Property Rights, Choice and Contingent Valuation *

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I

A desire for expedient decision-making, often under the auspicies of Cost-Benefit Analysis, has popularised applications of Contingent Valuation for estimating the monetary value of numerous non-market goods and bads. While enjoying an extended period of application, notably over the last decade, Contingent Valuation would appear to have come under the scrutiny of a particularly critical audience. In this paper, I want to explore several dimensions of neoclassical choice theory, which might assist in offering some explanation for difficulties that arise in Contingent Valuation, particularly on matters of the environment. In the case of environmental goods, it is likely that respondents to a contingent valuation exercise will: (i) have a preconcieved view of what should be the structure of property rights, which may or may not conicide with that structure of property rights implied by questions of willingness to pay and willingness to accept compensation; (ii) act according to a self-imposed ethical or moral code which will not confrom to the usual conceptualisations of choice behaviour in neoclassical choice theory. To provide for a realisitc contingent valuation of environmental goods, we require some ex ante knowlegde of the institutional structure of property rights and a more thorough understanding of the conceptual dimensions of respondent choice behaviour.

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II

A very brief sketch of the market economy reveals a formal institutional structure of ex ante entitlements or property rights and duties, held by individuals or groups of individuals in society. And it is these formal institutional structures within which choice situations are normally fromulated. However, that such a structure of rights may be absent, ill-defined or contentious, in the case of what I will refer to as 'environmental goods', will complicate what may at first appear to be a relatively straight forward formulation of a choice situation. Consider the debates raging over the production of whales. While there is a range of views on what people believe should be the outcome of recurrent negotiations, two opposing factions emerge. First, there are those in society who seek a ban on whaling production; no whaling whatsoever is to be undertaken - conservationists. Secondly, there are those who seek a no-ban on whaling production; whaling and at various levels of exploitation - whalers. The right to whales are essentially up for grabs. The whalers seeking rights to whale production and the conservationists seeking rights to conservation. In the absence of the formal institutional structures underpinning the market, it would appear that both groups have a legitimate, albeit conflicting claim to rights to whales.

Bromley (1989) conveniently adds some much needed theoretical weight to the institutional structures that we might expect will underpin environmental goods, with discussions of *non-property regimes*. According to Bromley, there will be no defined group of users or owners, benefits will be open to anyone, and there will be both privilege and *no right* to use and maintenance of the asset or environmental good. A logical extension of Bromley's formulation, would seem to imply that within a given society and for any number of environmental goods, members will have quite a legitimate claim to rights to these goods. That is, under a non-property or non-rights scenario, everyone - to introduce a variation on the Bromley theme - will have both privilege and *right* to the use and maintenance of the environmental good; and there will be a plurality of views on what people believe should be the structure of rights to environmental goods. Choice situations will not simply adhere to the formal structures normally associated with the market economy, but will more likely conform to a set of informal structures, comprising quite specific choice situations. Of course, such choice situations will also be observable within the market economy, notably where there is debate over the legitimacy of the status quo structure of rights. Indigenous land claims, for example, question the legitimacy of the status quo and contest those whose rights are defined by the formal structures of the market. This aside, however, the point I wish to make here, is that a failure to recognise the

presence of what emerges as a plurality of views on what should be the structure of rights to environment goods, inevitably leaves Contingent Valuation playing a rather tenuous role in environmental valuation.

To elaborate, let's return to the issue of commercial whale production that I introduced earlier. Imagine that we implement a Contingent Valuation to assist with the determination of society's total economic value of whales. At the outset, we are confronted with four possible options. These are illustrated in table 1: option I - individuals are asked their willingness to pay (WTP) for a ban (B) on whale production; option II - individuals are asked their WTP for a no-ban (NB) on whale production; option III - individuals are asked their willingness to accept (WTA) compensation for B; option IV - individuals are asked their WTA compensation for NB.

	WTP	WTA
B	*I*	*III*
NB	*II*	*IV*

Table 1

Now, let's consider the outcomes that might be observed with the implementation of options I and II. Remember that in option I, we want to know how much people will be willing to pay to buy rights to ban whale production. It is quite likely that conservationists (C), concerned with the threat of extinction, will express a willingness to pay to buy the rights to a ban. On the other hand, whalers (W), for whom the offer to buy rights to a ban conflicts with what they believe ought to be the structure of rights, namely a no-ban scenario, refuse to pay any amount, reasoning that the offer to buy a ban, actually represents a loss. The implementation of option II, will of course have the opposite effect. Here, we want to know how much people will be willing to pay to buy the rights not to ban whale production. Again, it is likely that conservationists will act in much the way as did the whalers in option I, refusing to pay any amount, reasoning that the offer to buy a no ban, actually represents a loss. And of course, we can expect whalers, for whom a no-ban represents a gain, to be quite willing to pay to buy rights to the no-ban.

Importantly then, in the absence of an explicit ex ante rights structure, Contingent Valuation makes an implicit assignment of rights which inevitably determine the direction of peoples WTP. In the above example, we can observe two logically separate structures of rights: (i) asking people about their WTP for rights to a ban, implicitly assigns rights in favour of whalers and the burden is placed upon conservationists to buy the rights and whalers to accept this implied structure of rights; and (ii) asking people about their WTP for rights to a no-ban, implicitly assigns rights in favour of conservationists and the burden is placed upon the whalers to buy the rights and conservationists to accept this implied structure of rights. In table 2, I have tentatively indicated the direction of the change, in terms of a gain or a loss, is represented by a *0* or + value. The WTP for a ban option effectively represents a gain from the initial no-ban position for the conservationist and a loss from this same position for the whaler. On the other hand, the WTP for a no-ban effectively represents a gain from the initial ban position for the whaler and a loss from this same position for the conservationist. Of course, that there is an implicit assignment of rights, while differing in terms of who gains and who loses, has the same conceptual structure in the case of a WTA compensation measure of value.

		C	W
WTP	B	+	*0*
	NB	*0*	+

Table 2

Thus, I want to tentatively propose that the actual value assigned to an environmental good will depend upon the structure of rights implied by measures of willingness to pay and willingness to accept compensation and what people believe should be the structure of rights. However, while this might initially appear to be rather straight forward, it is complicated further by the characteristics of peoples choice behaviour, notably in response to questions of willingness to pay and willingness to accept compensation in contingent valuation exercises. It is to this issue which I now wish to turn my attention.

III

Rational economic man is a rather notable, and surprisingly pervasive character in the neoclassical theory of choice. Not only is he capable of choosing various means to secure a set of desired ends and arranging these in orders of preferences, but he does so to maximise his own selfish interests. Of course, neoclassical economics is not much concerned with precisely what it is that he is maximising - ends are an exogenous component of choice - but it is certain that he is maximising. Robbins (1935), who was to relieve the classics of its strict normative properties, in search of so-called ascertainable facts, noted that whether economic subjects were egoists, pure altruists, pure sensualists, or what he thought more likely, some mixed bundles of these impulses, was not important. For Robbins, orders of preferences were simply a convenient way of exhibiting the actual characteristics of economic man. Economics displays this ordinal relationship in form of an indifference curve. For any two goods, A and B, we can demonstrate that economic man will be willing to give up some of A, for example, to gain more of B at the right price. And it is this trade-off depicted by an indifference curve, or more specifically, the locus of combinations of A and B, that make our economic man equally happy, or at least, indifferent between A and B.

To assume that people are willing and able to trade-off one good to gain more or less of another, based upon notions of indifference in choice, provides the foundations of what emerges as a rather limited framework for interpreting people's choice behaviour. To elaborate, let's reconsider our conservationist and whaler, introduced in the previous section. Confronted with the possibility of choosing between whale conservation and whale production, it would seem reasonable to believe that at the right price, the whaler might be willing to substitute, some whale production for some whale conservation. He may even do so at a cost, compensated by the good feeling he obtains from the knowledge that some whales will be protected for the enjoyment of others. That the whaler may be assumed to be acting altruistically, for example, presents little if any problem for notions of indifferent choice. However, lets now consider the behavioural characteristics of the conservationist. In this instance, the conservationist vigorously defends the protection of whales, believing that the slaughter of whales for human consumption is an abhorrent undertaking. She choses whale conservation not because of the unattractive price of any alternatives, but because she believes that the act of killing whales is ethically wrong, period. Whale production is simply not a substitute for conservation.

The introduction of ethical or moral dimensions in peoples choice behaviour, effectively takes us into the domain of lexicographic choice, where according to Lutz and Lux (1988), substitution takes on a relative dimension. The news that whales, for example, are valued by society, can be seen to conjure up two conceptually different images of the value of whales. The whaler has an image of processed quantities of whale meat, packaged and sold in tin cans in supermarkets, while the conservationist has an image of aesthetic beauty. Assuming that the picture of a whale on a tin can on a supermarket shelf will be a substitute for the conservationist, is quite unrealistic. While, the whaler may be willing to substitute some whale production for some conservation, in a conceptually different dimension, production and conservation are simply non-comparable. Although lexicographic choice has received relatively little attention in the mainstreams of neoclassical economic thought, Earl (1992) notes that a substantive literature has emerged over the last century (Drakopoulos, 1991). Moreso, there is some early evidence to suggest that lexicographic preference orderings may emerge in the contingent valuation of certain environmental goods.

In a recent experimental study, Boyce et al. (forthcoming) associated what emerged as a large number of infinite offers to sell a good, with notions of "moral responsibility". In this study, individuals where initially endowed with a Norfolk Island Pine and then asked to submit a maximum offer of $40 to give up personal possession of the tree. In an attempt to induce moral responsibility, half of the WTA sample were told that if they sold the tree back to the experimenter, then it would be killed. The authors noted that some people were so concerned in the WTA-kill condition that they submitted offers greater than $40 which ensured they would not sell their trees, and it was here that lexicographical preferences were observed. Although associated with notions of moral responsibility, it would appear that there is a need for a more detalied investigation of the motivational underpinnings of respondent choice behaviour. This would seem particularly pogniant, given what would appear to be a considerable number of contingent valuation studies, reporting abnormally high demands for compensation. To cite a single case, Rowe et al. (1980) study of the economic value of visibility, for example, noted that slightly over one-half of their sample of respondents required a large or infinite amount of compensation to permit pollution. A casual glance at the literature, however, reveals a large number of studies reporting similar findings, notably, it would seem, with environmental goods that have traditionally escaped the economists preoccupation with monetary valuations.

IV

In this paper, I have explored the institutional structure of property rights that might emerge in the contingent valuation of environmental goods and the conceptual dimensions of peoples choice behaviour. If we are to persist with the contingent valuation of environmental goods, and to do so with any amount of reasonable confidence, then there are several important tasks ahead of us. First, applications of Contingent Valuation, where the property right structure is ill-defined, contentious or absent, as is often the case with environmental goods and bads, requires very definite ex ante distributional judgements. While usually assumed to be beyond the domain of the economist, to ignore distributional issues of this nature, will almost certainly produce biased results from the contingent valuation of environmental goods. Secondly, that there will be instances where the contingent valuation of environmental goods, produces respondent behaviour that does not conform with the traditional conceptualisations of choice, would seem to present a more serious problem for Contingent Valuation. Quite how we might interpret protest bids or offers in reponse to questions of willingness to pay and willingness to accept compensation, is not obvious. As a first step, at least, I think we require a better understanding of the components that comprise choice situations, when people are confronted with trading-off environmental goods and bads. That we might not obtain this from the methodological tool kit of the economist, would seem to leave considerable room for implementing our skills of communication and introspection.

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