

A route with a view: The **contribution of scenic landscapes** to a **World Heritage Site** gateway community

LINDSEY ELLINGSON * [lindsey.ellingson@gmail.com]

ANDREW SEIDL ** [andrew.seidl@iucn.org]

LAWRENCE PRATT *** [lawrence.pratt@incae.edu]

Abstract | The route between El Calafate, a gateway community, and Glaciers National Park, a UNESCO World Heritage site, in the Patagonian region of Argentina is an undeveloped scenic roadway in which economic activity may fluctuate as a result of the level of physical development along the roadway. The view of this landscape along this roadway is a public good; therefore, the value of the landscape by tourists must be estimated by other than direct market signals in order to facilitate rational economic development planning. This study describes the tourists' demographics, trip characteristics, expenditure patterns and nonconsumptive use values associated with potential development that could alter the landscape along this scenic highway and its corresponding economic impact on the gateway community.

Keywords | Tourism, Argentina, Landscape, Gateway Community, Economics.

Resumo | A rota entre El Calafate, uma comunidade de interface, e o Parque Nacional Los Glaciares, Património Mundial da UNESCO, localizados na região argentina da Patagónia, constitui uma rota cénica subdesenvolvida, em que a actividade económica pode flutuar devido ao nível de desenvolvimento físico ao longo da estrada. A visualização da paisagem é um bem público e, portanto, o valor da paisagem atribuído pelos turistas deve ser avaliado, para além da sinalética comercial, de modo a facilitar o planeamento do desenvolvimento da racionalidade económica. Este estudo descreve os dados demográficos dos turistas, as características da viagem, os padrões de despesas e os valores de uso não-destrutivo associados ao desenvolvimento potencial que poderia alterar a paisagem ao longo desta rota cénica e o seu respectivo impacte económico na comunidade.

Palavras-chave | Turismo, Argentina, Paisagem, Comunidade de interface, Economia.

* **PhD in Agricultural and Resource Economics** by Colorado State University (USA) and **Postdoctoral Fellow** at Swedish University of Agricultural Sciences, Southern Swedish Forest Research Centre, Alnarp (Sweden).

** **PhD in Agricultural and Resource Economics** by University of Florida (USA) and **Head, Global Economics and Environment Programme** at International Union for Conservation of Nature.

*** **Masters of Public and Private Management** by Yale School of Management, New Haven, Connecticut (USA). **Senior Lecturer and Director** of the Latin American Center for Competitiveness and Sustainable Development at INCAE Business School (Costa Rica).

1. Introduction

Nature based tourism can serve as an important driver of rural regional economic development. In developing countries, a rapidly growing tourism industry can be an important source of foreign exchange inflows (Wunder, 2000). The valuable cultural and natural attributes of the tourism experience at a particular site are not necessarily captured or directly illuminated by market transactions. Alterations in these features could either increase or decrease the amount of tourism activity in the host community. Policies that potentially directly or indirectly affect the portfolio of cultural and natural features that contribute to the tourism experience should be fully accounted for due to the intended or unintended influence they may have on the local economy.

There is growing recognition that protecting natural areas such as UNESCO World Heritage sites, often enhancing local recreation and tourism opportunities, are tightly entwined with quality of life goals that are distinct from, and often in conflict with, economic development goals (McCool and Patterson, 2000). Hence, not capturing the nonconsumptive use values associated with tourism underestimates the impacts local natural attributes have on the local economy which could lead to significantly different policy decisions.

One area of tourism research that remains relatively unexplored is the role of natural amenities in tourism based economic development (Marcouiller and Clendenning, 2005) and their economic and physical impacts on gateway communities (Drost, 1996; Mules, 2005). The purpose of this research is to reveal tourists' nonconsumptive use values associated with several forms of proposed development in order to better inform economic development decisions in a gateway community to a World Heritage site (WHS). This research examines how infrastructural development in a currently

undeveloped and ecologically unique region impacts tourist values and behaviours associated with their vacation.

Unique natural resources are often managed as parks or protected areas and the economic benefit derived by gateway communities comes primarily from the demand to experience these protected areas by tourists (Eagles *et al.*, 2002). However, a visitor's experience does not necessarily begin upon arrival to the park or protected area; it begins once the visitor departs for their tourist destination (Clawson and Knetsch, 1966). Specifically, scenic landscapes along the road towards a tourist's destination may provide additional benefits to the tourist and his or her experience. These additional benefits can be translated into additional income for the local economy.

If infrastructure development were to be added along the roadway so as to disturb the undeveloped landscape, economic activity in the region may increase or decrease as a result of the level of development along the roadway due to consumer preferences. While the influence of most physical developments on economic returns to the region is quite easily understood through market signals, the potential benefit of *not* developing the roadway may be substantially less easily detected and analyzed. Since tourists may enjoy one view over another through their direct experience, but do not consume or possess the view in a way that other travellers or residents cannot also enjoy it, landscapes have features of public goods. Therefore, the landscape will be underprovided by market mechanisms due to free riding behaviour (Varian, 1992). Tourists' nonconsumptive use value needs to be estimated in order to approximate the value of the landscape to the tourism experience. The purpose of this study is to estimate the economic value to non-resident visitors of an undeveloped scenic roadway from the city of El Calafate to WHS Glaciers National Park in Argentine Patagonia.

1.1. Economic valuation of scenic roadways

Although there are a number of studies of the economic value of agricultural and scenic open space to tourists (e.g., Bergstrom, *et al.*, 1985; Beasley *et al.*, 1986; Bower and Didychuck, 1994; Halstead, 1984; McConnell and Walls, 2005; McLeod, *et al.*, 1999; Racevskis, *et al.*, 2000; Ready, *et al.*, 1997; Rosenberger and Loomis, 1999; and Willis and Garrod, 1993), there are no published accounts, to our knowledge, from the developing world. In a study on the enjoyment of scenic routes, Kent (1993) concludes that people drive scenic routes for the effect the landscape has on the way it makes them feel and on what they expect to see during their drive.

Only one example of an economic valuation study of development and scenic roadways in any setting was found in the peer reviewed literature. In their study in Vermont, USA, using a travel cost model and contingent behaviour approach, Tyrrell and Devitt (1999; 1996) found that non-resident respondents were willing-to-pay \$0.76 (US\$1995; \$1.05 in 2009) per person-trip to travel along a 'scenic' designated highway as opposed to one without such a designation. Respondents preferred to see infrequent small towns to both no development and occasional houses and businesses. Respondents were willing to pay \$1.49 (\$2.06 in 2009) to travel along a roadway with infrequent small towns relative to scattered occasional houses and business and \$1.20 (\$1.66 in 2009) for small towns relative to no development at all. Average daily expenditures for non-resident sightseers were \$160 (\$222 in 2009).

In a meeting proceedings paper, using a similar approach, Mathews *et al.* (2004) find that predicted visitation to the Blue Ridge Parkway will decrease (increase) with declines (improvements) in visual quality along the roadway and from viewing stations by approximately one-third. Mathews *et al.* (2004) find lost values of approximately \$1,000 (US\$2004; \$1,118 in 2009) per visitor per year due to more developed views along the roadway and overlooks, which are then extrapolated to some \$7.7 billion

(US\$2004; \$8.6 billion in 2009) annually due to the extremely high number of travellers along the roadway.

In a study regarding tourism and gateway communities, Mules (2005) found that if the tourist(s) travels using a personal motor vehicle, they will still spend money along the scenic route prior to arriving at the national park. Regardless of location of accommodation, whether it is inside the park or along the route, visitors will still spend money in the gateway communities as they pass through them (Mules, 2005). A gateway community can be viewed as the 'last chance to stop' along the scenic route before arriving to the traveller's destination, such as a national park.

1.2. World heritage sites and their gateway communities

The World Heritage Convention, adopted by the United Nations Educational, Scientific and Cultural Organization (UNESCO), designates sites around the world as World Heritage (WH) sites based on their qualities contributing to history, science or aesthetic values (Drost, 1996; Hall and Piggin, 2002). World Heritage sites can be classified as cultural, natural or both. A cultural site has historical significance such as monuments or clusters of buildings or sites. A natural site contains natural, geological and physiographical features (Hall and Piggin, 2002; Hawkins, 2004). The objective of designating WH sites is to increase the recognition of heritage conservation that may also preserve natural and cultural resources throughout the world (Drost, 1996). UNESCO encourages the member countries to consider the cultural or natural heritage within a focal community's comprehensive plans.

The designation of a site as World Heritage may increase local economic development from tourism, which, if done in a sustainable manner, is a benefit to the site and gateway communities. When WH designation has led to a perception of the rapid growth of tourism and related development, the importance of examining the economic and

environmental impacts on the surrounding gateway communities becomes a clear priority (Drost, 1996; Hall and Piggan, 2002). Hawkins (2004) finds that the sites and associated tourism opportunities should be promoted within the gateway communities so as to lead to improved relationships between the World Heritage site and the gateway community, and more enlightened regional development planning and management might increase the number and length of visits to the region (Hawkins, 2004).

1.3. Study site

El Calafate is the gateway community to Glaciers National Park, a UNESCO World Heritage site, located 80 km to the west of town along Provincial Highway #11. In 1981, Glaciers National Park was declared a 'Humanity Worldwide Heritage Place' by UNESCO due to its glaciological and geomorphological interests (National Park Service of Argentina, 2005). The site showcases a unique natural phenomenon wherein a several hundred foot tall and several miles wide blue hued glacier slowly flows to a point of land, temporarily creating two lakes separated by an ice plug from a contiguous body of water. The water level gradually rises in the south side lake, creating pressure on the plug. After a period of several years the pressure on the plug becomes so great that it is spectacularly destroyed and water rushes from the south lake to the north lake for those fortunate enough to be in attendance to view it. However, even when the peak performance is not on offer, visitors are entertained by enormous icebergs periodically separating themselves from the descending glacier and plummeting into the icy waters of the lake.

The Park is the primary attraction for visitors to the region, although there is significant regional hiking and mountaineering activity, highlighted by the relative proximity of El Chalten, often known as Mt. Fitzroy. El Calafate provides most of the tourist services for Glaciers National Park, including the nearest commercial airport, restaurants, hotels,

grocery stores and other services, while a few lodges exist very close to the park's entrance. After modest increases in tourist visits throughout the 1990s, Glaciers National Park has demonstrated an exponential increase in visitation in the years following Argentina's economic crash, more than tripling from 1999 levels to almost three hundred thousand in 2003, the most recent figure currently available to the authors.

Due to the popularity of the Park and the unique natural environment of the region, development along the highway is an important planning decision for local leaders. Provincial Highway #11 between El Calafate and Glaciers National Park currently offers an open view of the snow-capped mountains, traditional wildlife, farms and ranches and the rugged Patagonian landscape. Currently, there are no electric lines, billboards, or other infrastructure development along the route, other than the paved two lane roadway.

2. Methodology

In order to capture the tourists' attitudes, travel behaviour, expenditures and values towards the El Calafate region and Glaciers National Park, a 15 minute, in-person, intercept survey was administered. Willing, adult, non-residents of El Calafate (as established through a series of filter questions) were surveyed by employees of the State of Santa Cruz Department of Tourism and of the Foundation for the Future of Nature (FUNAFU) an Argentine NGO. The surveys were completed in the town of El Calafate and at the entrance to the Park in March and April, 2005.

The survey was presented in four sections: features of the trip; trip expenditures; sensitivity to change in environmental quality and tourism costs; and demographics. In the valuation portion of the survey respondents were provided with three pairs of images depicting the current (undeveloped)

state of the roadway next to one of three potential development scenarios. Using Adobe Photoshop software, Scenario I placed overhead electric wires, typical of the region, into the baseline. Scenario II introduced rock quarries, common in the region for roadway construction materials, into the landscape. Scenario III included both forms of infrastructure development. Specifically, respondents were asked to provide the maximum amount they would be willing to pay for each round trip from El Calafate to Perito Merino Glacier to avoid seeing the development portrayed in each of the three pictures. Other innovations in the survey instrument included the ability to complete the survey in either English or Spanish and to provide values in Euros, US Dollars, or Argentine Pesos, all at the choice of the respondent. The survey translation followed appropriate protocols, beginning in English, then translating to Argentine Spanish, then back translated to English again, in order to improve consistency of message.

In general, it is hypothesized that foreigners who travel greater distances, are wealthier and more educated than their Argentine counterparts and, therefore, will spend more money in the El Calafate community. It is further hypothesized that foreigners will be willing to pay more to avoid the infrastructural development which will adversely affect the scenic landscape from the roadway (Mowforth and Munt, 2003).

3. Results and discussion

This analysis is based on 390 useable surveys, although not all respondents provided information for all questions. An accurate count of refusals was not kept, but it is not believed that omitting the opinions of the refusals systematically skewed the results. The overwhelming reason for refusing to complete the survey was "not enough time," rather than strong objection to either the instrument or the subject matter of the study.

3.1. Demographics

Just less than one half (46%) of survey respondents were from Argentina and almost 80% of travellers to the region were fluent Spanish speakers, regardless of nationality. About 13% of visitors were from Spain and almost 7% came from Uruguay. English was the most common language spoken other than Spanish, accounting for about 2 of every 3 respondents. Approximately, 3 out of 4 respondents chose to take the survey in Spanish and nearly all Argentines elected to take the survey in Spanish. Almost half of foreigners took the survey in English. About 55% of all respondents were male. The gender of visitors varied substantially by country of origin. Slightly more than half of Argentine visitors were female, while 60% of foreign visitors were male. The average age of survey respondents was approximately 40 yrs old. Argentines were slightly (1 yr) older than the mean, making Foreigners slightly (1 yr) younger than the mean. The average number of weeks of paid vacation per year varies systematically, indicating that Argentines have somewhat less vacation time on average than their foreign counterparts (Table 1).

Argentine households appear to be somewhat larger than foreign visitors' households on average with an overall average of 3 people per household. One or two people typically contribute to household income across all groups. The percentage of respondents having earned at least a university degree is greater for foreign visitors than for visitors from Argentina. Pre-tax household income differs substantially between Argentine and foreign visitors. Responses provided in Euros were converted at a rate of 0.77 Euros to 1 US Dollar and Argentine Pesos (AP) were converted at a rate of 3 AP to 1 US Dollar, which was the exchange rate in 2005, the time the survey was administered. All monetary values are then adjusted to reflect 2009 dollar values. On average, foreign visitors earn four times their Argentine counterparts (Table 1).

Table 1 | Descriptive statistics

	Total	Argentine	Foreign
Spanish survey (%)	74%	98%	53%
Male (%)	55%	48%	61%
Age (mean)	40	41	39
University degree, at minimum (%)	66%	52%	78%
Paid vacation (weeks/year)	4.1	3.8	4.4
Number in household (mean)	3.1	3.4	2.8
Number of income Earners (mean)	1.8	1.9	1.7
Mean household income (US Dollars, 2009)	\$ 43,926	\$ 16,675	\$ 68,040
Proportion of visitors on their first trip to the El Calafate region	82%	71%	93%

3.2. Trip characteristics

Most people travel to El Calafate as a pair or in groups of three people. Travel patterns vary substantially within and across nationalities. There is some evidence of a “typical” trip to the region, but also a great deal of variation on the typical trip. Argentines tend to travel to the El Calafate region as a single destination trip, spending 1-3 days travelling to and from the region and spending approximately 3-4 days in the region. Foreigners tend to travel for substantially longer periods of time and linger somewhat longer in the El Calafate region.

The majority (82% overall; 71% of Argentines; 93% of foreigners) of visitors to the El Calafate region were on their first trip to the area. Argentines (29%) were more likely to have visited the area previously. Visitors to the El Calafate region generally would have liked to have stayed longer than they did by about 1-2 days. This difference of one day’s stay may create a substantial difference in expenditures in the local economy (Table 2).

Respondents were asked to rate their importance of different natural and human attributes and

activities considered in their decision to visit El Calafate. Across all visitors, the most important feature of a trip to El Calafate and Glaciers National Park is to see the glaciers and ice flows, contact with nature and the mountain landscapes. The least important features in a visit to the region are its communication infrastructure, nightlife and entertainment offerings, and hunting and fishing opportunities.

Total trip expenditures and local economic impact vary in three significant ways. First, total trip expenditures may reflect visits to multiple destinations, so all expenditures clearly cannot be included in either valuation or economic impact assessments. Secondly, certain expenditures do not take place locally, such as plane tickets and tour packages. As a result, they should be included in economic valuation estimates when attributable to El Calafate, but not in local economic impact estimates. In addition, local economic impact includes not only direct expenditures, but also local multiplier effects throughout the local economy. In this study, total trip expenditures and local direct expenditures are evaluated.

Table 2 | Trip characteristics (mean values)

	Total	Argentine	Foreign
Days on trip	28.1	7.6	47.5
Days in Argentina	12.5	5.5	18.0
Days in El Calafate	4.0	3.7	4.3
Number in travel group	4.2	3.9	4.5
Number of visits to Glaciers National Park	1.4	1.6	1.1
Additional nights of staying in El Calafate if could plan trip again	1.6	1.7	1.5

Table 3 | Total and local mean trip expenses (US Dollars, 2009)

	Total		Per day		Per person		Per person-day	
	Total	Local	Total	Local	Total	Local	Total	Local
Total	\$3,501	\$885	\$1,212	\$270	\$1,591	\$568	\$463	\$172
Argentines	\$1,349	\$632	\$438	\$175	\$681	\$317	\$214	\$83
Foreigners	\$5,491	\$1,132	\$1,882	\$356	\$2,434	\$812	\$680	\$251

Total trip expenditures, including tour packages and other expenditures outside of the region averaged \$3,501 (US\$2009), with Argentines spending about one third of the total on average and foreigners spending about one and a half times the average (Table 3). Excluding tour purchases, the average tourist expenditure in the El Calafate region was \$568 (US\$2009) or \$172 (US\$2009) per day; however, there is substantial variation in expenditures across groups. Locally, foreigners spent about \$500 (US\$2009) per trip more than Argentines on average. Mean expenditures for foreigners are almost twice that of Argentines and differences in expenditures per person-day between Argentines and foreigners are even more pronounced, as Argentines are more likely to travel in somewhat larger groups relative to foreigners. On average, foreigners spend about three times more per person than do Argentines, due to a few high-end foreigners.

3.3. Scenic value and economic impact estimates

Travellers were asked to assess at what increase in costs they would no longer choose to visit the El Calafate-Glaciers National Park region. Overall, respondents were willing to tolerate up to a \$185 (US\$2009) increase in costs due to hypothetical increases in fuel costs, taxes, or other travel costs and still visit the region. Here again, there is substantial variation across subgroups, with Argentines (\$69, US\$2009) willing to pay substantially less than foreigners (\$301, US\$2009). Interestingly, the median response for Argentines, and therefore

overall, was zero which may reflect their actual willingness to pay or sensitivity to changes in travel costs. However, it is more likely a reflection of a resistance to the imposition of additional costs by some governmental authority to gain access to the nation's natural heritage, something that appears largely to be considered a birthright.

Respondents were asked to evaluate the three development scenarios on two criteria; whether or not they would still visit if the development/change occurred and what would be their maximum willingness to pay to avoid the change. In each case respondents were asked to compare the development scenario to the current, undeveloped, case. It is hypothesized that people will be willing to pay to avoid the development relative to the current state. Survey responses regarding the importance of various aspects of the tourist experience would seem to provide some support for this hypothesis. Further, it is hypothesized that the combination of the two development options will result in stronger responses than in each individual case.

On average all respondents indicated a per trip willingness to pay of \$16 (US\$2009) to avoid the electric infrastructure development (Scenario I). This provides a measure of the value of the unimpeded landscape relative to one with electric cables in it. Similarly, in the second scenario consisting of quarries along the roadway, all respondents indicated they would pay about \$16 (US\$2009) to avoid the development. The willingness to pay to avoid the combined infrastructure development scenario (Scenario III) was greater than either of the individual effects, taken in isolation. On average, respondents were willing to pay about \$19 (US\$2009) per trip

to avoid the development. Foreigners, reflecting greater ability to pay and greater expenditures on their vacations to the region overall, were willing to pay roughly double the Argentines to avoid the development as shown (Table 4).

The total direct economic effect of tourism to the El Calafate economy can be estimated by multiplying the average expenditure by class (Argentine or foreigner) by the number of visitors. In 2003, the most recent complete data available, at least 92,600 non-resident Argentines and 134,000 foreigners visited the Glaciers National Park (National Park Service of Argentina, 2005). The surveys were undertaken in March and April of 2005. The proportion of Argentines to foreigners in our sample is quite similar to historic information, so a weighted average of impacts is not required. Subtracting transportation to El Calafate from non-tour expenditures, the mean estimated local expenditure per Argentine is \$224 (US\$2009), while the mean estimated local expenditure per foreigner is \$336 (US\$2009). Using the MGM2 Model, the total direct estimated economic impact of tourism visits to Glaciers National Park on El Calafate is \$65,797,796 (US\$2009) per year (Stynes and Sun, 2003). Estimates of local tourism multipliers average approximately 1.40 (ICT, 2005). Using this multiplier, the total estimated local economic impact is \$92.1 million (US\$2009).

Estimates of tourists' willingness to pay to avoid the development scenarios provide a notion of the sort of resources that might be raised to offset any local financial losses due to leaving the roadway undeveloped. The total potential amount

of money to be raised to offset these financial losses can be calculated by multiplying the number of visitors by the average willingness to pay to avoid each development scenario. The estimated willingness to pay to avoid electrical development is \$4 million (US\$2009) per year and to avoid quarries is \$3.9 million (US\$2009) per year. The aggregate annual willingness to pay to avoid having both electrical infrastructure and quarries is \$4.9 million (US\$2009). These numbers should be compared to the net benefits or costs of having the development to local people in the calculations for understanding the net benefits of having or not having the overhead electric wires and associated infrastructure along the scenic roadway between the gateway community and the World Heritage site.

It is possible that people who indicated that they were not willing to pay anything to preserve the relatively undeveloped nature of the roadway landscape did so for any number of reasons, including that they hold no value in the view. It would be inappropriate, however, to ascribe zero value to all zero bids since people may be opposed to the proposed payment vehicle (toll or entrance fee), the presumed managing institution (government), or associate the developed view with other attributes (e.g., jobs, prosperity) that were not intended by survey vehicle. For example, those who provided a zero willingness to pay response for any of the scenarios were asked whether they preferred the developed view to the undeveloped view and 28% of these respondents (32% among Argentines and 23% among foreigners) indicated that they did. As it is difficult to believe that people actually prefer

Table 4 | The maximum respondent is willing to pay for each round trip from El Calafate to Perito Moreno Glacier to avoid seeing the development shown (US Dollars, 2009))

	Scenario 1		Scenario 2		Scenario 3	
	Mean	Median	Mean	Median	Mean	Median
Total	\$3,501	\$885	\$1,212	\$270	\$1,591	\$568
Argentines	\$1,349	\$632	\$438	\$175	\$681	\$317
Foreigners	\$5,491	\$1,132	\$1,882	\$356	\$2,434	\$812

to see electric cables and gravel pits on the roadway, this response is viewed as either vote in favour of "development" or a protest bid. By extension, 72%, even among those who were willing to pay nothing to preserve it, indicated they preferred the unfettered view. In sum, the data overwhelmingly indicate that there is value in protecting the landscape between El Calafate and Glaciers National Park. However, there is substantial variation in opinion as to how that landscape should best be protected and, if it is protected, who should pay for it.

4. Conclusion

Glaciers National Park in Argentine Patagonia is a globally unique natural treasure. As a tourist destination, the Park is a very important economic driver to the gateway community of El Calafate. In this study, the likely economic impact of potential infrastructure development along a scenic roadway between El Calafate and Glaciers National Park in Argentine Patagonia was estimated. Although economic valuation of scenic landscapes has some history in the United States, this is the first study of this kind undertaken in Argentina to our knowledge. Moreover, there has been very little published work in any setting regarding economic valuation of scenic roadways.

In general, it was discovered that the natural environment was very important to all visitors' enjoyment of their visit to El Calafate. Foreign visitors to the region are wealthier; somewhat more educated, and spend more than Argentines. In addition, travellers would prefer to spend between one to two additional days in the El Calafate region, which, if captured, can result in substantial economic impact to the region.

The low willingness to pay to avoid the potential development scenarios should not be completely dismissed. While it is a small proportion of individual expenditures, it remains an important impact to the

regional economy and is, therefore, important for policy decisions. The total annual local economic impact of tourist visits to Glaciers National Park was approximately \$92.1 million (US\$2009) and the potential amount to be raised for the local tourism economy to leave the roadway undeveloped is as much as \$4.9 million (US\$2009) per year in additional tourism revenues. Furthermore, even among those who were not willing to pay to preserve the relatively undeveloped nature of the roadway, respondents overwhelmingly indicated a preference for an unfettered view over a more developed view. These people generally believe the local or national government should be held responsible for preserving the view rather than the visitor, a fairly uncommon sentiment in our experience. Future work could look to better understand the motivations for responses on the appropriateness of various policy alternatives to preserve the view, as well as, potentially, providing more specific attributes of the undeveloped view to better understand visitors preferences, and therefore values, for the rugged Patagonian landscape.

References

- Beasley, S., Workman, W., Williams, N., 1986, Estimating Amenity Values of Urban Fringe Farmland: A Contingent Valuation Approach: Note, *Growth and Change*, Vol. 17(4), pp. 70-78.
- Bergstrom, J., Dillman, B., Stoll, J., 1985, Public Environmental Amenity Benefits of Private Land: The Case of Prime Agricultural Land, *Southern Journal of Agricultural Economics*, Vol. 17(1), pp. 139-149.
- Clawson, M., Knetsch, J., 1966, *Economics of Outdoor Recreation*, Johns Hopkins University Press, Baltimore, MD.
- Costa Rican Tourism Institute (ICT), 2005, *Tourism Statistical Yearly Report – 2004* (and supporting summary data/documentation), Costa Rican Tourism Institute, San Jose.
- Drost, A., 1996, Developing Sustainable Tourism for World Heritage Sites, *Annals of Tourism Research*, Vol. 23(2), pp. 479-492.
- Eagles, P., Eagles, J., McCool, S., (eds), 2002, *Tourism in National Parks and Protected Areas: Planning and Management*, CABI Publishing, New York, NY.
- Hall, C., Piggin, R., 2002, Tourism Business Knowledge of World Heritage Sites: a New Zealand Case Study, *International Journal of Tourism Research*, Vol. 4, pp. 401-411.
- Halstead, J., 1984, Measuring the Non-Market Value of Massachusetts Agricultural Land: A Case Study, *Journal of the Northeastern Agricultural Economics Council*, Vol.13(1), pp. 12-19.

- Hawkins, D., 2004, Sustainable Tourism Competitiveness Clusters: Application to World Heritage Sites Network Development in Indonesia, *Asia Pacific Journal of Tourism Research*, Vol. 9(3), pp. 293-307.
- Kent, R., 1993, Attributes, Features and Reasons for Enjoyment of Scenic Routes: a comparison of experts, residents and citizens, *Landscape Research*, Vol. 18(2), pp. 92-102.
- Marcouiller, D., Clendenning, G., 2005, The Supply of Natural Amenities: Moving from Empirical Anecdotes to a Theoretical Basis, in Green, G.P., Deller, S.C. and Marcouiller, D.W., (eds), *Amenities and Rural Development: Theory, Methods and Public Policy*, Edward Elgar Publishing, Northampton, MA, pp. 6-32.
- Mathews, L., Kask, S., Rotegard, L., Johnson, G., Stewart S., 2004, How Much Do Visitors Value Scenic Quality?: Results from the Blue Ridge Parkway Scenic Experience Project, in Harmon, D., Kilgore, B., and Vietzke, G., (eds), *Proceedings of the George Wright Society / National Park Service Joint Conference, Protecting Our Diverse Heritage: The Role of Parks, Protected Areas, and Cultural Sites*, 2003, Hancock, Michigan: The George Wright Society, 2004.
- McConnell, V., Walls M., 2005, *The Value of Open Space: Evidence from Studies of Non-Market Benefits*, [<http://www.rff.org/rff/Documents/RFF-REPORT-Open%20Spaces.pdf>], (Site accessed 15 February 2005).
- McCool, S., Patterson, M., 2000, Trends in Recreation, Tourism and Protected Area Planning, in Gartner W., Lime, D., (eds), *Trends in Outdoor Recreation, Leisure and Tourism*, CABI Publishing, New York, pp. 111-119.
- McLeod D., Woirhaye, J., Kruse, C., Menkhaus, D., 1999, Private Open Space and Public Concerns, *Review of Agricultural Economics*, Vol. 20(2), pp. 644-653.
- Mowforth, M., Munt, I., 2003, *Tourism and Sustainability: Development and New Tourism in the Third World*, 2nd ed., Routledge, London.
- Mules, T., 2005, Economic impacts of national park tourism on gateway communities: the case of Kosciuszko National Park, *Tourism Economics*, Vol. 11(2), pp. 247-259.
- National Park Service of Argentina, 2005, Personal communication.
- The Nature Conservancy, Undated, Eduardo Avaroa Andean Fauna National Reserve, Bolivia, Fact Sheet.
- Racevskis, L., Ahearn, M., Alberini, A., Bergstrom, J., Boyle, K., Libby, L., Paterson R., Welsh, M., 2000, Improved Information in Support of a National Strategy for Open Land Policies: A Review of the Literature and Report on Research in Progress, Paper presented at the 24th International Conference of Agricultural Economics, August 13-18, 2000, [http://are.berkeley.edu/courses/ARE242/spring05/classReadings/newValuation/Racevskis_2000.pdf], (Site accessed 17 August 2005).
- Ready, R., Berger, M., Bouquets, G., 1997, Measuring Amenity Benefits from Farmland: Hedonic Pricing vs. Contingent Valuation, *Growth and Change*, Vol. 28(4), pp. 438-458.
- Rosenberger, R., Loomis, J., 1999, The Value of Ranch Open Space to Tourists: Combining Observed and Contingent Behavior Data, *Growth and Change*, Vol. 30, pp. 366-383.
- Stynes, D., Sun, Y., 2003, Economic Impacts of National Park Visitor Spending on Gateway Communities: Systemwide Estimates for 2001, Department of Park, Recreation and Tourism Resources, Michigan State University and National Park Service Social Science Program, East Lansing, MI, 30 pgs.
- Tyrrell, T., Devitt, M., 1999, Valuing Changes to Scenic Byways, in Abraham Pizam and Yoel Mansfeld, (eds) *Consumer Behavior in Travel and Tourism*, Haworth Hospitality Press, New York, pp. 227-244.
- Tyrrell, T., Devitt, M., 1996, *An Analysis of the Economic Impact of Scenic Byway Treatments in Vermont: A Pilot Study*, Impact Research Associates, Kingston, RI.
- Varian, H.R., 1992, *Microeconomic Analysis*, 3rd ed., W.W. Norton & Company, New York.
- Willis, K., Garrod, G., 1993, Valuing Landscape: A Contingent Valuation Approach, *Journal of Environmental Management*, Vol. 37, pp. 1-22.
- Wunder, S., 2000, Ecotourism and Economic Incentives – An Empirical Approach, *Ecological Economics*, Vol. 32, pp. 465-79.