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# What is the Value of Rangitoto Island?

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**ABSTRACT:** Contingent Valuation has been promoted as a catch-all approach to environmental valuation. While there have been numerous attempts in recent years to place monetary values on environmental amenities, studies have often reported a high frequency of protest, zero or inordinately large dollar-value responses. This paper reports on the results of a survey designed to obtain information on how people actually interpret questions of paying to avoid changes in their views of Rangitoto Island. Evidence suggests that the meaning respondents attach to the actual dollar values they offer or bid are inconsistent with the conventional logic that underlies Contingent Valuation. Instead, respondents might be seen to be expressing views about how things ought to be in society, and that it is simply not right to develop Rangitoto Island.

**KEYWORDS:**

## INTRODUCTION

Much attention has been given in recent years to the question of valuing environmental amenities. In particular, there have been numerous attempts to place money values on environmental amenities, in order to 'take them into account' in a quantitative cost-benefit type of analysis, or to place money values on the 'intangible' and non-quantifiable aspects of the environment. For this purpose, Contingent Valuation (CV) has been promoted as a catch-all approach to environmental valuation. However, even the most sincere attempts by CV practitioners have been problematical. Numerous studies have reported a high frequency of protest, zero or inordinately large dollar-value responses to

questions both of willingness to pay (WTP) for environmental amenities and of willingness to accept compensation (WTA) for their loss. For example, in their experiment measuring the economic value of changes in atmospheric visibility, Rowe et al. (1980) noted that slightly over one-half of the sample required infinite compensation or refused to co-operate with the survey. And more recently, in an attempt to measure the economic value of wildlife recovery, Stevens et al. (1991) reported that 62% of the respondent sample would not pay any amount of money for restoration.

There have been numerous casual explanations for these sorts of 'anomalous' responses to questions of WTP and WTA. Mitchell and Carson (1989: 97), for example, suggest that respondents 'often find it difficult to pick a value out of the air', and argue that experimenting with elicitation techniques will facilitate the respondents' valuation process by simplifying the choice process. But are these features really so anomalous? Are they, rather, symptoms of dissonances between the presumptions behind the CV methodology on the one hand, and people's perceptions of 'value' on the other? Remedies couched in such terms as refinement of the questionnaire structure, tend to gloss over underlying questions about the actual characteristics of people's so-called choice process.

This paper reports on the results of a study designed to explore and understand the meanings people attach to questions of WTP. A more-or-less orthodox Contingent Valuation-type application served as a vehicle through which we were able to obtain information on how respondents actually interpreted – perceived, thought about, and 'evaluated' – questions of paying to avoid changes in their environment. This provides the basis for making some general comments on the way in which we might expect that people will relate to features of their environment.

## THE STUDY SETTING

In this study, a questionnaire survey was undertaken of 246 residents in the East Auckland suburb of St Heliers Bay in New Zealand. Respondents to the survey were asked to express views on the 'value' of Rangitoto Island, including the amount of money they would be WTP to avoid changes to the Island. Rangitoto is a densely vegetated, undeveloped volcanic island, covering an area of 2311 hectares and rising to a central summit, 259 metres above sea level. It last erupted some 300 years ago, which was prior to European colonisation of these islands in the South Pacific, but well within Maori (New Zealand Polynesian) living history.<sup>1</sup> A notable landmark in the Auckland Region, Rangitoto Island is clearly visible from the St Heliers Bay foreshore of Auckland's Waitemata Harbour, situated in the Hauraki Gulf at the gateway to New Zealand's largest city and busiest commercial port.

Respondents were initially shown two photographs of the Island: View A

showed Rangitoto in its present, undeveloped state; and View B showed the same photograph, but with an artist's impression of development, depicting extensive building along the shoreline and on the lower slopes of Rangitoto Island. Two separately administered questionnaires were then used.

First, in both Questionnaire I (QI) and Questionnaire II (QII), respondents were asked whether they preferred View A or View B, or whether they had no preference for either View A or View B, and why. The great majority – 225 out of the 240 respondents – initially expressed a preference for View A; the remaining 25 respondents either initially expressed a preference for View B or expressed indifference.<sup>2</sup>

QI and QII thereafter differed, in presenting respondents with one or other of the following hypothetical scenarios:

QI Assume that approval for the development shown in View B currently exists. Now look at View A. With protection this is a possibility. Suppose you are asked to make a one-off contribution to a private trust fund to avoid the development shown in View B.

What is the maximum amount of money you would be willing to pay into a private trust fund to avoid the development shown in View B?

QII Assume that protection of View A currently exists. Now look at View B. Without protection this is a possibility. Suppose you are asked to make a one-off contribution to a private trust fund to continue protection of View A.

What is the maximum amount of money you would be willing to pay into a private trust fund to continue protection of View A?

Of the total of 240 respondents, 119 answered QI and 121 answered QII. The stated WTP amounts varied widely, from \$NZ0 up to \$NZ5000.<sup>3</sup>

Following the question of willingness to pay, a series of follow-up questions were asked. The first of these was:

Do you think the money amount you finally agreed to pay, is an accurate measure of the value to you of continuing protection of View A?

In response to this question, 55 respondents said they thought the money amount they finally agreed to pay, was an accurate measure of the value to them of continuing protection of View A. This group included all of those 25 respondents who had, earlier, expressed either a preference for View B or indifference. Not surprisingly perhaps, it was this latter sub-group of 25 that consistently offered \$NZ0.

The remaining 185 respondents were then asked to:

Explain why you think the money amount you finally agreed to pay, is not an accurate measure of the value to you of continuing protection of View A.

For this question, several respondent types are readily identifiable. 6 out of the 185 respondents, while initially preferring View A and indicating a willingness or unwillingness to pay, subsequently suggested that their WTP was not an accurate measure, for the simple reason that they either preferred View B or were indifferent about View A and View B. A further 28 respondents suggested that they did not consider their WTP an accurate measure because, either they were unfamiliar with paying for a view of Rangitoto Island, or they would have been more capable of making an accurate offer had they initially been given an indicative WTP figure with which to initiate their offer.

These two categories of responses might quite easily be reconciled within the conventional logic of Contingent Valuation, and it could be agreed that 'refinements' to the questionnaire structure and wording might have reduced the ambiguities in these respondents' successive answers. But there remain 151 respondents – equal to 63% of the total respondent sample – whose verbal interpretations appear at odds with the standard interpretations of 'environmental values' based upon the WTP measure of value. It is this latter group that gives rise to questions concerning the appropriate interpretation of responses. Their 'anomalous' response provides the backdrop against which we attempt an appraisal of the meaning respondents attach to questions of WTP. We did not want simply to presume that a 'WTP' in the colloquial sense, expressed a dollar-valuation in the form of a substitutability between goods. Rather we wanted to investigate in an open-minded way, the extent to which this may or may not be so.

To assist with our analysis, a further sequence of questions were asked in both the QI and QII versions of our survey, including: (i) whether the amount of money the respondent was WTP into the private trust fund depended upon the amount other residents would contribute; (ii) the extent to which the respondent's view (or not) of the Island from where they lived influenced their answers to the various questions; and (iii) if the development were really allowed to go ahead 'What would be required to make you happy about this development?'. The respondents' spontaneous responses to the questions were recorded on micro-cassette, for later transcription. These transcriptions thus furnish information, in the respondents' own words, on 'environmental value' – and on Rangitoto Island in particular. The following section presents a synthesis of these views, using the respondents' own idioms, and an analysis of what we found.

## INTERVIEW RESULTS

In the presentation of this section, we have made a synthetic distillation of people's remarks, by grouping their statements around key themes which became clear to us in the course of conducting the interviews and reading the transcripts. A detailed analysis was undertaken of 20 interviews, which were

judiciously selected to get a high diversity of responses, from amongst the 185 respondents who, one way or another, didn't equate their WTP with 'value'. It should be noted, therefore, that at this point we are not aiming for any 'quantitative' representativeness in our material, rather for a qualitative coverage of the broad spectrum of the views expressed and the manners of their expression. The degree to which there are common or 'shared' perceptions – or sharply divergent ones – can be understood by investigating patterns in the meanings expressed. Then some quantification of relative frequency of particular sorts of views can be assessed by referring back to the full set of survey responses; however we do not go into that here.<sup>4</sup>

Words and phrases italicised in what follows are lifted from transcribed interview material; what we have done is organise this material into a condensed and coherent text for ease of reading, in order to try to convey as effectively as possible the attitudes and feelings expressed. There is a strong (perhaps surprisingly strong) coherence in the patterns of views expressed. The coherence of our synthetic text directly reflects the raw material. However we make a point of indicating variants or differences of attitude where we have found these, because it is through careful consideration of 'where the differences lie' that the most insights are to be gained.

#### *Rangitoto: It's just there*

Rangitoto is *an island in the gulf, green, unspoilt. It is natural, untouched, in its primitive state; and it should stay that way. Visually, it makes the harbour so much nicer, the way the blue of the sea leads on to the green of the bush. But the feelings go deeper than that. There is something about its presence, an island in the gulf. Rangitoto is symbolic, of the greenness of Auckland, of New Zealand. Everywhere in Auckland, we feel its presence: it's just there; you see it; even when you don't see it, you know it's there. It's unique, you look out onto the sea just to have that feeling.... What feeling? Who knows, really. Yeah, there is something about it; something beautiful that's part of nature. People sort of go ga-ga and just stand there for ages just looking.*

*So: it's really cool; quite a bizarre place, a unique environment, a volcano, with the biggest pohutukawa forest in New Zealand, plants that don't grow elsewhere, growing straight out of the rock. All these things. And, it doesn't alter. As you go round it, its always basically the same sort of shape, from all sides, from whatever angle you look at it. A cone, that's there all the time. There is a sense of eternity. 'It's just, um, always there and looks the same.' And what is more, it's what it should be; it's good for being there.*

#### *Familiarity*

It is part of the identity of Auckland, in effect it's *the Harbour, the Gulf*. It symbolises *all Auckland's volcanoes*. Long-time residents *remember it as a*

*child, my parents taking me over there. It is so much part of Auckland that you get used to seeing it there; it would be most peculiar not to have it there. A special landmark, heritage like One Tree Hill (or, equally, the Waitakeres, the Domain, Kauri forests, or other Gulf-islands). It's something you went to as a child, will take my child(ren) to and the grandchildren and their children.*

*'It's everyone's' / 'You don't own it'*

Rangitoto is *accessible to all of Auckland, and you don't own it*. For most people, *it's an area where you can go to walk around it, where the undergrowth seems to just grow out of the rock. So it's a tourist jaunt; but more importantly it's for everybody. Anybody can go and walk on Rangitoto; they simply pay the fare to get across, or even free (swim or boat). For my lifetime and for my child's lifetime. It's one of those treasures that belong to us all. The feeling is, that it belongs to New Zealanders not to developers. On the other hand, it belongs to no-one; you don't own it; nobody should be allowed to buy it; no-one's got a right to develop it. Should the ratepayers of the rest of Auckland have to finance the cost of the select few to live on Rangitoto and enjoy those facilities? No! The government are keepers of it for the country. Sale or development would mean loss of control, the risk that people can't afford to visit. Moreover, the people who could afford to pay would very likely be not in New Zealand. So what that signals is not New Zealanders but overseas people buying the island.*

*Beyond value: 'You've either got it or you haven't'.*

Rangitoto in the gulf is *one of the best views in the world; a priceless place. It has immense value; but really an asset like Rangitoto has no value on it: you can't put a money value on it; it's beyond value. Beauty is priceless; with a thing like this, you've either got it or you haven't. You can't buy and sell it. Certain things you cannot value. Something occurs in nature; is just there: you can't put a value on that. It's an emotional attachment, which means it doesn't make sense to measure the view of Rangitoto in money for an individual. So, there's a problem about putting a money value on something ... nothing to do with money. One person likened it to flowers: 'Have a look at those flowers there, I can't put a figure on that. But I like to look at those flowers, and I like the look of Rangitoto as it is.'*

*Development: 'It shouldn't be allowed'.*

The respondents like *the clean green look: a little bit of nature and not clouded with houses and buildings and lights and all that sort of thing. It's really quite beautiful in its unspoiled state. And, we've got to have some green sanctuaries to go to, where you can look out on nature, untainted, there for everybody to*

enjoy. Rangitoto makes a *contrast* to the *urban clutter*.

Given this, development is *unacceptable, just crass commercialism*. There would be *more sewage that had to go somewhere, their electricity, rubbish collection*, and so on. There are *plenty of other areas for development*, there are *other spots they can develop*. Rangitoto is *something too precious*. It is *a part of the gulf, that should be vested for ever in people who will come. It's something to be looked after carefully, handed down*. It would be *a desecration to commercialise it*, an example of *corporate sabotage of the environment*. There would be something *sacrilegious* in putting houses on it, *like defacing a monument*. Houses on it would *absolutely ruin it*, clutter it up with *busyness and civilisation* so that it was *broken up, not complete*. For one person, the sad prospect was *sort of like Ruapehu: 'The same sort of scene where you've got a recreational mountain, very rugged and rough, and over a period of years all the ski huts ...'*

*Willingness to pay: 'a substantial commitment'*.

Most respondents felt they would be willing to *contribute* something to *protecting* Rangitoto from development. But the bulk of these – 151 out of the total sample, or about 3/4 of those willing to pay a positive amount – didn't think of this as giving a monetary valuation of the worth of Rangitoto to them. After all, *you shouldn't have to pay for something that's already yours*. As one person said: *'I don't think you should have to pay anybody'* in order to stop any development; *'I don't think anybody's got a right to even consider'* any sort of development.

Rather, the expressions of willingness to pay for protection are explained as *a sign, a token, a gesture*. Giving money (hypothetically in this case) is like a *donation*, showing *commitment*, willingness to *fight* against development, *stop it by upsetting the approvals*, fight for what is proper. The money contributions are gestures in a political process. Most often, they *think there would be a lot of people who would contribute, join in*. *You could start a petition to make sure the government legislated that it would stay green*. There is an *inherent distrust of politicians and those in public office*, who don't always *follow through* what they promise. So it is up to people to act as *watchdogs to the community*, and to *intervene* to make sure. The government cannot always be trusted because it is *too driven by economy, Fay Richwhite*, and allows too much development. People will react *not just with money*, but also *in a more political way*. It is not just a question of money, but also of *time and effort*. So people would *volunteer a contribution* depending on how they felt they could help. Many say they would *contribute* money to a *trust* as a sort of *working fund*, for a *ginger group*, a *fighting fund to make sure nothing changes*, *money in the kitty to have a battle with somebody to try and stop it*. This would represent a *willingness to stand up and be counted*.

On the other hand, people are pragmatic. Their willingness to give would



*depend on the circumstances.* One said: *'If I were the only person that could save it, I'd give all I had,'* because *no matter how much money it needs to be kept; it's what it should be.* Others, however, would take into account *the amount of money you need to fight the development plans,* and look at *how many other people are contributing.* They assume there would be *support from others,* and they wouldn't necessarily give a lot of money *if other people weren't prepared to get in and fight too.* After all, there are *a lot of other things* in local body politics that *you grin and bear because there's nothing you could do about it.* So you think about other calls on your money, like *family or new threats,* and also about what chance there is of stopping it.

*'It's not a question of money'.*

Respondents were asked: *'Suppose the development went ahead shown in View B (the photo with housing added on). What would be required to make you happy about this development?'* Some people thought briefly about ways the developments could be *contained, localised.* Quite a few suggested, more or less seriously, that perhaps you could *disguise the houses, paint them green.* But then, they concluded, you would be *living a lie, know they were there.* So they would *still object* to the development taking place. And anyway, some thought, you couldn't contain the development, once it started. It would probably *just keep on creeping up. Everybody who'd bought a section would probably chop down the pohutukawas. Anything that was set as a maximum would become minimum. At the end of the day you'd be looking at, instead of something green and pleasant, something barnacled and crusty....*

So, the almost unanimous conclusion was, really *nothing* could compensate. If development took place, *all concrete, houses, pollution, infrastructure* (etc.), it would be *a shame.* So you *could not be happy; it shouldn't be allowed.* One would live with a sense of *loss, grief, regret,* even of *shame.* As one respondent put it: *I would almost be surprised if every person that you interview didn't respond with the utmost horror at the thought of something like this ever happening.* So there's *nothing* that could make people happy for the development to go ahead.

The idea of a monetary compensation was rejected explicitly by some people. *It's not a money thing,* said several. There was a feeling that the island is not something that can be bought and sold, like a car or house. Even to talk about *money value* was dangerous: *'Where do you stop?'* Some respondents felt that *to accept money means saying it's okay.* Others said that, while they would accept money (and use it to buy a car or something), this wasn't a compensation for the loss. If development took place, then quite simply the island would be *ruined.* There is *no compensation possible for the loss; it couldn't be rectified.* In this sense, development is simply *unacceptable.* As one respondent concluded: *'I wouldn't be happy at all'.* The only acceptable option is *don't have any*

*development at all.*<sup>5</sup>

*Protection: 'It's the principle' ... 'whatever it costs'.*

*It's protected, it should be protected, kept as it is now for ourselves and our children. This produces a conflict for some people. Rangitoto's there, and it should stay. You can't put a value on it. And anyway, we're New Zealanders, we pay taxes, why should we need to give money to protect Rangitoto? So people object: It's nothing to do with the paying, it's the principle. After all, it's virtually the symbol of Auckland; it's what it should be, and it should stay. There should be no need to pay, to fight. Yet, if it came to the crunch, then they'd be prepared to give something. And once again: It's the principle ... whatever it costs.*

#### DISCUSSIONS AND CONCLUSIONS: 'AN ISLAND THAT'S GREEN, AND IT SHOULD STAY'

The literatures of environmental ethics, social psychology, and economics together suggest that there may be several quite different sorts of explanations put forward for the high frequency of protest, zero or inordinately large dollar-value responses to questions of paying (or compensation) for environmental amenities. Merely to propose, as Mitchell and Carson (1989: 97) have done, that technical refinements might 'reduce the number of non-responses', amounts to an a priori economic reductionism that is prejudicial to getting an understanding of the way(s) in which people do and might relate to aspects of their environment. Our own study suggests strongly that even where the majority of respondents propose a willingness to pay (or to accept compensation), and even when the values advanced fall within the realms of a 'normal' frequency distribution, it is quite probable that the actual dollar values they offer or bid will have meanings which are inconsistent with the conventional logic that underlies Contingent Valuation.

In this paper we have sought to present a synthetic profile of the ways that the respondents to our survey seem to relate, themselves, to the questions of 'valuing Rangitoto'. Questions of value, in the standard economic analysis of the environment, are underpinned by notions of **property rights**. The question of 'willingness to pay' for a particular environmental asset or amenity relates, at a logical level, to the idea of buying and selling. By payment, you acquire a 'right' to use or enjoy something. In our study, an interesting antinomy has been observed. On the one hand, a majority of the respondents in this survey made it clear, that in their view, enjoyment of Rangitoto is 'everybody's' right. It should be accessible to everyone, to all New Zealanders. In this respect, people's responses were driven by what they felt should be the situations, in terms of 'rights of access', not in terms of willingness or ability to pay. They responded

in terms of a view how things ought to be in society, not from the standpoint of a merely self-interested consumer. This was made clear in two main ways: the widely expressed view that one 'shouldn't have to pay,' and the sentiment also widespread that payment signified a willingness to 'fight to keep it'.

On the other hand, a large number of these respondents also insisted that the island does not 'belong' to anybody. It is not anyone's 'property.' In this respect, it is not even a question of 'entitlement' in the usual 'property rights' sense, since it is felt to be 'improper' to pretend to possess it. The question of development or protection is, rather, one of what is **right and proper**. People say it would not be right to 'develop' Rangitoto. It would be spoiled, desecrated. The propositions in the questionnaire provoked, for many respondents, horror and alarm that anyone would even think of doing something like that. The island needs to be protected against anything like that. In principle the government (local, regional, national) should fulfil the duty to protect the island, keep it green, do what is right. But sometimes they don't, hence the willingness and commitment of many respondents to act as citizens to maintain what is right.

What are the implications of our findings for CV methodology? The suggestion that people, when asked about environmental values, may respond along several levels of 'logics' – for example as 'consumers' with primarily self-interested considerations, but also as 'citizens' with a view of what is just or fair – has been widely canvassed in recent literature (popularised by Sagoff, 1988; and discussed in the context of Contingent Valuation by, for example, Blamey and Common, 1993). What our study further suggests is that people want to find, and often do find, something of the **transcendent** in their environment: beyond choice, beyond value. In responding to our questionnaire, many people seemed to expressing a feeling about the **rightness** of a certain co-existence – of Rangitoto with us; of us with Rangitoto island. Rangitoto is just there, as something beyond human choice, and it is good like that. As one respondent put it, an island like Rangitoto: you've either got it or you haven't; and since we've got it, then it should stay.

As a problem of 'valuing the environment', Rangitoto may seem to be a relatively extreme case. Is it right to draw generalised conclusions from consideration of something so unique, primitive, primordial. Our own study suggests that the sentiments that the Island evokes may be not so atypical. First of all, for many people of the Auckland region, Rangitoto is a tangible symbol for a type of relationship towards the world in which they live, or want to live. The message we often got, presenting our 'development' scenario, was of grief and a strong sense of loss when such things in the world become reduced to their commercial, monetary value. As many people said, the domain of 'development' has to be localised, limited in extent. Rangitoto is good the way it is. It is a place to visit, to enjoy, to respect, to cherish. For Aucklanders, it is a sort of friendly relationship. No-one is threatening the other, there is room for Rangitoto and for us. There is a sense of pleasure, too, that people, tourists, can come and visit the

island, walk around on it, climb up to the top. In a way the island welcomes people – but as visitors, not for development. There are other places that can be developed. It is something to be cherished because it exists, co-exists with us in the world. It is not something to which we are ‘entitled’; it simply is there. But once it is there, given that it is there, it would be ‘improper’ (a crime, of sorts) were it to be reduced to its possible money value.

It is, moreover, quite probable that this sort of feeling about the ‘natural’ world we live in, is also present to greater or lesser degree in the ‘valuation’ of more commonplace environmental features. Indeed many respondents made this quite plain. If Rangitoto stands for Auckland, so too does One Tree Hill, the Harbour, the Gulf. If Rangitoto is an island in the Gulf, so too are Motutapu, Brown’s Island, Waiheke. If Rangitoto is green and ‘natural’, unspoiled, so too is (one would like to hope) New Zealand – the Waitakeres, kauri, places where you feel eternity, away from civilisation.

There are things, dimensions of life, that are beyond money. With money you can buy a car, and it rusts.... A car and Rangitoto do not exchange. So what is the value of Rangitoto? It exists. An island that is green, and it should stay. As for an attempt to put a money value on it? Well, according to what most of the respondents say, that simply shouldn’t be allowed.

## NOTES

The authors wish to thank Trish Marsters for assistance with the interview transcriptions. We are also grateful for discussions with numerous colleagues and friends in England and New Zealand.

<sup>1</sup>The name means ‘Rangi’s blood’ referring to Rangi the sky god and the eruption of red-hot lava and gas that bled from the cone and sky to form the black scoria of the present island’s surface.

<sup>2</sup>Of the total 246 respondents, 6 who had initially agreed to participate in the experiment, were subsequently excluded from the data set, for either choosing not to co-operate with the hypothetical scenario, or failing to understand the questionnaire.

<sup>3</sup>Two question variants were used to examine the quantitative differences in WTP arising from the assignment of different initial endowments. In this paper, we will not be concerned with the actual dollar-value responses. The details of these results are reported in Vадnjal (1994).

<sup>4</sup>We do not, either, detail the exact procedures of our transcript analysis. In brief, it consists of identification of key words – key in the sense of being primary or pivotal in the ways people expressed themselves. By attention to the linkages between key words, and the clusters of subordinate words, one can build up a sort of ‘map’ of the structuring and flows of people’s views and argumentations. In principle, the sort of structural analysis of meanings, sometimes called lexicological analysis, serves as a good foundation for preparation of questionnaires that can, meaningfully, be used on a large scale to quantify ‘public opinion’ within a selected population on such issues as (inter alia)

environmental perception and valuation.

<sup>5</sup> It could be suggested from this, that these people are expressing lexicographic preferences: the Island that's green is 'preferred' along one level, money-goods along a next level. But this still leaves us with the question, in what sense is it 'not a problem of money' – as we discuss in the concluding section below.

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