

EXACT VALUES FOR ILL-DEFINED PRODUCTS

Forest economics has moved on since the days when practitioners measured timber revenues and operational costs, and theoreticians debated optimal rotations based only on these values. Partly, we no longer assume fixed and certain revenues and costs: econometric sophistication is applied to modelling and predicting their possible future courses (Linden and Uusivuori, in this issue). Additionally, environmental evaluation has become central discourse in forest economics. To such benefits and costs, too, sophisticated analysis is applied. By these techniques, we aim (if only by placing finely calculated limits of error) to measure values precisely: but do we know what values, precisely, we are measuring?

Scarpa *et al.* in this issue seek to pinpoint sources of environmental benefit using the hedonic model, and draw reasonable conclusions about valued, separable stand characteristics. But, typically, the highest aesthetic quality is expressible only by subtle variables of spatial arrangement and compositional interaction. Unless these, in all their potential variety, are included in models, their influence is, at best, included via simpler proxies. To use resultant models for planning may miss the essence of value.

In theory, CVM confronts this problem head-on, describing explicitly the characteristic to be valued: how much profit from your forest would you be prepared to forgo, to create a stand structure looking like *this* rather than *that* [show photo-montages]? There remains, however, the problem of the freight of interpretation riding with every objectively described characteristic. Also in this issue Mäntymaa and Svento explore such vagueness in CVM. But vagueness includes not only respondents not knowing their mind, or understanding complex products inaccurately: they bring their own clutter of associations, fears and hopes to answering questions, and researchers also lack accurate understanding of what that clutter is.

Notoriously, Kahneman and Knetsch argued that, when offered public goods, respondents' willingness to pay indicated "purchase of moral satisfaction": being seen to

value such goods displays good citizenship. Moreover, a particular species may have symbolic significance, representing the value of all biodiversity conservation. These factors are clearly potent and troublesome for passive use values — option, existence and vicarious values — consumed in the mind rather than through the senses.

The symbolic response is clearly manifested, when respondents express willingness to pay to preserve even species which, according to post-CVM questioning, they suspected to be fictitious. They may (given the opportunity) state explicitly that bids reflect beliefs that “genetic resources should be maintained intact”, or desires “to be seen as someone concerned about nature”.

There is nothing faked or perverse about these responses, but they are hard for researchers to track. People don’t want biodiversity loss, and any act of species extinction is biodiversity loss. Researchers may know — and respondents if pressed may agree — that biodiversity loss will occur, whether the investigated species is preserved or not: simply, no-one can deliver the product “maintaining genetic resources intact”. Yet low willingness to pay for something which *itself* has little significance to respondents may seem to impose personally responsibility for inevitable biodiversity loss: thus *guilt avoidance* becomes an (hypothetically) purchasable commodity, while protest bids might be seen as a means of disengaging from guilt.

These problems by no means suggest that we should abandon these new and intellectually intriguing products, returning exclusively to traditional forest economics. Ill-specified products *will* be traded off one way or another, and arguably economics offers the most dispassionate approach to their evaluation. But now and again we should devote some time to asking what, precisely, it is that we are measuring.

Colin Price , Associate Editor