Economic Studies in Inequality, Social Exclusion and Well-Being
Series Editor: Jacques Silber

P. K. Pattanaik Yongsheng Xu

Multidimensional Well-Being, Deprivation and Inequality

Conceptual Issues and Measurement



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Series Editor

Jacques Silber, Ramat Gan, Israel

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Multidimensional Well-Being, Deprivation and Inequality

Conceptual Issues and Measurement



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Preface

The literature on multidimensional well-being, deprivation, and inequality has grown rapidly over the last few decades and is now vast and rich. In this volume, we have explored only a few conspicuous strands of this large literature.

It is our pleasant duty to acknowledge our debt to many colleagues and co-authors. Our immense intellectual debt to the foundational contributions of Amartya Sen and Martha Nussbaum on multidimensional well-being and deprivation will be obvious to readers of this volume. For helpful and stimulating conversation over the years, we are also grateful to Sabina Alkire, Taradas Bandyopadhyay, Kaushik Basu, Achin Chakraborty, Steve Cullenberg, Shatakshee Dhongde, Indranil Dutta, James Foster, Wulf Gaertner, Reiko Gotoh, Keith Griffin, Azizur Rahman Khan, Urmee Khan, Yi Li, Steve Marglin, Clemens Puppe, Sanjay Reddy, Jacques Silber, Robert Sugden, the late Kotaro Suzumura, Koichi Tadenuma, Martin van Hees, and Naoki Yoshihara.

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Riverside, CA, USA Atlanta, GA, USA P. K. Pattanaik Yongsheng Xu

Contents

| 1 | Intro | oduction | 1 | |
|----|--|--|----|--|
| Pa | rt I 7 | The Basic Analytical Framework | | |
| 2 | Con | ceptions of Individual Well-Being | 7 | |
| | 2.1 | Introduction | 7 | |
| | 2.2 | The Utility-Based Conception of Individual | | |
| | | Well-Being | 7 | |
| | 2.3 | The Functioning and Capability Approach | 11 | |
| | 2.4 | Evaluation of Individual Well-Being and Value | | |
| | | Judgments | 14 | |
| 3 | Valuation of Functioning Bundles and Interpersonal Comparisons | | | |
| | | Vell-Being | 17 | |
| | 3.1 | The Source of Values for Assessing an Individual's | | |
| | | Well-Being and Comparing the Well-Being of Different | | |
| | | Individuals | 17 | |
| | 3.2 | Minimal Relativism, Continuity, and Dominance: | | |
| | | An Impasse | 25 | |
| | 3.3 | Comparison of Well-Being Differences | 31 | |
| | 3.4 | Top-Bottom Dominance and the Possibility of Making | | |
| | | Interpersonal Comparisons of Well-Being | 33 | |
| | 3.5 | The Proofs | 38 | |
| 4 | Freedom and Individual Well-Being | | | |
| | 4.1 | Introduction | 43 | |
| | 4.2 | Measuring Freedom: The Number of Available Options | 46 | |
| | 4.3 | The Value of Freedom | 49 | |
| | 4.4 | Minimal Relativism, Continuity, Dominance, and the Assessment of Individual Freedom: An Impossibility Result | 54 | |

viii Contents

| | 4.5 | Assessment of Individual Well-Being When an Individual's Well-Being Depends on Her Achieved Functioning Bundle as well as her Opportunity Set | 60 |
|-----|------------|---|-------------------|
| | 4.6 | The Possibility of Making Interpersonal Comparisons of Freedom and Freedom Differences (resp. Well-Being and Well-Being Differences) Between Very Well-Off and Very Badly-Off Individuals | 62 |
| | 4.7 | Proofs | 66 |
| 5 | | dom: A Reexamination of the Concept | 75 |
| | 5.1 | Competitive Equilibrium and the Consumers' Freedom | 70 |
| | 5.2 | to Choose Functioning Bundles | 76 70 |
| | 5.3 | with Other Individuals | 79 |
| | | Set in the Framework of Game Theory | 80 |
| | 5.4 | Concluding Remarks | 85 |
| Pai | rt II | Some Applications | |
| 6 | Mea | surement of Individual and Social Well-Being | 89 |
| | 6.1 | Preliminaries | 90 |
| | 6.2 | Individual Well-Being Functions | 91 |
| | | 6.2.1 The Individual Well-Being Function When Each Attribute | |
| | | Can Take Only Finite and Discrete Values | 92 |
| | | 6.2.2 The Individual Well-Being Function When All Attributes Are Cardinally Measurable | 94 |
| | 6.3 | Complementarity and Substitutability of Attributes | 94 97 |
| | 6.4 | Social Well-Being Measure | 104 |
| | 6.5 | The Social Well-Being Measure and Interpersonal Comparisons | 101 |
| | | of Individual Well-Being | 107 |
| | 6.6 | Proofs | 110 |
| 7 | Mea | surement of Deprivation | 115 |
| | 7.1 | An Approach to Measuring Multidimensional | |
| | | Deprivation | 115 |
| | 7 7 | The Conventional Approach to Measuring Multidimensional | |
| | 7.2 | 11 | 100 |
| | | Deprivation | 120 |
| | 7.3 7.4 | 11 | 120 122 127 |

Contents ix

| 8 | The "Column-First" Approach to the Measurement | | |
|-----|--|--|-----|
| | of So | cial Well-Being and Deprivation | 131 |
| | 8.1 | Row-First and Column-First Approaches to the Measurement | |
| | | of Social Well-Being | 131 |
| | 8.2 | Does It Matter Whether We Use the Row-First Approach | |
| | | or the Column-First Approach? | 134 |
| | 8.3 | The Column-First Approach: Full Versus Half-Way? | 139 |
| | 8.4 | Row-First and Column-First Approaches to the Measurement | |
| | | of Social Deprivation | 139 |
| | 8.5 | Proofs | 142 |
| 9 | Well | Being Inequality | 153 |
| | 9.1 | A Two-Step Approach to Measuring Multidimensional | |
| | | Well-Being Inequality | 153 |
| | 9.2 | Other Approaches to Measuring Multidimensional | |
| | | Well-Being Inequality | 155 |
| | | 9.2.1 Uniform Majorization | 155 |
| | | 9.2.2 Correlation Increasing Majorization | 158 |
| | 9.3 | Dimensional Inequalities and Well-Being Inequality | 159 |
| | 9.4 | Proof | 161 |
| 10 | Concluding Remarks | | 163 |
| | 10.1 | The Contribution of the FCA to Welfare Economics | 163 |
| | 10.2 | Diversity of Values in a Society and Interpersonal | |
| | | Comparisons of Individual Well-Being | 164 |
| | 10.3 | The Freedom of Individuals and the FCA | 167 |
| | 10.4 | Applications | 167 |
| Bih | liogra | phy | 169 |
| | | • | |
| Ind | ex | | 177 |

Chapter 1 Introduction



The conception of an individual's well-being as the individual's desire satisfaction or happiness has been central for much of normative economics, which deals with problems of social welfare judgments and social choice. However, following the path-breaking contributions of Sen (1985, 1987) and Nussbaum (1988, 2000), a large and rapidly expanding literature has developed over the last few decades using an alternative concept of individual well-being, which visualizes an individual's well-being as the value attached to the individual's achievements along certain valued dimensions of her life and the individual's freedom to choose from a set of vectors of achievements along those dimensions. Reservations about the notion of an individual's well-being as her happiness or desire fulfillment are at least as old as the discourses of the Buddha¹ and the writings of Aristotle. But, in Sen (1985, 1987), we encounter a systematic effort to develop an alternative analytical framework that can be used by social scientists to assess the well-being of individuals as the first step toward forming social welfare judgments. Using the terms, "functioning" and "capability," of Sen (1985, 1987), we shall call this alternative approach to the concept of individual well-being the functioning and capability approach (FCA).

The FCA radically departs from the conventional approach to the concept of individual well-being in welfare economics insofar as it identifies an individual's well-being as the value attached to the individual's achievements along certain dimensions of life (e.g., health, education, protection from the elements,

¹ For instance, in the Sakkapanha Sutta, the Buddha distinguishes "two kinds of happiness: the kind to be pursued and the kind to be avoided", the former kind being the type of happiness the pursuit of which leads to decrease in "unwholesome factors" and increase in "wholesome factors" and the latter kind being the type of happiness the pursuit of which leads to increase in unwholesome factors and decrease in wholesome factors (see Walshe (1995, p. 329)). The Sammāditti Sutta and Sāleyyaka Sutta explain the Buddhist notions of "wholesome" and "unwholesome" (see \widetilde{Nan} and Bodhi (2005, pp. 132-133 and pp. 382-383)).

²See Chap. ² below for explanation of these terms.

2 1 Introduction

nourishment, participation in the community's life, etc.), and her freedom to choose a vector of such achievements rather than as the individual's happiness or desire fulfillment. This avoids some of the problems with the conception of individual wellbeing as happiness or desire satisfaction. At the same time, it also raises a number of analytical as well as practical issues. The purpose of this volume is to explore in some detail a few of these issues. There are two distinct parts in the volume. The first part, consisting of Chaps. 2 through 5, deals with some basic conceptual problems while the second part, consisting of Chaps. 6 through 9, discusses some important applications of the FCA.

Chapter 2 starts with a brief review of the difficulties with the conception of an individual's well-being as her happiness or her desire fulfillment. It also outlines some of the basic features of the FCA. Chapter 3 is concerned with the source of the values that are to serve as the basis of the evaluation of individual well-being in the FCA approach. In this context, we discuss a dilemma. It turns out that, if the evaluator of individual well-being seeks to accommodate in her evaluation, even in a minimal fashion, the differences in the values of individuals or groups of individuals, then her evaluation cannot satisfy simultaneously some very plausible requirements including a very mild dominance-based criterion, suggested by Sen (1987, pp. 29–30), for interpersonal well-being comparisons in the FCA. In Chap. 3, we also discuss the possibility of avoiding this impasse by weakening Sen's dominance-based criterion for interpersonal comparisons of well-being.

Chapters 4 and 5 are concerned with the role of individual freedom in the FCA approach to individual well-being. Along with the actually realized vector of an individual's achievement along the valued dimensions of her life, the individual's freedom to choose her achievement vector from the set of all achievement vectors, which are feasible for her, also plays an important role in the evaluation of the individual's well-being in the version of the FCA where individual well-being is viewed as the value attached to the pair of the individual's achieved functioning bundle and her freedom to choose such achieved functioning bundle. In fact, this is an important innovative feature of the FCA, which does not have any counterpart in conventional welfare economics. Taking this formulation of an individual's freedom as given, Chap. 4 first discusses the problem of evaluating an individual's freedom and proves a counterpart of the negative results in Chap. 3: the chapter shows that, if the evaluator of the freedom of individuals seeks to accommodate, even in a very moderate fashion, the differences in the individuals' values, then she will run into problems with some compelling criteria for interpersonal freedom comparisons. These negative results are then extended to the problem of evaluating an individual's well-being when individual well-being is dependent on the individual's achieved functioning bundle as well as her freedom to choose the achieved functioning bundle. Chapter 4 also discusses the possibility of making interpersonal comparisons of freedom and of well-being based on weaker criteria for making such comparisons while accommodating individuals' own evaluations of their freedom and of their well-being. Chapter 5 argues that the problem with the evaluation of individual freedom in the FCA goes even deeper: the conception of an individual's freedom as the freedom to choose any member of a set of feasible vectors of achievements is 1 Introduction 3

unrealistic in our world where much of the time the vector of an individual's achievements is jointly determined by other individuals' actions and the individual's own action.

The second part of this volume, consisting of Chaps, 6 through 9, is more directly concerned with applications of the FCA to practical problems of measuring individual and social well-being, deprivation and inequality in societies, and also the difficulty that arises when joint distribution for the relevant attributes is not available. In Chap. 6, we provide axiomatic analysis of a class of individual well-being functions and a class of social well-being functions. We also discuss the issue of two dimensions being substitutes and complements to see how the dimensions interact in the exercise of measuring individual well-being. Chapter 7 discusses the problem of measuring deprivation in the society. We argue for an analytical framework for measuring individual and social deprivation, which visualizes an individual's deprivation directly as the individual's well-being being "too low." We compare this alternative framework with the framework that is currently used very widely to measure deprivation in a society. Chapter 8 deals with a practical problem, which frequently arises in applied work because of incompleteness of available data. Often we have the separate distribution of each attribute over the population but not the joint distribution of all the relevant attributes over the population. In the absence of the joint distribution for all the attributes, it is not possible to follow the intuitively plausible procedure for assessing social well-being by first assessing the well-being of each individual and then aggregating the well-being of all individuals to reach the index of social well-being. In such cases, it is tempting to measure the society's wellbeing by first aggregating the achievements of individuals in terms of each separate attribute so as to measure the society's achievement in terms of each attribute separately and then to aggregate the society's achievements in terms of the different attributes to reach an assessment of the society's well-being. Chapter 8 highlights the intuitive difficulties involved in this procedure. Chapter 9 deals with the problem of measuring inequality in the FCA and introduces a two-step approach to the measurement of well-being inequality.

Chapter 10 brings together and comments on some broad themes dealt with in the preceding chapters, namely the contributions of the FCA to welfare economics, diversity of values in a society and its impact on interpersonal comparisons of individual well-being, the conception of individual freedom in the FCA, and some important assumptions made in our discussion of applications of the FCA in Part II.

Part I The Basic Analytical Framework

Chapter 2 Conceptions of Individual Well-Being



2.1 Introduction

The well-being of individuals in a society is a basic consideration on which the members of the society base their judgments about the society's welfare corresponding to different social states. In a democratic society, the individuals' social welfare judgments, in their turn, influence how they will vote when the society makes its choice from a set of available social states or social policies. Therefore, the exact intuitive content of the notion of individual well-being is of fundamental importance to anybody interested in normative issues relating to the basis of social welfare judgments of individuals and social decision procedures. In this chapter, we discuss some basic features of the notion of individual well-being as it is formulated in the FCA. To put this discussion in perspective, we start by briefly outlining in Sect. 2.2 the utility-based concept of individual well-being that has dominated much of traditional welfare economics. In Sect. 2.3, we present some objections that have been raised against the utility-based conception of individual well-being. Finally, we present a brief outline of the alternative conception of individual well-being in the FCA, which constitutes the subject of this book.

2.2 The Utility-Based Conception of Individual Well-Being

In much of conventional welfare economics, a person's well-being is typically taken to be her "utility." While utility has been always thought of in subjective terms, the substantive content of the term has shifted since the time of Bentham (1748–1832), who gave us one of the earliest definitions of the term. Bentham often talked about utility in the sense of pleasure and the absence of pain, but it is worth noting that Bentham tended to treat the terms "pleasure," "benefit," "advantage," and

"happiness" as synonyms. As Bentham (1789) wrote, "By utility is meant that property in any object, whereby it tends to produce benefit, advantage, pleasure, good, or happiness (all this in the present case comes to the same thing) or (what comes again to the same thing) to prevent the happening of mischief, pain, evil, or unhappiness to the party whose interest is considered: if that party be the community in general, then the happiness of the community: if a particular individual, then the happiness of that individual." Such free transition, to and fro, between the terms "pleasure" and "happiness" continues to some extent in J. S. Mill (1861), but, simultaneously, Mill also attempts to distinguish happiness from a continuous state of "highly pleasurable excitement" (see Mill 1861, pp. 263–264). For Mill, happiness is "not a life of rapture; but moments of such, in an existence made up of few and transitory pains, many and various pleasures, with a decided predominance of the active over the passive, and having as the foundation of the whole, not to expect more from life than it is capable of bestowing" (Mill 1861, p. 264). Thus, for Mill, a happy life consists of a more complex and sustainable subjective state than a series of continuous pleasures, and he identifies utility with happiness in this sense. Very few scholars would now identify an individual's well-being with her pleasure and absence of pain. The interpretation of well-being as happiness, however, is taken more seriously than the interpretation of well-being as pleasure and absence of pain, especially if happiness is taken to mean satisfaction with one's life.

There is yet another important "utility"-based conception of well-being, where an individual's utility is thought of in terms of the satisfaction of her preferences; this is the interpretation of utility that is dominant in modern microeconomic theory, especially in welfare economics. To talk about preference satisfaction, we need a set of options/ objects / states of affairs over which preferences are defined. It is true that, in our ordinary language, we sometimes talk about an individual preferring a state of affairs x, without mentioning any other object y such that the individual prefers x to y. But even when we use the term preference in this way and say that an individual prefers x without explicitly mentioning any option(s) other than x, it is often implied that, other things remaining the same, the individual prefers having x to not having x (thus, not having x is really the option competing with x). If an individual prefers an option x to another option y, then, in welfare economics, it is typically assumed that the realization of x will promote the individual's well-being to a greater extent than the realization of y. While the conception of an individual's well-being as the satisfaction of the individual's preferences is widely accepted in welfare economics, the literature also points to various limitations of this conception. It may be useful to briefly consider here a few of these limitations.

(i) Suppose individual *i* prefers option *x* to option *y*, but her preferences are based on inadequate or outright wrong factual information about the options. Then it is not clear why we should necessarily accept that *x* will offer *i* higher well-being than *y* despite the fact that *i* may herself believes so. Thus, consumers in rich countries spend billions of dollars on dietary supplements of various types, many of which, according to medical experts, have little health benefits. It is also well-known that consumers often buy financial products (e.g., annuities,

reverse mortgages) without full awareness of the various complicated rules and pitfalls associated with these products. In general, as many products sold in the market become increasingly complex, consumers of those products fail to keep up with the rapidly expanding volume of information required to make an informed decision about the purchase of such products. Clearly, in such cases, the link between the satisfaction of the consumer's preferences and her well-being becomes rather tenuous.

- (ii) Suppose an individual is considering whether she should go in for higher education after graduating from high school. Her preferences with respect to university education are likely to be different depending on whether we consider her preferences before or after higher education. In this case, which of these two different preferences should we take as an indicator of her wellbeing?¹ There is no easy answer to this question.
- (iii) Some individuals have malicious and antisocial preferences. It is difficult to accept that the satisfaction of their preferences increases their well-being. Also, an individual's preferences may be based on ethical considerations, which have very little to do with the individual's beliefs about her own well-being. If a person has a strong preference to stop the killing of whales because of her ethical belief that whales have the right to survive, such preference may have little to do with the person's belief about what promotes her own well-being.²
- (iv) A multiplicity of conflicting preference orderings may be embedded in the psyche of the same individual; one of these preference orderings may come to the surface in one context while, in another context, a different preference ordering may take over and guide her choice of an option. Thus, when considering her life style in a reflective fashion, the individual may firmly believe that regular exercise will contribute to her health and increase her well-being. But, when the time for exercise comes, the individual may habitually suffer from weakness of the will and prefer to watch television programs instead. In this case, it is difficult to accept that the individual's preference for watching television over exercising reflects her belief about what promotes her well-being.
- (v) Convinced that some of the things in life, which most people aspire for, are beyond their reach because of the way the social, economic, and political institutions are organized, people of some chronically disadvantaged groups (e.g., lower castes in India, racial minorities in some developed economies, and women in many countries) often choose to modify their own aspirations: rather than having high aspirations and living a life of continuous disappointments, they consciously or subconsciously choose to curtail their aspirations and

¹See Hahn (1982) for a discussion of this problem.

²This is not to deny that, if a person has empathy for whales, then the killing of whales may adversely affect her well-being. What we are considering in our example is the case of a person whose preference against the killing of whales is exclusively based on her position that killing of whales is ethically wrong.

change their preferences to avoid such disappointment. In such cases, the satisfaction of the individuals' modified preferences can hardly be taken seriously as a reliable indicator of their well-being. Goodwin (1995, p. 15) describes the problem succinctly when he writes, "If you cannot get what you want you should simply revise your preferences so that you will want what you can easily get . . . few of us would find the satisfaction of preferences chosen on that basis alone all that satisfying" (see also Sen (1985, p. 15; 1987, p. 11) whose criticism of the preference-satisfaction approach to the notion of well-being attaches much importance to this argument).

Faced with such problems, some scholars have suggested a distinction between the actual preferences of an individual and the individual's preferences as they would be under ideal conditions. Thus, Harsanyi (Erkenntnis, 1977a), writes, "It is wellknown that a person's preferences may be distorted by factual errors, ignorance, careless thinking, rash judgment, or strong emotions hindering rational choice, etc. Therefore, we may distinguish between a person's explicit preferences, i.e., his preferences as they actually are ... and his 'true' preferences, i.e., his preferences as they would be under 'ideal conditions'." Elsewhere, Harsanyi (Social Research, 1977b) suggests that "all clearly antisocial preferences, such as sadism, envy, resentment, and malice" should also be excluded. Thus, while accepting many of the criticisms of the conception of an individual's well-being as the satisfaction of her preferences, Harsanyi suggests that one way of resolving those difficulties may be to purge the actual preferences of the individual of the various "distortions" so as to arrive at the individual's "true" preferences or her preferences as they would be under "ideal conditions" characterized by the absence of those distortions. For example, if the lack of information about options is the source of the distortion, we would have to consider what the individual's preferences would be under complete information. Similarly, if an individual's preferences are influenced, at least partly, by her ethical values and commitments, we need to find out what her preferences would be if the individual was guided solely by considerations of her personal well-being. While such purification of the individual's actual preferences may seem attractive in some ways, it presents formidable challenges in practice. An individual's preferences over the options under consideration are the result of numerous, and sometimes conflicting, considerations as well as her beliefs about the options, which in turn depend on the information available to her about those options and the accuracy of such information. Even the individual herself may find it difficult to say what her preferences would be if she had additional information about the options or if her preferences were purged of ethical judgments and malicious content.

Critics have also found flaws with the conception of an individual's well-being as her happiness. Sen (1987, Chap. III) argues that both the preference-satisfaction approach and the happiness approach to the notion of individual well-being suffer

³See Elster (1983).

from similar problems. Both approaches focus exclusively on an individual's mental states (satisfaction of preferences or happiness). In the process, both approaches ignore the intrinsic importance of the physical aspects of a person's life, such as the state of the person's health, adequacy of the amount of nourishment available to her, and the amount of leisure that she enjoys. It is true that people usually prefer to have better physical conditions in their lives and are happier when these conditions improve. But this, by itself, does not quite meet Sen's criticism. What Sen is claiming is that the value of improving the physical circumstances of the person's life goes beyond the extra happiness or extra preference satisfaction that it may bring to an individual. In arguing this, Sen relies heavily on the phenomenon of "selfcurtailed desires" that we have mentioned earlier. A person may be moderately contented despite deep physical deprivations because, to avoid disappointments, she has taught herself not to desire anything better in her life. But, in such cases, we would hesitate to say that the person has a reasonable level of well-being. Sen would claim that, in judging the well-being of a person, the relevance of the physical conditions in the person's life goes beyond how these conditions affect her happiness or preference satisfaction.

2.3 The Functioning and Capability Approach

In the happiness-based conception of individual well-being as well as in the preference-based conception, one is concerned with a "subjective attitude" or "mental state," which provides a single exclusive indicator of the individual's well-being. In contrast, the functioning and capability approach concentrates on: (i) the dimensions/ aspects of people's lives to which they attach intrinsic value for self-oriented reasons and (ii) the relative importance attached to these dimensions in evaluating the overall well-being of the individual. Note that in the previous sentence, when referring to the aspects of life that people value, we introduced two qualifications, namely that people should be valuing these aspects for their intrinsic worth and that they should be valuing them for self-oriented reasons. Consider the former qualification. In our ordinary language, we can say that people value having cars, but, typically, having a car is not valuable for its own sake. We value having a car because a car allows us to do certain things, namely to move from one place to another to participate in recreational activities, visit friends and family, and access healthcare facilities. Similarly, we value food because it provides us nourishment. Thus, being well-nourished, interaction with family and friends, being healthy, etc., are all attributes, which have intrinsic value for people, and the FCA would consider them to be different dimensions of their well-being. Being happy is also an attribute to which people attach intrinsic value and is a dimension of their well-being, but it is not the only dimension of well-being in the FCA. The FCA starts by considering all aspects of life, which are of intrinsic value to people, and considers them to be dimensions of an individual's well-being. As Sen (1985, 1987) puts it, "functionings," i.e., the "doings" and "beings," which people value, are the dimensions of an