ABSTRACT
Scholars and practitioners are engaging in a fierce debate over the implications of using market-based discourse in communicating environmental problems and solutions. However, there has been less attention to exactly who is using such economic discourse and how it is combined with other discourses. Prior researchers have proposed tripartite frameworks for categorizing discursive strategies around pro-economic, anti-economic, and non-economic metaphors, which are here applied to eight U.S. environmental advocacy organizations’ press releases. An original text-analytic dictionary of pro-economic, anti-economic, and non-economic discourse is used to distinguish between the proposed discourse strategies. This analysis indicates that economics-oriented discourse strategies are more complex and varied than previously suggested. A more nuanced framework is proposed.

Language, though often used uncritically, results from social and political processes. The language used in a given situation – i.e. the discourse – is underpinned by common “assumptions, judgments, and contentions,” and creates “a shared way of apprehending the world” (Dryzek, 1997, p. 8) and “a basis for coordinated human action” (Brulle, 2000, p. 26). These underlying assumptions do not simply exist, however. Discourses are themselves powerful means for shaping individuals’ worldviews and the bounds of social and political action. The creation and maintenance of discourse is a political and social struggle over the power to define reality and identify the limits around what is universal and natural (Fairclough, 2015). Thus, discourse is created and perpetuated through societal structures and interactions – both laying out the boundaries of acceptable knowledge and enhancing the power of knowledge holders (Keller, 2017). Discourse supports (and reveals) societal power, but also provides a means of resistance (Dryzek, 1997; Keller, 2017; Prelli & Winters, 2009).

An individual’s understanding of the environment, and the causes and consequences of its degradation, is similarly built and shaped by discourse. As Cantrill and Oravec (1996, p. 1) emphasize: “of our environment, what we say is what we see.” However, as a critical analysis of discourse would predict, environmental discourses are heavily contested. Environmental advocates play out this struggle through discursive frames that identify their preferred causal explanations and solutions for environmental degradation, including varying claims about human-nature relations, the value of nature, the means for protecting nature, and the reasons for doing so (Brulle, 2000). Much of the variation between such discourses can be identified via key metaphors and rhetorical devices that distinguish their different visions (Dryzek, 1997).
One discursive struggle has arisen over the use of economic metaphors for understanding environmental degradation and how it should be addressed (Barnaud & Antona, 2014). Market-based metaphors such as “natural capital” and “ecosystem services” reframe nature, and its value, in relation to human economic needs (Boehnert, 2016). Proponents argue that the preservation of nature requires bringing it into the market economy and emphasizing its anthropocentric benefits (Goldman & Tallis, 2009; TEEB, 2010). Opponents counter that subsuming nature within the human economy misconstrues human-nature relations, denies nature’s intrinsic value, and risks both endangering the environment and entrenching human injustices (Boehnert, 2016; Eckersley, 2005/2004; Matulis, 2014; McCauley, 2006; Sullivan, 2017).

While scholars have mapped broader environmental discourses (Brulle, 2000; Dryzek, 1997) or discourses surrounding specific environmental topics such as sustainable development (Hopwood, Mellor, & O’Brien, 2005) or climate change (Carvalho, 2005), there has been less attention to exactly how environmental advocates use pro-economic discourses – or combine them with anti-economic and non-economic discourses. To add to our understanding of economic discourse strategies, I analyze the press releases of eight major U.S. environmental organizations with varying ideologies and advocacy strategies. I apply the frameworks of Coffey (2016) and Fisher and Brown (2014), who propose three dominant economics-oriented discourse strategies, which each employ a particular combination of pro-economic, anti-economic, and non-economic discourse. I ask how these three discourse strategies are used in environmental organizations’ public communications.

To address this question, I first discuss the debates around economic discourses and the recent research on environmental actors’ uses of economic metaphors. I then summarize Fisher and Brown’s (2014) and Coffey’s (2016) frameworks of economic discourse strategies, and their constituent pro-economic, anti-economic, and non-economic discourses. I apply these frameworks to hypothesize which discourses we should expect in the press releases of eight major U.S. environmental organizations, and compare them using an original text-analytic dictionary. Through this analysis, I argue that there is greater variation and complexity in the use of economics-oriented discourse strategies among environmental advocates than previously theorized. I conclude with a more extensive framework of economic discourse strategies, and suggest that a clearer understanding of environmental communication requires a more nuanced view of how pro-economic, anti-economic, and non-economic discourses are combined to build environmental-advocacy narratives.

**Economic discourse in environmental communication**

Traditionally, economic discourses of the environment, at least in the United States, have focused on the human use of and benefits from natural resources, whether implying no need for conservation (i.e. “manifest destiny” discourse) or conservation through scientific or technical means (i.e. “wildlife management” and “conservation” discourses) (Brulle, 2000). In this context, environmental-protection advocates have often structured their discourse in contention with the terms of industrialism whether seeking change from within the dominant economic system, or by seeking to change the system itself (Dryzek, 1997, p. 13).

More recently, the center of the struggle over economic metaphors has been reshaped around whether nature should be explicitly incorporated into the globally-dominant neoliberal and capitalist market economy. Certain economic metaphors – such as ecosystem services – were created to argue for environmental protection (see Bekessy, Runge, Kusmanoff, Keith, & Wintle, 2018; Norgaard, 2010). However, these metaphors’ underlying assumptions about human relationships with nature have subsequently informed the bounds of science and policy (Norgaard, 2010). This struggle over economics-focused environmental discourse, and its practical implications, can be seen in recent debates over the use of economic metaphors and frameworks for conservation policy (i.e. Corbera, 2015; Damiens et al., 2017; Kareiva & Fuller, 2016; Matulis, 2014; Potschin, Primmer, Furman, & Haines-Young, 2016; Schröter & van Oudenhoven, 2016; Silvertown, 2015; Silvertown, 2016; Wilson & Law, 2016).
Proponents of this new economic discourse of the environment usually acknowledge both nature’s importance in itself (i.e. independent of humans) as well as its critical importance for human functioning, but argue that nature must be incorporated into market economies to enable its preservation and to correct for the damages incurred by its prior exclusion. The Economics of Ecosystems and Biodiversity (TEEB) global initiative, for example, sees its core goal as “making nature’s values visible” by “mainstream[ing] the values of biodiversity and ecosystem services” and “demonstrat[ing] their values in economic terms” in order to increase their importance in economic and political decision-making. From this perspective, environmental degradation results from a failure to incorporate nature’s true value into decision-making, but can be reversed if “sustainable management is recognized as an economic opportunity rather than as a constraint on development” (TEEB, 2010, p. 28). Environmental preservation is justified for its anthropocentric benefits, even if those benefits are not always economic (Schröter & van Oudenhoven, 2016).

This market-focused approach is deemed necessary, or useful, given failures of traditional approaches to conservation (Brown, Tipper, & Wheeler, 2016; Potschin et al., 2016). As Goldman and Tallis (2009) argue, the implementation of economic approaches to conservation via ecosystem-service projects, could expand the range and scope of biodiversity conservation globally. In addition, some hope that (even instrumental) use of economic discourse may prompt environmental action from individuals, businesses, or governments who were not stirred by previous environmental discourses (see Fisher & Brown, 2014).

Critiques of this market-focused approach to conservation, and its associated discourse, arise from multiple angles. First, economic discourses have been critiqued for oversimplifying both ecological systems and the processes for applying economic frameworks to those systems. As Norgaard (2010) argues, there are more ways to understand and describe ecological structures and processes than simply through economic valuation and benefits (see also Turnhout, Waterton, Neves, & Bulzer, 2013; 2014). In particular, the focus on economics-oriented ecosystem services reduces the complex value(s) of ecosystems and biodiversity to a single quantifiable (and commodifiable) measure of value (Turnhout et al., 2013; 2014). Barnaud and Antona (2014) add that economic discourse hides its own inherent conceptual uncertainties, and thus inaccurately suggests that applying economics to the environment is straightforward and uncontested. In other words, economic discourse may imprecisely and incorrectly reflect (or construct) reality (Sullivan, 2017).

Second, economic discourse over-emphasizes nature’s human-directed benefits, reducing our attention to nature’s intrinsic and non-anthropocentric value (Admiraal, Musters, & de Snoo, 2016; Gray & Curry, 2016; McCauley, 2006; Silvertown, 2015). Bekessy et al. (2018) argue that this may perversely replace altruistic motivations with monetary motivations, making it less likely that new publics will be mobilized for nature conservation than if moral frames were invoked (see also Corbera, 2012; Doak, Bakker, Goldstein, & Hale, 2014). Much economic discourse also subsumes the environment into the human economy, an “epistemological error” about the relationship between the planetary ecosystem and the human economy that depends upon it (Boehnert, 2016, p. 404). Thus, critics suggest economic discourse may counterproductively reframe the relationship between humans and nature (McCauley, 2006; Spash & Aslaksen, 2015).

Finally, the application of economic metaphors towards concrete environmental policies may create unjust outcomes. For instance, economic discourse narrows the values and knowledge that are relevant for nature and biodiversity conservation, excluding the wide diversity of human–nature relationships and marginalizing peoples who hold these diverse views and experiences (Turnhout et al., 2013). More drastically, Corbera (2012, pp. 613–614) argues that economics-framed arguments “depoliticize” conservation policy, delegitimize opposing viewpoints, and ultimately harm “socio-ecological resilience” by creating tradeoffs between local communities and marketized ecosystem services. Such critiques also emphasize socio-economic inequalities and injustices created by the current economic system, and the potential for recreating or reinforcing them in the environmental sphere (Kendall, 2008; Matulis, 2014; Silvertown, 2015; Sullivan, 2017). In short, these critics prefer replacing (or at least supplementing) economic discourse with socio-ecological and moral concepts like
justice and solidarity, among others (Admiraal et al., 2016; Barnaud & Antona, 2014; Doak et al., 2014; Scoones, 2016; Spash & Aslaksen, 2015).

As this indicates, there is an extensive literature, and debate, on the potential implications of market-oriented environmental discourse. However, until recently there has been less systematic research into who uses economic discourse and how. Fisher and Brown (2014), Admiraal et al. (2016), Coffey (2016), and Kusmanoff, Fidler, Gordon, and Bekessy (2017) provide four exceptions, demonstrating that the use of economics-focused environmental discourse has varied over time and across organizations.

Admiraal et al. (2016) and Kusmanoff et al. (2017) identify a substitution effect between market-economic and biodiversity-conservation discourses. As economic language increased in EU research-subsidy documents (Admiraal et al., 2016) and Australian government and conservation-organization press releases (Kusmanoff et al., 2017), attention to biodiversity itself appears to have decreased. Thus, economic discourse displaces non-economic discourses in the political sphere.

Fisher and Brown (2014) and Coffey (2016) suggest that while economic discourse is quite prevalent, it is by no means equally used (or equally believed) across organizations. Fisher and Brown (2014) find that some organizations use economic rhetoric as an instrumental strategy for engaging funders and policymakers, rather than as an accurate representation of natural value. Other organizations either avoid economic metaphors or actively counter economic frames with critical anti-economic discourse (Fisher & Brown, 2014). Additionally, Coffey (2016) finds that major international institutions vary substantially in their use of specific economic metaphors when discussing the environment.

Given these findings, and the implications of the debates surrounding which discourses environmental advocates should use to communicate about nature and promote solutions to environmental degradation, this raises the question of how environmental advocates, more broadly, are actually using pro-economic discourse and how they combine it with anti-economic and non-economic discourses to make their arguments to the public and to policymakers.

**Economic discourse strategies**

As discourse shapes power and knowledge within society, using a particular discourse can be understood as a strategic act. Specifically, “language differences play an important, positive role in signaling information as well as in creating and maintaining the subtle boundaries of power, status,” etc., between different speakers in society (Gumperz, 1982, p. 6). Thus, a speaker’s vocabulary builds, conveys, and reinforces specific interpretations of reality. More pointedly, a discourse strategy is the “(discursive) manipulation of ‘reality’ by social actors in order to achieve a certain goal” whether conscious or not (Carvalho, 2005, p. 3). For example, the discourse used to present an environmental problem – such as climate change – has the potential to uphold or contest dominant ideologies and legitimate political choices (Carvalho, 2005).

The use of economic discourse for discussing the environment is similarly strategic in its potential to reshape the relationship between the two. Fisher and Brown (2014) and Coffey (2016) propose similar tripartite typologies of economics-oriented discourse strategies. While these three discourse strategies are defined by their relationship to market-based economics, they vary in their use of pro-economic, anti-economic, and non-economic language.

The first is the “enthusiast” or “embrace” discourse strategy, defined by the heavy use of market-based economic metaphors for solving environmental problems, and suggesting that environmental degradation either results from “the lack of economics, and the lack of quantification” (Coffey, 2016, p. 215) or simply that economic framing is necessary for environmental conservation (Fisher & Brown, 2014, p. 261). This discourse strategy is the most supportive of dominant economic and political structures (Coffey, 2016, p. 219), and seeks environmental solutions from within those structures, rather than attributing environmental degradation to failures of governance or regulation (Fisher & Brown, 2014, p. 261). As a discourse strategy, this includes heavy use of economic metaphors, and particularly market-based economic metaphors, but excludes anti-economic discourse that is critical of economic approaches. From this perspective, non-economic “moral arguments
for nature are not a priority” (Fisher & Brown, 2014, p. 261). In addition, Admiraal et al. (2016) and Kusmanoff et al. (2017) suggest that this discourse strategy will include lower usage of (non-economic) biodiversity-conservation discourse.

The second type is the “pragmatist” or “partition” discourse strategy. Fisher and Brown (2014, p. 259) define this approach as using pro-economic discourse while also explicitly emphasizing nature’s intrinsic value, potentially through non-economic discourses. Coffey (2016, p. 217) suggests that this approach involves the use of economic metaphors only in some instances, while using non-economic metaphors in others, such as metaphors grounded in ecology or political and social structures. This strategy can be seen as “pluralist” with a willingness to engage with economic framing, but which is nevertheless still interested in promoting alternative visions of the environment (Coffey, 2016, p. 219; Fisher & Brown, 2014, p. 259). The implication is that a wider variety of pro-economic (i.e. not simply market-based) and non-economic metaphors will be used with this discourse strategy.

The final type is the “skeptic” or “reject-and-replace” discourse strategy. This approach indicates either a skepticism towards or outright rejection of applying economic concepts to environmental conservation, leading to an anti-economic discourse that includes the pejorative use of economic concepts – i.e. commodification, profit maximization – paired with alternative non-economic metaphors for human-nature relationships, such as justice or stewardship (Coffey, 2016, p. 2018; Fisher & Brown, 2014, p. 262). This approach is also suggested by opponents of economic language who argue that alternative metaphors and discourse should be emphasized in environmental communication (e.g. Boehnert, 2016; Gray & Curry, 2016; Spash & Aslaksen, 2015; Sullivan, 2017). Thus, this strategy is more politically confrontational and radical, with a willingness to negatively critique economic structures, and a greater emphasis on alternatives to the status quo (Coffey, 2016, p. 219; Fisher & Brown, 2014, p. 260).

These discourse strategies each suggest particular combinations of pro-economic, anti-economic, and non-economic discourse categories. However, the precise metaphors used within each is less clear. The key issue is that economic terminology may be used in the service of promoting market-based environmental solutions or it may be used to critique and undermine them. Coffey (2016, p. 212) highlights this paradox in his investigation of four targeted economic metaphors: natural capital, natural assets, ecosystems services and ecological debt. His results show that the latter metaphor is not in the same category as the first three, as “ecological debt” is more likely to “unsettle dominant discourses” than support them (Coffey, 2016, p. 217). Thus, the use of economic vocabulary alone is not enough to distinguish between economic and anti-economic discourses in an environmental context.

The neoclassical economics concept of “profit maximization” provides another example. While market-economic environmental discourse emphasizes that profitability and conservation can coexist, “profit maximization” implies profits supersede other goals and values. Thus, even actors particularly supportive of market-based economics, such as TEEB (2008; 2010), do not use the phrase to promote environmental conservation. TEEB proposes that there is an “ethically indefensible trade-off” between the monetary value (i.e. profit) of ecosystem-services and their value for human well-being (2008, pp. 31–32), and that “short-term profits … promote destructive practices” precisely because they are “logical and profitable” (2010, pp. 9–10). Instead, TEEB suggests alternatives to profit maximization, such as the “development of new ‘sustainability’ metrics to complement the familiar metrics of GDP growth and corporate profitability” (2008, p. 59). Indeed, the only things TEEB explicitly seeks to “maximize” are the “efficient use of capital” (2010, p. 19) and “the social benefits of consumption” (2008, p. 31). Thus, the phrase “profit maximization” suggests a critique of market-based economics, for use in anti-economic environmental discourse.

In addition, economic discourse can also be used to promote alternatives to market-based or neo-liberal environmental conservation (see Boehnert, 2016; Cato, 2011; Coffey, 2016). For example, green economists propose a positive economic program that refashions and reconsiders the relationship between the environment and the human economy, as well as social and political systems (Cato, 2011). This can be seen in different conceptions of property rights, where neo-classical and
environmental economists promote private property as a solution to environmental problems, while ecological economists promote community, common, or collective property via “social conservation systems” and other public forms of ownership (Cato, 2011, pp. 218–19). In Fisher and Brown’s (2014) and Coffey’s (2016) typologies this difference in market-based vs. other pro-economic language would highlight a distinction between an embrace/enthusiast and a more pragmatic/partition discourse strategy.

Thus, distinguishing between economic discourse strategies requires more than simply identifying the presence or absence of any economic language. Instead, the above literature suggests that there are at least two different pro-economic discourse categories: market-economic metaphors, and what could be called public-economic metaphors, which suggest economy-environment relations outside the market. Anti-economic discourse also uses economic language, but presents critical-economic metaphors meant to pejoratively frame market economics. Based on the typologies presented by Fisher and Brown (2014) and Coffey (2016), we would expect the embrace/enthusiast discourse strategy to use market-based economic metaphors, while the partition/pragmatist strategy would add (or more heavily use) public-economic metaphors. The skeptic/reject-and-replace discourse strategy would emphasize critical-economic metaphors.

In addition to these pro- and anti-economic discourse categories, these discourse strategies also include non-economic discourse. As noted, Fisher and Brown (2014) and Coffey (2016) suggest that metaphors focused on social, political, or moral relationships with nature – i.e. socio-ecological metaphors – should be used by both the partition/pragmatist strategy and the skeptic/reject-and-replace strategy. Finally, Admiraal et al. (2016) and Kusmano et al. (2017) suggest that biodiversity and conservation language – i.e. conservation-ecology metaphors – will be less prevalent in an embrace/enthusiast discourse strategy.

**Characterizing environmental advocates**

We can apply the tripartite framework of discourse strategies, and their constituent discourses, to hypothesize which ones environmental advocates are likely to use. While major environmental organizations have been differentially associated with economic approaches, there has been little systematic analysis of their specific discourse strategies, combining pro-economic, anti-economic, and non-economic metaphors. To investigate this, I focus on eight major environmental organizations in the United States: 350.org (350), Environmental Defense Fund (EDF), Friends of the Earth (FOE), Greenpeace (GP), The Nature Conservancy (NC), Natural Resources Defense Council (NRDC), the Sierra Club (SC), and World Wildlife Fund (WWF).

Seven of these eight (excluding 350.org) are among the most prominent US environmental organizations (Bosso, 2005; Brulle & Jenkins, 2010). All were founded prior to 1971, and generally focus on a wide range of environmental issues (Bosso, 2005). However, they vary in their fundamental ideologies and advocacy approaches, and prior research suggests they should vary in their acceptance of market-economic discourse.

Bosso (2005, p. 74) arranges these seven organizations from most “accommodationist” to most “radical” as follows: NC/WWF, EDF, NRDC, SC, FOE, GP. The most accommodationist (NC, WWF, and EDF) have all strongly promoted ecosystem-services and market-based approaches to conservation, though NC has been most heavily associated with the practice (Bosso, 2005, p. 77; Goldman & Tallis, 2009; Spash & Aslaksen, 2015, p. 246). These three organizations are characterized as more “willing to embrace market solutions and collaborate with corporations to achieve common goals” (Bosso, 2005, p. 75). Thus, we should expect that NC, WWF, and EDF will conform to an embrace/enthusiast discourse strategy.

Bosso (2005, p. 75) argues that NRDC and SC are more likely to “offer varying critiques of market capitalism but tend to focus on achieving change through the political system.” In contrast, the most radical of the seven, FOE and GP “express the strongest skepticism of market capitalism and even about the efficacy of working within the political system” (Bosso, 2005, p. 75; see also Fisher &
Thus, NRDC and SC are likely to use a partition/pragmatist discourse strategy, while FOE and GP are more likely to use a reject-and-replace/skeptic discourse strategy.

In addition to these dominant actors in the U.S. environmental movement, I include 350.org in this analysis. 350.org was founded in 2008 and focuses on mobilizing public action against climate change (Tokar, 2014). This organization provides an interesting counterpoint to the seven others: while its public actions suggest it may be confrontational, it has been criticized for being too moderate and too willing to work through dominant institutions (Dietz, 2014; Garrelts & Dietz, 2014; Tokar, 2014). It has also actively pursued a campaign to convince major institutions to divest from fossil fuels, suggesting direct attention to economic drivers of climate change. Thus, 350.org may use either a pragmatist or skeptic discourse strategy.

Data

I focus on the discourse presented in the press releases of these eight environmental organizations. Press releases are relatively short statements intended to publicize particular events or issues from their writer’s perspective. Traditionally, they have been targeted at the media, through whom the public is reached; but with the advent of the internet, press releases are now also directly accessible by the public (Strobbe & Jacobs, 2005; Walters, Walters, & Starr, 1994). Given that releases are deliberately framed for these audiences, their language should mirror the discourses and narratives that organizations want to promote. In particular, as the media reinforces dominant environmental discourses, with real impacts on public opinion and attention (Yacoumis, 2018), environmental-advocacy press releases are intended to interject particular views into or through the dominant discourse. As Kusmanoff et al. (2017, p. 161) argue, press releases are a key part of many organizations “contribution to the public political discourse on environmental and conservation issues.”

The original data set used here includes 9,082 press releases gathered from these eight organizations’ U.S. websites in late June 2017. This set includes all publicly available and reliably dated press releases between January 1, 2010 and June 20, 2017, and which are in English and at least 400 characters long. NRDC, EDF, WWF, and FOE have press releases across this entire period. GP has reliably dated press releases beginning in August 2010. SC, 350, and NC had a narrower span of releases available: beginning in January 2013, November 2013, and December 2014, respectively.

Methodology

Identifying discourse strategies (and their constitutive pro-, anti-, and non-economic language) requires a method for distinguishing which phrases fall within each discourse category. I build on and expand Coffey’s (2016) methodology for investigating the use of economic metaphors, which consists of locating key phrases within organizations’ written texts. This approach is effectively a text-analytic “dictionary” approach, whereby micro-level features of a text (i.e. words or phrases) are identified and counted according to their inclusion in a list of theoretically relevant words sorted into “a priori categories” (Loughran & McDonald, 2011; see also Young & Soroka, 2012, p. 208). Variations in word use and frequency can then be used to gain insight into the conceptual frameworks underlying environmental discourse (Admiraal et al., 2016).

Thus, the first task is to build a dictionary that enables a comparison of the above discourse categories. Previous studies have focused on just a few metaphors to discern narrow patterns in their use (i.e. Admiraal et al., 2016; Coffey, 2016; Kusmanoff et al., 2017). However, to investigate the discourse strategies proposed by Coffey (2016) and Fisher and Brown (2014), a much more extensive set of metaphors is needed to distinguish the presence of various pro-, anti- and non-economic discourses. To this end, I compiled a list of key terms and phrases from proponents and opponents of the economic framing of nature, using both academic and non-academic sources. This approach relies on identifying the “language-in-use” within particular contexts to categorize the terms (Hajer &
Versteeg, 2005). Based on the explicit and implicit usage of the terms, I sorted them into the above-identified categories of discourse (see Table 1; see Supplemental Information for the full list of terms and sources).

Market-economic discourse includes market-based solutions to environmental problems and implies human-nature relationships that are mediated by markets. This category revolves around metaphors such as “natural capital” and “ecosystem services”. Public-economic discourse includes phrases that are inherently economic – i.e. related to goods, value, ownership, etc. – but that suggest a broader range of human-nature relationships, which are economically mediated or organized by forces beyond markets, such as governments, communities, or morality, and which imply that economic forces are embedded within environmental or social structures, rather than the other way around. Critical-economic discourse includes metaphors that pejoratively highlight market-based economic relationships, such as commodification, marketization, debt, extraction, and speculation. Socio-ecological discourse emphasizes human-nature relationships that are not mediated by economics or markets, with metaphors for alternative social and political organization around nature, including concepts of justice, sovereignty, rights, community, and solidarity. Conservation-ecology discourse contains phrases oriented towards scientific and technical language, drawn heavily from Larson’s (2011) conservation and ecology metaphors.

Finally, a sixth category of discourse emerged while building the dictionary. I include “green discourse” as a separate category, because the language around “green economy” or “green growth” is contested between those who promote market-based solutions and those who critique them (Boehnert, 2016; Cato, 2011; Scoones, 2016). Thus, it is not necessarily clear how green discourse should align with the other discourses, though it is closely intertwined with them.

To identify each organization’s discourse strategies, I applied this discourse-category dictionary to the press releases, counting each individual usage of a given phrase. To ensure comparability across organizations, I calculated the proportion of press releases that include at least one instance of the term(s) of interest (Kusmanoff et al., 2017, p. 161). This controls for variability in the number of press releases from each organization, as well as variability in writing styles, such as a tendency to repeat a given phrase within a release. Thus, this measure suggests the relative frequency of each type of discourse across each organization’s releases.

### Environmental advocates’ discourse strategies

A first observation is that none of the discourse categories, as constructed here, are overwhelmingly dominant within US environmental organizations’ press releases. On average, about 25% of the organizations’ releases have at least one instance of any discourse. Across organizations, this varies from a high of 44% of NC’s 50 releases, to a low of 16.5% of GP’s 549 releases. This suggests that

| Category       | Description                                                | Examples                                                                 |
|----------------|-------------------------------------------------------------|--------------------------------------------------------------------------|
| Market-Economic | Economic terms that emphasize market-based relationships   | natural capital, natural assets, ecosystem services, biodiversity offsets |
| Public-Economic | that imply environmental relationships beyond simple markets.| public goods, public lands, sustainable development, circular economy     |
| Critical-Economic | that critique market-based environmentalism.               | ecological debt, fictitious commodities, commodification, land grabbing  |
| Socio-Ecological | that describe non-economic human-environment relationships (i.e. social, political, ecological, etc.) | bioethics, climate justice, ecological democracy, just sustainabilities   |
| Conservation-Ecology | that emphasize scientific or ecological aspects of nature, ecosystems, and conservation. | biodiversity conservation, wildlife conservation, ecosystem health, food chain |
| Green | That use “green” as an adjective to imply environmentalism. | green economy, green accounting, green growth, green bond           |
there is far more being publicly discussed by these advocates than is captured by their economic discourse strategies.

Focusing on the proportion of total releases that do include phrases from each of the discourse categories, I conducted a simple cluster analysis to discern which organizations were most alike in their overarching patterns of discourse across all six categories. The resulting clusters indicate that WWF and EDF share a similar pattern of discourse across categories, while NRDC, SC, FOE, and GP are more alike. NC and 350 have more unique patterns of discourse, and thus inhabit their own solitary clusters. Given the characterizations of the organizations, and the resultant hypotheses above, it is not surprising that WWF and EDF are similar, nor that 350 shows a different pattern from the others. However, it is surprising that NC is markedly different in its discourse patterns than WWF and EDF, and that NRDC and SC are similar to FOE and GP.

The simple cluster analysis alone, however, does not indicate which discourse strategies are being used, nor how each organization is combining discourses. Comparing across discourse categories, it is readily apparent that some types of discourse are much more prevalent than others (see Figure 1). There are relatively few press releases from any organization that use either green or critical-economic discourse, while all organizations have at least some use of market-economic, public-economic, and conservation-ecology discourses, and all but one organization uses at least some socio-ecological discourse. However, it is clear that there are real differences between the organizations’ broader discourse strategies (i.e. how they combine the discourse categories). As the general characterizations of the eight organizations would predict, NC, WWF, and EDF are the heaviest users of market-economic discourse, while the organizations at the more radical end of the spectrum – SC, GP, FOE, and 350 – are the heaviest users of socio-ecological discourse.

Focusing more narrowly on the relationships between particular types of discourse use, we can see that the organizations that are heavier users of market-economic discourse are relatively unlikely to use either socio-ecological or critical-economic discourse, and vice versa (See Figure 2a & b). The results also suggest that there is less of a tradeoff between market-economic and conservation-
ecology discourse in these U.S. environmental advocates’ texts (see Figure 2c) than found in Australia and the EU by Kusmanoff et al. (2017) and Admiral et al. (2016). Instead, both WWF and NC, who are relatively heavy users of market-economic discourse, also use conservation-ecology discourse in their press releases. And among organizations that use little market-economic discourse, there is variation in the use of conservation-ecology discourse. Thus, for U.S. environmental advocacy organizations, who are ostensibly using market-economic discourse in pursuit of environmental goals, there is not necessarily a reduction in conservation-focused language.

These results show the relative usage of discourse categories across organizations. However, discourse strategies themselves should be a function of relative usage of the various categories within a given organization’s press releases. Figure 3 shows each organization’s use of the six discourse categories, aggregated as a proportion of their releases each year. With this granular look at discourse patterns, we can see more complex relationships between discourse categories than predicted by the current tripartite conception of discourse strategies.

Only EDF shows a fairly pure embrace/enthusiast discourse strategy, with a strong usage of market-economic discourse and far less use of any other discourse categories. NC and WWF, who are heavy users of market-economic discourse, have more nuance in their discourse strategies. NC

Figure 2. Use of Market-Economic Discourse versus Other Discourses.6

Figure 3. Discourse-Category Use Over Time.
appears to show an embrace/enthusiast approach to economic discourse more broadly, with its market-economic discourse dominated by the phrases: “natural capital,” “market-based,” and “ecosystem services.” But NC also explicitly combines market-economic metaphors with public-economic ones through the use of the phrases “sustainable development,” “public land(s),” and “intrinsic value.” An emphasis on nature’s intrinsic value, for instance, was one of the theoretical markers of a partition/pragmatist strategy, rather than an embrace/enthusiast strategy (Fisher & Brown, 2014).

WWF shows a discourse strategy similar to NC when it comes to economic values, pairing market-economic with public-economic discourse (the latter through heavy use of the phrase “sustainable development”). However, WWF also adds a much more extensive use of conservation-ecology discourse into its press releases, particularly through reference to “wildlife conservation” and “biological diversity,” among others. This suggests that NC and WWF fall between the embrace/enthusiast and partition/pragmatist strategies, as they are grounded heavily in economic values but not solely market-based ones.

Only NRDC seems to be following a full partition/pragmatist discourse strategy, as defined by Fisher and Brown (2014) and Coffey (2016). This is apparent from NRDC’s relatively similar usage of all categories except critical-economic discourse, which suggests a desire to promote a wide variety of values, including both market-economic and socio-ecological ones. Interestingly, NRDC also appears to be the most prominent user of the contested green discourse, particularly through an emphasis on “green infrastructure.” While SC’s characterization suggested it should communicate like NRDC, it is not as plural in its discourse use. SC does use market-economic discourse, but it is far more likely to present socio-ecological and public-economic discourse in its press releases, particularly through a focus on various justices/injustices and public land(s) respectively, as well as conservation-ecology discourse.

Contrary to expectations, GP appears to have a partition/pragmatist discourse strategy more similar to NRDC and SC. GP uses socio-ecological, conservation-ecology, and public-economic discourse in fairly similar proportions, with a relatively low level of market-economic discourse. However, it uses almost no critical-economic discourse – only “land grab” – and no green discourse at all. The very low levels of critical-economic discourse from NRDC, SC, and GP indicate that they are not taking an actively confrontational approach to market-economic discourse, at least not in the terms investigated here. Nevertheless, it is intriguing that GP appears somewhat more pluralist than SC in its approach, as GP is usually perceived as a much more confrontational advocacy organization. However, it is also worth noting that, proportional to their volume of press releases, neither NRDC, SC, nor GP is particularly prolific in its use of any discourse category here, which suggests that perhaps the most centrist strategy is simply to avoid such metaphors altogether.

FOE has the highest level of critical-economic discourse, with the inclusion of terms such as “land grabbing,” “dispossession,” “financialization,” “climate debt,” and “neoliberalism,” among others. However, other than its use of critical-economic discourse, FOE’s mix of socio-ecological, public-economic, and conservation-ecology discourse is fairly similar to SC’s differentiated partition/pluralist approach. Only 350 shows a substantially different pattern with its almost exclusive emphasis on socio-ecological discourse, and an increasing, though lower, use of public-economic discourse. 350 also has the second highest use of critical-economic language, though its low absolute levels of use are not particularly striking. In short, while FOE and 350 appear to be closest to the reject-and-replace/skeptic strategy camp, they are not necessarily very strongly within it, at least via their press releases.

Finally, it is worth calling attention to Coffey’s (2016) suggestion that organizations taking the middle ground may partition their use of various discourses by context. To investigate whether these organizations are explicitly counterbalancing their discourses within a single press release, or whether they are more likely to partition their discourses across releases (suggesting different issues or contexts), I identified how many releases contained at least one phrase from one or more discourses. Of the 1,887 press releases with at least one instance of any discourse, only 13% had two or more discourse categories present, and only 1.4% had three or more.

NRDC and 350
we were least likely to have more than one discourse per release (with a mean of 1.08 discourse categories per release), and NC and FOE were the most likely (with means of 1.23 and 1.28, respectively). Thus, all the organizations, regardless of the types of discourses they were using, were very likely to partition their discourse. This may simply be due to the nature of the press release, as a fairly short discussion of a single topic, but it nonetheless presents additional nuance for the discourse strategies of these organizations.

Discussion

The core question posed in this analysis was whether these eight U.S. environmental organizations were using the three economics-oriented discourse strategies as expected. The simple answer is: sort of. Taken broadly, the organizations are using discourse that seems to fit their usual characterizations. The organizations identified as more “accommodationist” (Bosso, 2005), are more likely to use market-economic discourse, and far less likely to use socio-ecological discourse. In contrast, the organizations characterized as more “radical” (Bosso, 2005) generally showed the opposite pattern. Thus, their discourse choices are broadly communicating environmental visions that align with their known political advocacy approaches. However, as is often the case, the actual patterns of discourse are far more diverse and complex than anticipated (see Gunster, Fleet, Paterson, & Saurette, 2018). Fisher and Brown’s (2014) and Coffey’s (2016) general tripartite schema of discourse strategies oversimplifies some of the variation present among these eight environmental organizations.

Thus, I propose that we might consider subcategories within these broader discourse strategies that would allow a more precise identification. First, among those who most fully embrace market-economic discourse, we should distinguish between Market-Economic Enthusiasts, who fully emphasize market-economic discourse and use other discourses very sparingly (i.e. EDF), and the Economic Pluralists, who very strongly embrace market-economic discourse, but also use public-economic and conservation-ecology discourses (i.e. NC, WWF). Second, we should consider the Full Pluralists, who show a fairly equal embrace of pro-economic discourses, as well as the non-economic discourses, such as socio-ecological discourse (i.e. NRDC). Third, among those more skeptical of market-economic discourse, we should distinguish between two discourse-strategy types. The Socio-Ecological Pluralists strongly emphasize non-economic discourses, and particularly socio-ecological discourse, but nevertheless generally avoid critical-economic discourse (i.e. SC, GP, 350, FOE). The Market-Economic Critics, of which there were none among the eight mainstream organizations studied here (though FOE comes closest), would take a much more aggressive approach through heavy use of critical-economic discourse, possibly paired with non-economic discourses. These subcategories within the three broad types of discourse strategies would allow a clearer categorization of environmental actors’ discourse practices.

Conclusions

The discourse strategies used by the eight environmental organizations investigated here provide a nuanced understanding of how discourses may be combined to build advocacy narratives for environmental communication. While Fisher and Brown (2014) found that most advocates they studied believed that market-economic discourse might be necessary to reach and influence elites, these eight U.S. environmental organizations show a much more varied use of discourse in practice, and they certainly present alternatives to market-economic discourse. This suggests that the organizations are using a variety of rhetorical strategies to attempt to effectively communicate their understanding of what supports a healthy environment. In addition, the potential overlap of discourse types across most of these organizations suggests that there is ample space for a broader conversation over environmental and conservation issues (i.e. Scasta, Welter, & Friday, 2018), at least among major U.S. environmental organizations.
However, even the most radical of these mainstream organizations shy away from metaphors that pejoratively frame market economics, and thus they appear less willing to openly criticize economic framings of the environment when seeking media attention. Instead, the organizations present alternative positive visions of human-nature relationships, through public-economic or socio-ecological discourses. As discourse shapes reality, this suggests that the dominant environmental discourse may be open to supplementing economic discourses with non-economic ones, but that outright critiques (suggesting the replacement of economic discourses with other discourses) are out-of-bounds in the mainstream political sphere. In other words, this environmental-advocacy discourse seeks to expand the system, rather than replace it.

Future investigation and application of these theorized economic-discourse strategies would benefit from a wider range of discursive texts and originating organizations. A similar study of reports, blog posts, or tweets—each targeting slightly different audiences—would allow for greater variation and differentiation between organizations’ discourse strategies, and might open up greater insight into discourse strategies across audiences and communication goals. A wider range of organizations might illuminate the conditions under which organizations are willing to explicitly criticize market-based environmentalism. It would also be fruitful to investigate whether particular discourse strategies affect media attention. Regardless, as the current research indicates, we may find that there is more variety and nuance than expected in the public discourse strategies of environmental advocates.

Notes

1. http://www.teebweb.org (Accessed June 16, 2018).
2. https://350.org/350-campaign-update-divestment/ (accessed June 20, 2018).
3. The number of press releases for each organization is as follows: SC-3050; NRDC-1702; EDF-1457; FOE-1113; WWF-743; GP-539; 350-428; NC-50.
4. I used the quantdada and tidyverse packages in R (Benoit, 2018; Wickham, 2017), to count each occurrence, aggregated across press releases, dates, categories, and organizations.
5. Cluster analysis was conducted via the R “kmeans” function, assuming four clusters in the data.
6. Text shading indicates cluster membership.

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