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RESEARCH NOTE

THE NATURE OF INDIVIDUAL PREFERENCES: A PROLOGUE TO JOHANNESSON, JONSSON AND KARLSSON

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In their recent Guest Editorial in this journal, Johannesson *et al.*[1] provide descriptions of the different types of outcome measure that *can* be used in economic evaluation and recommendations about which measures *should* be used. Their central argument in the normative sections of the paper appears to be that the chosen outcome measure should reflect individual preferences, which they note is 'in accord with the individualistic foundations of welfare economics' (p. 282).

For example, the authors discuss the assumptions that are necessary for life years gained to be viewed 'as a valid cardinal utility function that will rank treatments according to individual preferences' (p. 281) and suggest that the problems associated with using composite scores derived directly from quality of life instruments are that they 'may not even rank health states according to individual preferences' (p. 281). The entire discussion of the QALY-HYE debate is focused around the extent to which these measures can be assumed to be valid representations of individual preferences and the lengthy discussion of the contingent valuation (CV) method is principally to alert researchers to the 'best practices' in eliciting willingness-to-pay (WTP) responses.

It is somewhat surprising, therefore, that Johannesson *et al.*[1] do not consider the nature of the individual preferences that they wish to judge the various outcome measures by. It is important to do so however, particularly as the recommendations on how to proceed with the measurement of health outcomes, which is clearly a central part of the paper (for example, see pp. 288 and 293), will to a large extent depend on which how individual preferences are viewed and which paradigm is adopted.

The received wisdom amongst economists has been that individuals have clear, well-defined preference functions which can be 'tapped into' by appropriate questions: in the words of Fischhoff,[2] 'if we've got questions, then they've got answers.' This is referred to by Fischhoff as the philosophy of articulated values. An implication of this viewpoint is that if a particular respondent's answers are different on two separate occasions, then implicitly the questions must have been different. Proponents of this paradigm focus on ensuring that questions are formulated and understood as intended, arguing that any 'slip' could invoke a precise, thoughtful answer to a 'wrong' question.

In their recommendations for outcome measurement in cost-utility analysis (CUA), Johannesson *et al.*[1] argue that it is 'important to continue the work on testing to what extent QALYs are consistent with individual preferences' (p. 288). This statement, and indeed the whole discussion in this section, implies that individual's possess a unique set of (consistent) preferences over health outcomes. However, if such preferences are either shaped by the elicitation procedure or simply ill-defined, it is plausible that a *valuation* task (as involved in the calculation of QALYs) may imply a different ranking of alternatives than that revealed from a direct *choice* task (which is how Johannesson *et al.*[1] judge the validity of the valuation methods used in CUA). The preference

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reversal phenomenon observed in the domain of monetary gambles is the most obvious (and certainly most contested) example of this possibility.[3, 4]

The philosophy of articulated values has been called into question in the domain of outcome measurement by many studies which have shown that seemingly subtle changes in problem structure, question format or other aspects of the assessment process can sometimes dramatically change the stated preferences of respondents.[5–7] Such findings can be accounted for by an alternative paradigm — the philosophy of basic values- — which asserts that people cannot be expected to have articulated opinions on more than a small set of issues (of which health is unlikely to be one) with which they are very familiar. Thus, if responses are affected by 'framing effects,' then respondents must not have 'true' underlying preferences; rather, the elicitation procedures are major forces in *shaping* preferences.

Between these two alternative paradigms lies the philosophy of intermediate values, which asserts that preferences (particularly over things like health) do not come as fully fledged and instantly accessible as economists have typically believed, and that elicitation procedures can *help* to shape preferences. However, proponents of this paradigm would argue that after deliberation and reflection, respondents are able to give answers to questions that enable something (but by no means everything) to be inferred about their underlying preferences. Such a perspective would view apparent inconsistencies in individual preferences as representing derivatives from a set of basic values. Increasingly, economists, typically those who involved in preference elicitation, are thinking about preferences in this way.

In their discussion of the use of CV questions, Johannesson *et al.*[1] devote more attention to the problems of 'framing effects' than they do in their discussion of outcome measures in CUA. In so doing, they alert researchers to some of the methodological problems associated with eliciting CV responses, e.g. the 'embedding' effect (see p. 291). In recommending that WTP responses be elicited using a binary as opposed to an open-ended approach (see p. 292), the authors are now explicitly recognizing that question formulation can have a significant effect on a respondent's stated valuation.

If a paradigm similar to the philosophy of intermediate values is accepted, an important implication for future research into the valuation of health outcomes is that much more intensive interviewing and discussion is required. In order that we can have greater confidence in the answers that respondents give, this is likely to involve more than one interview, possibly including a pre-interview focus group meeting in which respondents discuss issues relating to health and illness and a post-interview feedback meeting in which respondents have the opportunity to revise their responses. Whatever their precise protocols, future studies should allow respondents more time for the deliberation and reflection alluded to above, including the opportunity to review any apparent inconsistencies in their responses.

This process would, of course, be relatively resource intensive per respondent and therefore would mean smaller sample sizes than many economists, brought up in a tradition of 'hard' quantitative data, might consider desirable. But other economists, particularly those 'exposed' to other disciplines such as psychology, are becoming increasingly aware of the insights that supposedly 'soft' qualitative data can provide. In future research, attempts must be made to establish the cognitive processes that respondents use to arrive at their responses, i.e. to get a better understanding of *why* valuations differ in addition to *how* they differ.

In addition, it is now widely recognized that the specific *context* of a particular choice can have an significant effect on a respondent's stated preference. For example, particular patterns of responses have been explained in terms of perceived reference points.[8] Of course, such an effect has no place in standard economic theory, which is built around an expected utility (EU) framework. The only considerations that yield utility in such a framework are the *outcomes* resulting from the particular choice, thus ruling out any utility associated with the *process* of that choice. However, a number of alternatives to EU have been proposed by economists which allow for the context of the choice to play a role in determining the overall level of utility. Qualitative data can help shed light on which choice contexts are, at a descriptive level, considered relevant and which are not; and, as noted by Froberg and Kane,[9] 'to predict new context effects we need to better understand the psychological processes inherent in decision making.'

This note is not intended as a criticism of Johannesson *et al.*'s paper,[1] since their recom-

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mendation that when evaluating measures of health outcome researchers should consider the extent to which they reflect individual preferences would attract few dissenting voices amongst economists. However, against this background, it seems reasonable first to consider the nature of these individual preferences, and in particular the extent to which they conform to the economist's philosophy of articulated values. On the assumption that preferences, particularly regarding health, do not come as well defined as economists have traditionally assumed, future research into outcome measurement should look more closely at the ways in which preferences are constructed. This research agenda is applicable to those interested in measuring preferences over health using any of the available elicitation techniques.

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