Title

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Journal

Society & Natural Resources, 34(9)

ISSN

0894-1920

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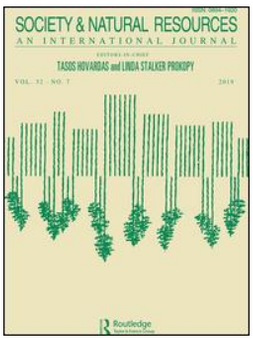
Publication Date

2021-09-02

DOI

10.1080/08941920.2020.1823542

Peer reviewed



Routledge
Taylor & Francis Group

Society & Natural Resources
An International Journal

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/usnr20

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To cite this article: Christopher T. Bastian , Catherine M. Keske , Dana L. Hoag & Donald M. McLeod (2020): Comment on Eaton et al.'s Reconceptualization of Economic Dependence in "Trouble with Sense of Place in Working Landscapes", Society & Natural Resources, DOI: 10.1080/08941920.2020.1823542

To link to this article: https://doi.org/10.1080/08941920.2020.1823542

Published online: 27 Sep 2020.

SOCIETY & NATURAL RESOURCES
https://doi.org/10.1080/08941920.2020.1823542

Comment on Eaton et al.'s Reconceptualization of Economic Dependence in "Trouble with Sense of Place in Working Landscapes"

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ABSTRACT

This commentary expands upon Eaton et al.'s research note about the challenges of measuring sense of place (SOP). Our body of work includes qualitative and quantitative research that supports their finding that landowners have a strong SOP and conservation ethic about their working lands. However, we deliberate on the importance of considering a broader interpretation of "economic dependence" in the context of SOP, which may include financial and non-financial benefits to the landowner. Eaton et al. report mixed results in its predictive power for conservation decisions on working lands. Yet, several issues negatively impacting economic dependence may override conservation management decisions and explain the "mixed" results reported by the authors. We posit that the definition of economic dependence should include both income and wealth generation as well as landowner amenity rents (defined as the landowner's internally derived benefits or satisfaction from the amenities on their working lands).

ARTICLE HISTORY
Received 20 May 2020
Accepted 20 August 2020

KEYWORDS
Agricultural land conservation; landowner amenity rents

Introduction

In this commentary, we advocate to include "economic dependence" as a dimension of sense of place "SOP." We extend its definition to include income, wealth generation, and landowner amenity rents, which are the internal economic (but non-monetary) benefits/satisfaction that landowners derive from the amenities on their working lands. We expand upon a key point made by Eaton et al. (2019) in their research note about the trouble with assessing SOP on working lands. Most SOP studies to date have been conducted on high amenity landscapes that are "consumed" for recreational purposes, and the lens may be too narrow to capture SOP complexities on working lands. Our body of research on agricultural land conservation suggests expanding the number of SOP dimensions from five (place attachment, place meaning, place dependence, place

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identity, and place satisfaction) to six, including economic dependence. Citing the economics literature, we note that the dimension "economic dependence" may consist of financial (e.g. income and wealth) as well as non-financial benefits.

Reconceptualizing Place to Include Economic Dependence as a Standalone Dimension

Eaton et al. (2019) summarize mixed findings when SOP is a predictor of conservation outcomes on working landscapes. Part of their discussion explores current conceptualizations of economic dependence as a potential issue. The authors call for researchers to reconceptualize place dependence and suggest economic dependence needs to be expanded theoretically and tested empirically as a distinct dimension of SOP.

We strongly agree with Eaton et al.'s (2019) point that the definition of economic dependence should be expanded and considered a standalone SOP dimension. Based on over a decade of research (from Hoag et al. 2005 to Keske et al. 2017) about what motivates agricultural producers to apply conservation easements on their land, we believe that researchers need to broaden the current view or working definition of economic dependence to include income, wealth generation, and internally derived benefits landowners receive from the amenities on their working lands as examples of economic benefits generated from place. The term "economic benefits" may include non-financial as well as financial benefits from agricultural production. Though economic benefits are related to and often encompass financial benefits, the two terms should not be conflated. Economic value includes opportunity cost and utility, which are not always captured in a financial transaction or market price. Research indicates that many landowners are willing to pay more for ranchlands or access to grazing permits than what would be expected from the land's ability to generate income from agricultural endeavors (see Torell et al. 2005; Rimbey Torell, and Tanaka 2007). This discrepancy relates to additional economic utility or value that accrues to landowners because of the physical and intangible amenities generated from the land or place beyond income or wealth, i.e. the landowner gets economic value from producing on those lands beyond income or wealth.

The economic literature related to decisions regarding conservation easement placement has termed these economic benefits as "private amenity rents" (Hoag et al. 2005; Keske 2008; Keske, Hoag, and Bastian 2011); we refer to these as "landowner amenity rents" in this article. Landowner amenity rents are somewhat independent from "amenity-rich" lands. The landowner may be the only one in society who derives benefit from the land, and the land may not even provide amenities to others. For example, a landowner may acquire non-monetary economic value from their own pride in owning land that their family homesteaded. "Rents" are a term for "unearned non-monetary benefits"; hence, "landowner amenity rent" is the benefit that the landowners have for the land in addition to any value that it may provide to the rest of society. In sum, economic benefits, or landowner amenity rents do not always reflect financial or monetary benefits, though they often do, in the case of working lands. Though amenity rents could ostensibly be lumped into the "lifestyle" category presented by Eaton et al. (2019), we assert that landowner amenity rents are separate and distinct from the current

dimension of place dependence that tends to focus on enjoyment of activities in place (see Table 1 in Eaton et al.).

A slice of our extensive research on SOP and conservation easements (Cross et al. 2011) was discussed in Eaton et al (2019). In this comment, we highlight findings from the entire body of our research on conservation easements, which emphasizes how understanding and empirically capturing economic factors like income, wealth generation, and landowner amenity rents can address the shortcoming in the definition of SOP identified by Eaton et al. Understanding these factors elucidates SOP and prediction of conservation outcomes.

Qualitative Research Indicates Landowner Amenity Rents Are Part of SOP

We used multiple research methodologies and data layers to explore the complex relationships between people and working landscapes, as promulgated by Eaton et al. (2019). In 2006, we conducted qualitative focus group research interviews with 44 agricultural landowners to seek their motivations for agricultural land protection (Miller et al. 2011). Results indicated that almost all landowners viewed their land as providing important benefits to local communities, including cultural benefits, as well as dimensions of SOP such as place attachment and place identity. Some respondents noted that their land provided environmental benefits like open space, and that some of these benefits could also stimulate the economy, like providing wildlife habitat for hunting. Nearly all landowners demonstrated awareness that their land provided a number of important ecosystem services that would be lost if the land was subdivided (Miller et al. 2011). In addition, many landowners expressed that they enjoyed these ecological benefits themselves, and irrespective of whether others felt the same. When a landowner values these benefits more than the earning potential of the land, they constitute landowner amenity rents.

The act of exhibiting managerial control over the land provided nearly all landowners with a sense of satisfaction (Miller et al. 2011), and they described high conservation ethic and felt responsibility to manage the land for multiple generations. Many landowners stated in focus groups that their deep knowledge of the land enabled them to care for the environment, including wildlife, and to manage agricultural production over time. They noted that losing managerial control to a land trust or conservation organization might serve as a deal breaker for entering into a conservation agreement. While some expressed concern that loss of managerial control could reduce their income, the act of managing the land for agricultural production brought satisfaction to many landowners. Losing managerial control under a conservation easement agreement would reflect loss of landowner satisfaction (or landowner amenity rent).

Empirical Evidence of Economic Dependence

Given the results of these focus groups, we worked with sociologists, most notably J. E. Cross and M. G. Lacy, to develop questions measuring SOP dimensions, as well as land characteristics, and financial factors that might affect conservation easement decisions.

We further explored these definitions in our survey of 2270 agricultural landowners in Colorado ($N = 1737$) and Wyoming ($N = 533$) conducted in 2007.

These surveys are the subject of initial analyses reported by Cross et al. (2011) and depicted in Eaton et al. (2019). Cross et al. (2011) examine how SOP, conservation ethic, and economic dependence predict the existence of a conservation easement on the landowner's property. Economic dependence as tested in that article was solely defined by Likert questions related to income or financial livelihood generated from the land. In contrast, place identity was tested as a four item additive scale developed from Likert scale questions related to personal history and identity tied to the land, community belonging, feeling "more myself here than anywhere", and feeling a spiritual connection to where the respondent lives (Cross et al. 2011). Regression results indicate that economic dependence had a significantly negative relationship with the adoption of conservation easements, conservation ethic had a positive and significant relationship, but place identity was not statistically significant in explaining the existence of a conservation easement on the landowner's property. Key findings are that "perceived economic dependence on the land is a subjective experience related to but separate from farm income and land characteristics" (p.81). Landowners, while having a strong conservation ethic and commitment to being good stewards "may not be willing to place a conservation easement on their property because of financial considerations" (p.81).

Though the Cross et al. (2011) study elucidates some financial dimensions of economic dependence, namely income, our other studies show how the landowner amenity rent aspect of economic dependence may better explain these conclusions. For example, a property owner might accept only a fraction of the economic cost to adopt a conservation measure if they retain important landowner amenity values such as privacy, or desire to uphold a family legacy (Keske, Hoag, and Bastian 2011).

Additional empirical analyses of these surveys have expanded our understanding of SOP, conservation ethic, and economic dependence in ways that are not described by Eaton et al. (2019). In addition to the data analyzed in Cross et al. (2011), we utilized data from the stated choice experiment also conducted in the survey[1]. Those stated choice questions give respondents the opportunity to choose between conservation easements with various levels of attributes (identified in the focus groups during the qualitative research phase) which included length of the easement, protection of wildlife habitat, the potential for land trusts to impact managerial control of the land, provision of public access, and financial benefits including the potential for payment and reduction in income tax liability.

These stated choice data have been analyzed using a technique known as random utility models (Louviere, Hensher, and Swait 2000). The same stated choice experiment was conducted with land trust agents as part of our grant-related research. Landowner willingness to enter into a conservation easement agreement for land protection was examined against land trust willingness to engage in a conservation easement agreement with an agricultural landowner (Bastian et al. 2017). We tested a summated Likert scale variable designed to represent SOP, as reported in Cross et al. (2011). The coefficient had a positive sign and it was found to be statistically positive in explaining acceptance of conservation easements by landowners. This result is consistent with our focus group results but somewhat counter to conclusions found in Cross et al. (2011). We believe

that this is related to how the components of SOP were deconstructed for the Cross et al. (2011) analysis. Moreover, the random utility model used easement attributes from the stated choice experiments in addition to SOP to explain easement acceptance, which may have provided more specificity.

Results reported in later research (Bastian et al. 2017) show that other indicators of wealth creation, defined more broadly than economic dependence in Cross et al. (2011), were statistically significant in explaining easement choice. Anything about conservation that increased personal financial benefits improved the likelihood of adoption and vice versa. We found that the higher the percent of perceived market value of their land for which landowners were compensated (wealth creation), the more likely landowners were to choose a conservation easement. Moreover, results of the analysis also indicated that landowners were more willing to choose an easement in perpetuity because of its reduction in tax liability as compared to an easement lasting 20–25 years. An indication of higher land productivity and higher agricultural commodity sales that might be lost or threatened by conservation (both of which are indicators of income generation) reduced the likelihood of choosing an easement. Additionally, if a respondent had more off-farm income (an indicator of less dependence on income from agricultural endeavors), then it increased the likelihood that respondents would choose an easement.

Interestingly, though concerns about losing managerial control emerged as a critical theme within the landowner focus groups, this effect did not show as statistically significant in the landowner choice set empirical analysis, as it did for land trusts (Bastian et al. 2017). The lack of statistical significance among landowners could reflect the small focus group sample relative to the survey sample size, or that conservation easement attributes (like financial benefits) were more influential in determining whether landowners enter into a conservation easement agreement. However, to further explore landowner amenity rent, we conducted additional empirical analysis on the set of attitudinal Likert scale questions about the ecosystem service benefits provided to agricultural landowners by their lands (Bastian et al. 2017). A significantly positive relationship was found between easement choice and the summated score on these ecosystem service questions (Bastian et al. 2017). We believe the provision of these ecosystem services increased amenity rents received by landowners. Thus, the more landowners believed their land provided important ecosystem services, the more amenity rents they received and the more inclined they were to protect them with an easement. Overall, these results support that amenity rents are important to owners and managers of working lands, and they impact their conservation behavior and outcomes.

In summary, all of this points to the importance of using income or wealth creation from the land as a dimension of economic dependence; and that the wealth creation dimension is much broader than simply the income generated from agricultural operations. Moreover, landowner amenity rents are also a key dimension of economic dependence. This supports one key finding espoused in Cross et al. (2011) that economic dependence is broader than farm income alone.

Conclusions

Our body of research, which includes qualitative and quantitative research analyses, shows that landowners have strong SOP and conservation ethic about their working

lands. We believe that the totality of our results point to economic dependence being a much broader concept for landowners than simply income generation from agricultural operations on their land. Given these results, we also believe that economic dependence, defined as the summation of income, wealth creation, and landowner amenity rents emanating from the land or place, offers a consistent predictor of conservation behavior related to placing a conservation easement on working lands, particularly as a stand-alone dimension of SOP. That is, if choosing a conservation action is perceived to significantly reduce economic dependence (income, wealth creation, amenity rents, or a combination of these components), thereby reducing SOP, landowners are more likely to forgo that action. We believe that the reported research strongly supports our conceptualization of economic dependence, but we support Eaton et al.'s conclusion that more research in this area is warranted. A logical extension of our research may be to evaluate economic dependence on other types of working lands, such as privately-owned forest or recreational areas. These working lands may offer the opportunity to assess how income, wealth-building and landowner amenity rent affect conservation decisions, and whether these three aspects of economic dependence manifest in a similar way to agricultural lands.

Note

1. Stated choice experiments ask respondents to make choices between different policies or goods. They have been used extensively to elicit choices and attribute values in marketing research, food product research, and research about environmental goods or policies (see Louviere, Hensher, and Swait 2000; Hensher, Rose, and Greene 2005).

Acknowledgments

The authors appreciate the contributions of two anonymous reviewers and the editor.

Funding

This publication is a contribution to USDA-NRI grant # 2005-35401-16008.

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