of central capabilities to be arbitrary. But for both, assigning to the liberal tradition, what counts is not the actual achievement of these capabilities, but the option to choose. Nussbaum's endeavor to identify central capabilities resembles the idea of the universality of human needs, which is an important aspect of human need based approaches to welfare (see section 3).

While *opportunity welfare* is a big leap forward from commodity welfare, Sen's approach still requires the problematic assumption of authentic and stable preferences. This reliance leads us to categorise the capability approach as a preference based approach. This is in contrast to O'Neill (2011) who classifies the capabilities approach as needs based. However, welfare can only be measured in opportunities, if behaviour reliably adheres to the assumptions of economic preference theory. If preferences are subject to various influences and able to change, opportunities can not be an absolute measure for welfare as one can not know if an opportunity has been chosen for authentic or other (e.g. social) reasons.

Interestingly, Sen himself discusses an adaptive phenomenon (Sen, 2009, p.283). He argues that deprived people tend to adapt their expectations to their situation. This leads him to criticize happiness economics' approach to welfare as interpersonal comparability of utilities becomes impossible (see section 2.2). Sen however ignores that if expectations are adaptive, preferences regarding the opportunities are also adaptive. This means the relevance of opportunities is not equal for everybody but is endogenous to the personal environment. Consequently, the availability of opportunities is not sufficient to capture someone's standard of living.

3 Human Need Based Approaches

In human need based approaches, welfare is conceptualized as the satisfaction of specified human needs. Human needs can be classified according to various criteria (Alkire, 2002).¹ Distinguishing independent and incom-

¹Max-Neef (1992, p.133f) organizes needs into two categories: existential and axiological needs. He combines and displays four existential and nine axiological needs in a matrix, which illustrates important aspects of the process of need satisfaction. The four existential needs are: being, doing, having and interacting. The nine axiological hu-

measurable human needs breaks with preference theory, which rests on a single measure for value and welfare. Another fundamental difference between a theory of human need and preference theory is that human needs are conceptualized as finite and satiable while preferences, for the overall consumption bundle, are assumed infinite and unsatiable.

Len Doyal and Ian Gough's (1991) theory of human need is one of the most elaborate in economics. Doyal and Gough claim their theory overlaps significantly with other theories of human need like Max-Neef's axiological categories or Nussbaum's central human functional capabilities (Gough, 2015, 2014). Doyal and Gough suggest two basic needs: health and autonomy. The satisfaction of these two basic needs, to some degree, is considered the prerequisite of a human individual being capable of forming its own goals and striving to achieve these goals: "whatever the cultural practices and values within which she [the individual] lives, she will require certain prerequisites to strive towards those goals. In this way we identify physical survival/health and personal autonomy as the most basic human needs ..." (Gough, 2015, p.1197).

Autonomy is to be seen as a socially interdependent concept: "We define basic autonomy as the ability to make competent informed choices about what should be done and how to go about doing it. This foundation of human purposive action is applicable to a wide variety of human contexts and predicaments, from oppressive and totalitarian contexts to ones with wide options for creative participation." (Gough, 2015, p.1197). Autonomy is defined as the agency needed to participate in the social environment. Autonomy is further advanced by the concept of critical-autonomy. Critical-autonomy enables the individual to reflect on one's own cultural setting, compare it, and work together with other individuals to change it, or move to another culture. Autonomy presupposes an inter-dependence, as people build a self-conception through interaction (Gough, 2015, p.1199).

Doyal and Gough follow Max-Neef's approach of the separation of needs from need satisfiers (Max-Neef, 1992). Human needs are argued to be universal, i.e. constant over time and across cultures, while satisfiers may vary. For Max-Neef the set of need satisfiers is one of the defining characteristics

man needs are: subsistence, protection, affection, understanding, participation, leisure, creation, identity, freedom.

of culture itself. While human needs stay constant, what changes across cultures and over time is the set of *need satisfiers*.

Satisfiers can vary in quality and quantity (Max-Neef, 1992, p.200). To deal with the qualitative differences of satisfiers Max-Neef distinguishes five types of need satisfiers: synergic satisfiers (e.g. breast-feeding, self-managed production, popular education), singular satisfiers (e.g. programmes to provide food, curative medicine, insurance systems), inhibiting satisfiers (e.g. paternalism, Taylorist-type of production, authoritarian classroom), pseudo-satisfiers (e.g. mechanistic medicine 'a pill for every ill', over-exploitation of natural resources, chauvinistic nationalism) and violators or destroyers (e.g. arms race, national security doctrine, censorship) (Max-Neef, 1992, p.205ff). These types differ in their contribution to the actualization of needs. The presence of the last three types of satisfiers is potentially destructive for need satisfaction. Such destructive or non-beneficial satisfiers comply with the social and cultural setting. They appear reasonable and legitimate but actually hinder and limit the actualization of human needs.

The measurement of welfare flowing from Max-Neef's approach requires the identification and classification of satisfiers. The examples of the various types of satisfiers illustrate that satisfiers can be thought of as social structures or institutions. Identifying and analyzing the effects of social institutions is a key subject of *critical institutional economics* and the social sciences in general. Thinking about social institutions in terms of satisfiers provides a conceptual framework that acknowledges the effects of institutions on human need satisfaction.

Increases in potentially non-beneficial satisfiers are accompanied by the threat of decreasing welfare irrespective of their effects on production and consumption levels. In a publication entitled "Economic growth and quality of life: a threshold hypothesis" Max-Neef explicitly discusses the limitations of economic growth to create welfare (Max-Neef, 1995). The argument rests on the Index of Sustainable Economic Welfare (ISEW). This indicator considers non-beneficial aspects of production and economic activity in the form of depletion of natural resources and 'defensive expenditures' which are ignored by production indicators. The ISEW levels off or even declines in all countries, it has been calculated for, since the 1970s or 1980s (Max-Neef, 1995).

To operationalize their human need based approach, Doyal and Gough propose *universal satisfier characteristics*, or intermediate needs, as a cultural bridge between universal basic needs and socially relative satisfiers. Universal satisfier characteristics are conceptualized as properties of goods, services, activities and relationships which enhance physical health and autonomy in all cultures (Doyal and Gough, 1991, p.157). They name eleven intermediate needs: adequate nutritional food and water, adequate protective housing, non-hazardous work environment, non-hazardous physical environment, appropriate health care, security in childhood, significant primary relationships with others, physical security, economic security, safe birth control and child-bearing, appropriate basic and cross-cultural education.

To measure human need satisfaction in terms of universal satisfier characteristics requires identifying proper indicators. Doyal and Gough refer to social and environmental indices in a broad and general way. What qualifies certain social or environmental indices to represent specific universal satisfier characteristics and the satisfaction of human needs has to be clarified (Gough, 2015, p.1202-3). Also the identification of a minimum level of need satisfaction for social participation, which avoids serious harm, and a general level of satiation, which enables human flourishing via optimal need fulfillment, poses measurement challenges in the approach of Doyal and Gough (Gough, 2014, p.376ff).

3.1 Human needs, culture, behaviour

The human need based approaches of Max-Neef and Doyal and Gough provide a conceptualization of social relations and cultural institutions which are lacking in preference based approaches. It has become clear that the satisfaction of needs and satisfiers are social in nature.

In terms of the debate on structure versus agency (Archer, 2003), the discussed human need based approaches can facilitate the analysis of the effects of structure (i.e. social relations and cultural institutions) on the actualization of needs. A concept of agency and a model of behaviour, based on the satisfaction of human needs, is missing in these approaches.

The concept of agency in preference based approaches conceptualizes

humans as autonomous. The economic model of behaviour consequently denies structural influences on individual behaviour. These differences in ontological and methodological premises between preference theory and human need based approaches illustrate the necessity for an alternative concept of agency. The necessity for an alternative model of behaviour becomes particularly visible when dealing with adaptive phenomena: Changes in individual aspirations, social relations, and cultural institutions require an understanding of the role of peoples' behaviour for those changes, and the effects of those changes on peoples' behaviour.

This void might be filled by self-determination theory which provides a concept of agency that acknowledges the relevance of structure. Self-determination theory proposes a model of behaviour that considers structural influences and links behaviour with need satisfaction. In the subsequent section we give a brief introduction to self-determination theory and highlight its connection to the aforementioned human need based approaches in economics.

3.2 Self Determination Theory (SDT)

Conceptually, self-determination theory (SDT) is largely in accordance with Gough and Doyal's approach. While Doyal and Gough derived their set of basic human needs logically, self-determination theory is empirically grounded. Self-determination theory identified three basic psychological needs: competence, autonomy and relatedness. Competence refers to an environment which promotes the feeling of empowerment and ability to achieve an end. Autonomy is a sense of volition and self-determination to act. Autonomy explicitly does not refer to the individualist idea of independence and detachment, but is an inter-dependent concept. Autonomy is not the renouncement of social relations, but the feeling of acceptance and support of one's actions. Lastly, the need of relatedness refers to the feeling of belonging and significance to a social group, which provides a sense of security (Ryan and Deci, 2000).

The specification of the three basic psychological needs emerged from psychological research on various topics and was subsequently tested by a number of authors across cultures and against other propositions of hu-

man needs (Deci and Ryan, 2012, p.87). The founding fathers of self-determination theory, Richard M. Ryan and Edward L. Deci showed that these three basic psychological needs are universal and apply to all human beings across all cultures. This does however not mean they take the same form across all culture, but that the same underlying processes can be identified across cultures (Ryan and Deci, 2000; Deci et al., 2001; Ryan and Deci, 2001). This resembles the above mentioned distinction between human needs and satisfiers.

The authors of both theories, Gough (2015) as well as Ryan and Deci (2006) argue the concept of autonomy in Doyal and Gough's theory of human need to be equal with the three basic psychological needs identified by self-determination theory. Doyal and Gough's autonomy incorporates the three needs relatedness, competence and autonomy in SDT. Therefore, the two basic needs autonomy and health, in Doyal and Gough's approach, might be interpreted as a distinction between psychological and physical needs. This distinction, sometimes made in economics (Galbraith, 1970, p.427), does however not mean that psychological and physical needs can be separated at the level of the individual. Psychological and physical needs can be considered as two sides of the same coin rather than separate entities. Psychological needs can be seen as drivers of behaviour, and physical needs as observable living conditions. This view obviously applies to Bentham's calculus of pleasure and pain and the utilitarian roots of the economic model of behaviour, in which decision taking is exclusively understood as the result of psychological sensations of pleasure and pain.

Satisfaction of Human Needs and Wellness

Ryan and Deci claim that the satisfaction of their set of basic psychological needs is necessary for the optimal functioning of a human being (Ryan and Deci, 2000). Their definition of a basic need is borrowed from Clark Hull (1966) and defined by a state, which if satisfied promotes well-being and health and if dwarfed, drives towards malady and ill-being.

To capture *optimal functioning* (Sheldon and Ryan, 2011, p.33), self-determination theory introduces the term wellness. In their early papers, Ryan and Deci still use the term well-being for an individual's full and vital functioning, which they later replace by the notion of wellness (Ryan et al., 1995).

Wellness is distinguished from happiness, which refers to a subjectively experienced positive mood (Ryan and Deci, 2011, p.47). Wellness conduces towards happiness, but does not guarantee it. For example, unlike happiness, wellness allows for the capacity to be unhappy, e.g. after the loss of a loved one (Ryan and Deci, 2011, p.48).

Wellness is also distinguished from the hedonic concept of well-being pioneered by Daniel Kahneman. Adhering to the utilitarian tradition, Kahneman defines well-being as the absence of pain, thus the summation of positive affect (Kahneman et al., 1999, p.5). The similarities to the sum-ranking of utility are non-coincidental, as both marginalist economics and hedonist psychology have their origins in Benthamite utilitarianism (Scitovsky, 1976, p.15). As already discussed, neoclassical economics relies on this hedonic psychological foundation, while at the same time denying it. Wellness, in contrast to the hedonic conception of happiness, refers not to an outcome (the presence of pleasure), but is concerned with the processes and content of living (i.e. the full and vital functioning) (Ryan and Deci, 2011, p.47).

This distinction is very closely tied to Aristotle's concept of Eudaimonia. For Aristotle happiness entails a way of life and not a feeling. Eudaimonic happiness refers to living a good life, defined as pursuing ends of intrinsic worth and not to merely feeling good (Ryan et al., 2008). Accordingly, hedonic pleasure is one outcome of wellness, but not its main concern. While hedonic thinking is only concerned with the outcome, namely pleasure, eudaimonic thinking is concerned with the processes. Happiness is not the focus, but the Good Life, the reasons to be happy are of main concern. Wellness refers therefore not to pleasure but an "array of outcomes, including subjective well-being, or happiness, as well as freedom from stress, anxiety, and depressive symptoms, and experiencing vitality and integration in functioning" (Ryan and Deci, 2011, p.47). This is important, because self-determination theory has shown that the focus on pleasure regardless of the processes can actually lead to prescriptions dwarfing wellness (Ryan et al., 2008).

Measuring Need Satisfaction and Motivation

In SDT, optimal functioning of humans evolves around their motivation to act. The individual can appear as active, engaged and self-motivated or as passive, driven and alienated. Intrinsic motivation, which is authentic and stems from the individual herself, is contrasted with extrinsic motivation, that appears as an externally controlled action. It is shown that intrinsic motivation leads to enhanced performance, creativity and persistence (Ryan, 1991), increased vitality (Nix et al., 1999) and overall wellness.

In accordance with intrinsic and extrinsic motivation, two analytical categories for aspirations are identified: intrinsic goals and extrinsic goals. Goals describe the outcomes which people are pursuing. They are differentiated from needs because goals refer to "learned desires", while needs are "essential nutriments" (Deci and Ryan, 2008b).

Intrinsic goals are undertaken for their own sake, according to one's own values. Intrinsic goals like personal growth and building relationships are pursued for autonomous reasons. They are ends to themselves and lead to internal feelings of worth, which results from psychological need satisfaction. Intrinsic goal pursuit and fulfillment is directly linked to the satisfaction of the basic psychological needs. Extrinsic goals are instrumental and undertaken as means for different ends.

Extrinsic goals are pursued for controlled reasons e.g.: the goals of wealth or fame. They derive their worth from a different end than their own. They rely on external indicators of worth. Extrinsic goals are in direct conflict with the satisfaction of the basic psychological needs (Deci and Ryan, 2008a; Ryan and Deci, 2000). The pursuit of extrinsic goals tends to crowd out the satisfaction of basic psychological needs. Extrinsic goals turned out to serve as "need substitutes" (Deci and Ryan, 2008b). Even when attained, the pursuit of extrinsic goals is associated with lower health, wellness and lower performance (Vansteenkiste et al., 2004).

The empirical findings of SDT show that goals are not exogenous to the social environment. Goals are understood to be acquired as a function of the social environment (Deci and Ryan, 2008b). By social environment, self-determination theory refers not only to the immediate social surrounding of an individual, but explicitly to the institutional setting or structure

(Ryan and Deci, 2011). The economic, social and cultural setting fosters or thwarts basic needs satisfaction and thereby defines goals. The degree to which the basic psychological needs have been fostered respectively thwarted over time, leads to the adaption of intrinsic goals respectively extrinsic goals. Intrinsic goals are adapted in a social environment, which fosters basic psychological needs satisfaction. Reversely, extrinsic goals are adapted in a social environment, thwarting psychological needs satisfaction (Deci and Ryan, 2008b).

These findings illustrate that the effect of the social environment on human need satisfaction is twofold. The social environment determines which goals are adopted by the individual and it provides for the need satisfaction. A positive feedback loop between goals and the satisfaction of the basic psychological needs can be identified: Poor basic needs satisfaction leads to the adoption of goals which are shown to undermine basic needs satisfaction. This is because basic psychological needs satisfaction leads to internal feelings of worth. If psychological needs are thwarted, they are substituted with external indicators of worth, which do not contribute to need satisfaction (Deci and Ryan, 2008a).

Certain goals are beneficial to the individual and society as a whole, while others are not. The claim of non-beneficial goals is neither paternalistic nor normative. Non-beneficial goals are desired outcomes, which are shown to diminish welfare even when attained. The adoption of extrinsic or non-beneficial goals is not an act of irrationality, but the consequence of certain social habitats.

The empirical findings of self-determination theory can be summed up in the following way: The social environment is seen as a key to human behaviour and wellness. It determines if the basic psychological needs of a human being are met. Only if the social environment provides for autonomy, competence and relatedness, the individual, groups and communities can develop in a healthy manner. If the basic psychological needs are satisfied, the individual will appear with great motivation to be active. What follows is that the satisfaction of the basic psychological needs is associated with greater vitality, performance and overall wellness. If basic psychological needs are not satisfied, the individual appears as idle and alienated.

The non-satisfaction is linked to poor vitality, poor performance and poor wellness. The level of psychological need satisfaction results from the extent of intrinsic motivation and the pursuit of intrinsic goals in peoples' lives, which are the indicators for welfare.

Over the years SDT has contributed significantly to the measurement of motivation and life aspirations (i.e. goals). Proponents of SDT have compiled an impressive stock of tools for empirical research in a broad range of topics and academic fields.²

4 Growth, Consumerism and Alienation

According to the economic model of behaviour, the imperative for economic growth and ever increasing consumption is assumed to be inherent to individual preferences. Self-determination theory with its concept of basic psychological needs provides an account of how new goals are imposed onto the individual by one's social environment. The empirical results of SDT suggest that the ever-increasing demand for consumption goods in fact is a product of the mode of production (i.e. the social environment) itself. Sales-techniques, but also the work environment foster a focus on commodity accumulation (i.e. extrinsic goals), which does not contribute to higher wellness and welfare.

SDT emphasizes the role of a consumerist culture and economic institutions in fostering extrinsic goals. Advertising and the glorification of wealth and power directly thwart basic psychological needs satisfaction by creating insecurities and anxieties (Deci and Ryan, 2012; Ryan and Deci, 2011). But also corporate culture with its controlling use of competition and rewards undermines basic psychological needs satisfaction and leads to the adaption of extrinsic goals (Deci and Ryan, 2012). The pursuit and even attainment of extrinsic goals however does not contribute to needs satisfaction. This creates a vicious cycle. Intrinsic goals are further substituted with extrinsic goals (Deci and Ryan, 2008b, 2012). Commodification of the human life appears as the result of a social environment created by a societal focus on the accumulation of commodities.

The role of economic theory on this process must not be neglected. The

²An overview of questionnaires and scales is available via the SDT webpage: <http://selfdeterminationtheory.org/>.

concept of commodity welfare extends out of the university into society, by continuously advocating the importance of production. John K. Galbraith famously discusses this influence of economic theory on the real-world: "If goods are firmly established as the cause of happiness, the public will be attentive and responsive to claims to reward on their behalf, and certainly the relentless propaganda on behalf of goods must greatly increase the importance attached to production. This, in turn, strengthens the position of producers in the exercise of their sovereignty especially as regards the community and the state. What can be so important as what they do? Economics again assists by making the level of output the formal, measurable accomplishment of the society." (Galbraith, 1970, pp. 474-5) The economic model of behaviour is not neutral itself, creeping into the fabric of the real world. With its focus on ends, it suggests incentives to guide human behaviour. Due to its status these incentives then become the fiber of our societies. Within the workplace, schools and universities but also in social policies, (pecuniary) incentives become the guiding principle. These incentives, omnipresent in western societies, may however run contrary to the basic need of autonomy. In the name of freedom and efficiency, the economic model of behaviour promotes heteronomy instead of autonomy. The research of SDT shows that the dwarfing of autonomy leads to alienation and lower performance, the opposite of the desired and expected result. The economic model of behaviour becomes the advocate of the total commodification of life with all its negative consequences on wellness and welfare.

5 Conclusions

We showed that a synthesis of human need based approaches in economics and psychology can enable a substantial progress in the conceptualization and measurement of welfare. The concept of satisfiers developed and applied in the approaches of Max-Neef and Doyal and Gough provides a framework to theorize the effects of social relations and cultural institutions (i.e. social relations and structure) on human need satisfaction. Complementary to this, self-determination theory provides a concept of agency that acknowledges the relevance of structure and allows to replace the ideas of autonomous, self-interested preference function maximizers in mainstream

economics. The model of behaviour put forward by self-determination theory rests on the distinction between intrinsic and extrinsic motivation. People are conceptualized as pursuing intrinsic or extrinsic goals. Which type of goals are pursued turned out to be crucial for the actualization of needs. Empirical research also reveals that the extent to which people pursue intrinsic or extrinsic goals largely depends on the social environment. This finding highlights the relevance of social relations and cultural institutions for behaviour and welfare.

Another important finding for the measurement of welfare is the identification of non-beneficial satisfiers and non-beneficial goals. Non-beneficial satisfiers appear reasonable and legitimate but actually hinder and limit the actualization of human needs. The empirical identification of non-beneficial goals in self-determination theory implies that what people aspire is not necessarily a good indicator for how to improve their welfare. These findings are clashing with the concept of authentic preferences.

Section 4 discusses consumerism as an example for a cultural institution and its potentially negative effects on welfare. This runs contrary to the positive connection between welfare and consumerism, firmly established in neoclassical theory, which fosters policies oriented towards economic growth. The conventional view ignores that consumerism can lead to the replacement of intrinsic goals and internal feelings of worth with extrinsic goals and external indicators of worth. In this case economic growth leads to alienation and reductions in human need satisfaction. The case of consumerism illustrates that understanding adaptive phenomena and the effects of cultural institutions on need satisfaction is a key for designing economic policies and establishing institutional structures that facilitate welfare.

Self-determination theory provides a model of behaviour and a concept of agency which, if integrated, enables economics to deal with institutional structures and cultural change. Self-determination theory thus is able to substantially contribute to a consistent theoretical framework of heterodox economics. Drawing on the wide range of empirical tools available in the literature of self-determination theory, it has the potential to yield a welfare indicator which solves the problems of the adaptive phenomena found in alternatives to GDP. Contributing to the debate about the relation between psychology and economics, we hope to initiate a fruitful exchange.

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Multilevel Governance and Development
Wirtschaftsuniversität Wien
Institutsvorstand : ao.Univ.Prof. Dr. Andreas Novy
Welthandelsplatz 1
A-1020 Wien, Austria
Tel.: +43-1-31336/4777 Fax: +43-1-31336/705 E-Mail: mgd@wu.ac.at
<http://www.wu.ac.at/mgd>