

Too Many Cooks Spoil the Broth: Toward a Theory for How the Tragedy of the Anticommons Emerges in Organizations

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Abstract

In organizations, conflict revolves around the use of shared resources. Research on property rights, territoriality, and social dilemmas suggests that to reduce such conflict, organizations could facilitate the psychological privatization of *commons resources*. We introduce a model that helps understand how psychologically privatizing organizational commons resources—to prevent the overuse problem of the *tragedy of the commons* (Hardin, G. *Science*, 162, 1968, 1243)—can lead to the emergence of another resource dilemma. We develop a model that illustrates how resource complexity and group complexity increase psychological marking and defending behaviors. These behaviors potentially lead to a problem of resource underuse—a *tragedy of the anticommons* (Heller, M. A. *Harvard Law Review*, 111, 1998, 621)—in organizational settings. The conceptual model, integrating insights from research on property rights, territoriality, and social dilemmas with law and social psychology, provides a bottom-up behavioral explanation of the emergence of the tragedy of the anticommons in organizations and outlines opportunities for future research.

We dedicate this article as a tribute to Matthew (Matt) McCarter, our colleague and friend, who passed away on July 7, 2019. It was sad to finalize this manuscript without him; it is an honor to publish it in his memory. Matt was passionate about the conceptual model proposed in this article and deeply dedicated to research and teaching that links theory to practice. To learn more about Matt, see the obituary written by The University of Texas at San Antonio (written by Wendy Frost on July 15th of 2019: UTSA Management Professor Matthew McCarter Passes Away; Retrieved November 3, 2019 from <https://www.utsa.edu/today/2019/07/story/McCarterObit.html>). To learn more about Matt's publications, see Matthew W. McCarter's google scholar page (Retrieved November 3, 2019 from <https://scholar.google.com/citations?user=ATbRISoAAAJ>). We thank participants of the Academy of Management (AOM), International Association for Conflict Management (IACM), and International Conference on Social Dilemmas (ICSD) conference participants for feedback on the ideas presented in this article. An earlier version of this manuscript, titled "How Anticommons Resources Emerge through Territorial Conflict in Organizations," was honored by the SIM Division in the Best Paper Proceedings of the 2012 AOM Meeting. We are grateful to Michael Gross, Editor-in-Chief of NCMR, and the NCMR reviewers for constructive feedback that strengthened the contribution of this article. The authors are indebted to Michael Heller, Gerardo Okhuyesen, Jone Pearce, and Bart Wilson for their invaluable comments on previous drafts of this manuscript. We hope the conceptual model presented in this article spurs empirical research that promotes cooperation and beneficial management of resources in organizational contexts.

The *tragedy of the commons* (Hardin, 1968) inspired research across the social sciences to examine how eliciting cooperation can improve commons resource management. *Commons resources* are shared resources for which access to users is not restricted, and their use subtracts from the other users' benefit. Examples of natural commons resources include fisheries, forests, and water and oil (Ostrom, 1990), and those in organizational settings include shared budgets (Kramer, 1991), databases (Kumar & van Dissel, 1996), and tourist populations (Ingram & Inman, 1996). The tragedy of the commons (e.g., for overviews, see Feeny et al., 1990; Ostrom, 1990; Ostrom et al., 2002) emerges because access to the resource is open to all, and thus, commons resources are susceptible to overuse and exhaustion.

To mitigate the tragedy of the commons, a variety of structural and behavioral solutions have been identified (for reviews, see Dawes, 1980; Kollock, 1998; Kopelman, Weber, & Messick, 2002). One structural solution, grounded in the property rights, territoriality, and social dilemma literatures, is privatizing the commons resources (Brown, Lawrence, & Robinson, 2005; Smith, 1981; van Dijk & Wilke, 1997). Broadly speaking, privatization involves transferring some or all ownership of an open resource to private parties, such as individuals, teams, or departments (Zahra et al., 2000). Privatization is theorized to encourage efficient and effective management of the commons because, economically, the user incurs not only the benefits but also the long-term costs of its management (Smith, 1981) and, psychologically, the user has an increased social responsibility toward their portion of the commons in the short and long term (van Dijk & Wilke, 1997).

Privatization can be coordinated by a centralized legal authority, as well as informally through psychological ownership (Brown et al., 2005; Pierce, Kostova, & Dirks, 2001). Psychological ownership is relevant to organizations because it can be present with or without formal ownership. As suggested by North (1990), even when a central authority arbitrates disputes of ownership, psychological ownership may remain and motivate individuals to follow informal "rules of the game" about governing the commons that diverge from formal rules. But the problem, and a core idea of the current article, is that the existing research advocating psychological ownership as a solution to managing commons resources assumes psychological owners agree on who should have the authority to restrict access to and use of the commons resource. What happens when psychological owners of a commons resource disagree about how the resource should be managed?

We propose that when multiple individuals psychologically own a commons resource and disagree about how it should be used, the commons resource becomes susceptible to tragic underuse, rather than overuse. An *anticommons resource* is a nonsubstitutable resource over which multiple actors claim rights to restrict access to the resource and no one has an effective privilege of use (Heller, 1998). This article contributes to the literature by introducing a bottom-up behavioral model of the emergence of anticommons resources in organizational settings.

The Problem of Resource Underuse: The Tragedy of the Anticommons

Introduced by Heller (1998), the *tragedy of the anticommons* is a situation where resources are prone to inefficient underuse because too many owners hold rights (or the ability) of exclusion. Anticommons resources are, conceptually, a mirror image of commons resources (Buchanan & Yoon, 2000; Heller, 1998, 2008; Vanneste, Van Hiel, Parisi, & Depoorter, 2006). Whereas commons resources face the tragedy of overuse from users not being able to restrict access (Hardin, 1968), anticommons resources face the tragedy of underuse from users being able to restrict access (Heller, 1998; Michelman, 1967). Thus, resource dilemmas—a subset of social dilemmas—potentially occur at both ends of the property spectrum: commons and anticommons dilemmas (Kopelman, 1999; see Figure 1). The tragedy of the commons represents a *take-some* resource dilemma (Dawes, 1980), whereas the tragedy of the anticommons represents an over-fragmented property regime where individual units are not bundled into a useable resource (Heller, 1998), essentially, a resource no one can take or put into use.

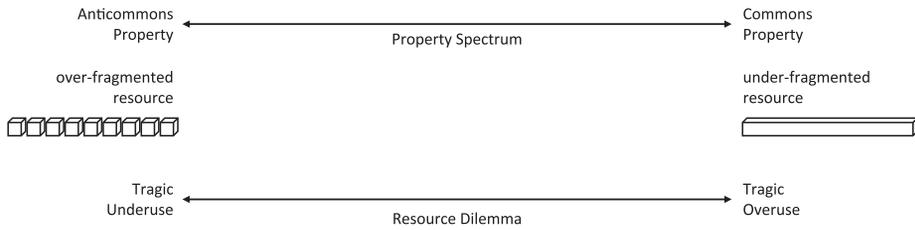


Figure 1. Resource dilemmas at both ends of the property spectrum.

In a take-some dilemma, it is in an individual’s self-interest to take as much of the commons resource as possible in the short term; however, if everyone (or enough) chose this strategy, then the commons become overused and everyone is worse off in the long term (Messick & Brewer, 1983). It represents a *social dilemma* because an individual can maximize self-interest by not cooperating (regardless of what others do), but everyone receives a lower payoff if all are noncooperative compared to if they were cooperative (for reviews of social dilemmas, see Dawes, 1980; Kollock, 1998; Kopelman, Weber, & Messick, 2002; Messick & Brewer, 1983; Van Lange, Joireman, Parks, & van Dijk, 2013; Weber, Kopelman, & Messick, 2004). Individual rationality conflicts with what is rational for the group in take-some dilemmas (Dawes & Messick, 2000; Kahan, 1974). Similarly, we suggest that self-interested and therefore individually rational psychological marking behavior can lead to the emergence of a social dilemma at the opposite end of the property spectrum: a tragedy of the anticommons.

Heller’s (1998, 1999, 2008, 2011) work primarily takes a top-down approach to anticommons resources emergence and provides examples where central authorities (e.g., the government) arrange formal property rights in such a way that (perhaps unintentionally) creates anticommons resources. The top-down approach Heller offers is one explanation for anticommons emergence: The structure of formal property rights by a central authority creates excessive information and transaction costs (Williamson, 1979) associated with coordinating usage of a shared resource, resulting in that resource being underutilized (Heller, 1998; Heller & Eisenberg, 1998; Parisi, Schulz, & Depoorter, 2005). Examples of the anticommons explained by the top-down approach include Russian storefronts postcommunism (Heller, 1998), innovation in pharmaceuticals (Heller & Eisenberg, 1998), and the failed development of a worldwide human mutation database (Maurer, 2006). Proposed solutions to a top-down approach are institutional in nature (Parisi, Schulz, & Depoorter, 2004; Parisi, Schulz, & Depoorter, 2005).

In the current article, we propose a bottom-up approach to anticommons emergence. Heller and Eisenberg (1998) speculated that anticommons resources can be exacerbated by individuals falling victim to psychological biases (e.g., over-valuing a fragment of property they [perceive to] own), leading them to actions (over-pricing or hold-ups) that unintentionally continue to lock up a resource. However, the psychological and behavioral antecedents of the anticommons resources are hitherto unexplored territory in organizational settings.

Consider the following vignette set in the context of an academic institution where the administration faced a take-some dilemma of the tragedy of the commons; however, unintentionally it transformed into another resource dilemma, the tragedy of the anticommons. The university created a campus-wide intranet for donor information. In the database, each department’s advancement administrators could retrieve donor contact information to then approach and request support. However, each department’s contact of a donor typically makes that donor less (or un-) able to contribute to other departments, thereby reducing the intranet benefit to the other departments. Thus, it is in each department’s interest to contact as many donors as possible. The result is a financially exhausted (and perhaps annoyed) pool of donors reluctant to give in the future. The university sought to navigate the overuse of the donor commons by allowing advancement administrators to mark donors as “taken” or not approachable for later use. This was done by either making notes by the donor’s name or limiting the contact and personal

information about the donor. Conflicts arose when several departments viewed a donor as “theirs” and these departments restricted each other’s access to the donor’s information. The “over-fragmented” intranet to this day is frozen and left unused.

Integrating ideas from research about psychological privatization with self-serving biases, we explore how and why anticommons resources behaviorally emerge from the bottom up in organizational settings. Key to the model developed in this article is the concept of *psychological ownership*, which is defined as “a feeling of possessiveness and of being psychologically tied to an object” (Pierce et al., 2001: 299). Considering the complexity of the environment alongside behaviors of psychological ownership as theoretical mechanisms, we propose a model of anticommons emergence. By proposing a bottom-up conceptual model of anticommons emergence, we contribute theoretically to the understanding of resource dilemmas.

The Proposed Model: Bottom-up Emergence of the Anticommons

Herein, we present a model about how anticommons resources emerge when individuals rationally seek to psychologically privatize a commons resource. Several assumptions underlie the model. One assumption is that the individuals involved psychologically own (portions) of the commons resource. Psychological ownership can emerge through an individual using a resource, associating (or identifying) with a resource, or investing private resources into the development or maintenance of that resource (Pierce et al., 2001). Another assumption is that individuals do not share perceptions about what constitutes appropriate commons governance; a logic of appropriateness, rather than a logic of rationality, prevails (Arora et al., 2012; Kopelman, 2009; March, 1994; Weber, Kopelman, & Messick, 2004). Furthermore, the model assumes that the organizational authority will not step in to adjust and enforce property rights involving the commons (Ostrom, 1990).

The model we propose to better understand anticommons resource emergence in organizational settings illustrates a bottom-up process of the tragedy of the anticommons (See Figure 2). We suggest that characteristics of the commons resource and the group lead to complexity surrounding what constitutes a fair resource distribution. The complex environment increases the likelihood that individuals will be susceptible to viewing the distribution of the resource through egocentric interpretation of fairness and reactive egoism. Viewing the governance of the commons resource egocentrically, individuals mark and defend their psychologically owned portion of the commons. As more of the commons resource becomes marked and defended, an anticommons resource emerges. The carrying capacity of the commons resource moderates the relationship between territorial behavior and anticommons resource emergence. Integrating insights from research on property rights, territoriality, and social dilemmas with law and social psychology, we discuss each section of the conceptual model and the propositions that describe the theoretical mechanisms of a bottom-up behavioral explanation of the emergence of the tragedy of the anticommons in organizations.

Resource Complexity and Egocentric Views of Fairness

The complexity of the commons resource impacts the degree of egocentric view of fairness experienced by individuals. A shared resource can be complex in at least two ways: ease of divisibility and its value distribution. Some shared resources are difficult to divide or “lumpy” (Taylor & Ward, 1982); for example, a commons resource may provide significant benefits to a user only when that individual utilizes a certain amount of it. Using any amount below this critical mass yields no, or very little benefit. When shared resources are easily divisible, it is simple for individuals to use social heuristics to divide it and meet their needs (de Kwaadsteniet, van Dijk, Wit, & de Cremer, 2006). For instance, if a commons resource can be divided easily among six users, then an equal-division rule is often employed with each getting one sixth (Allison & Messick, 1990). Yet, when shared resources are not easily divisible,

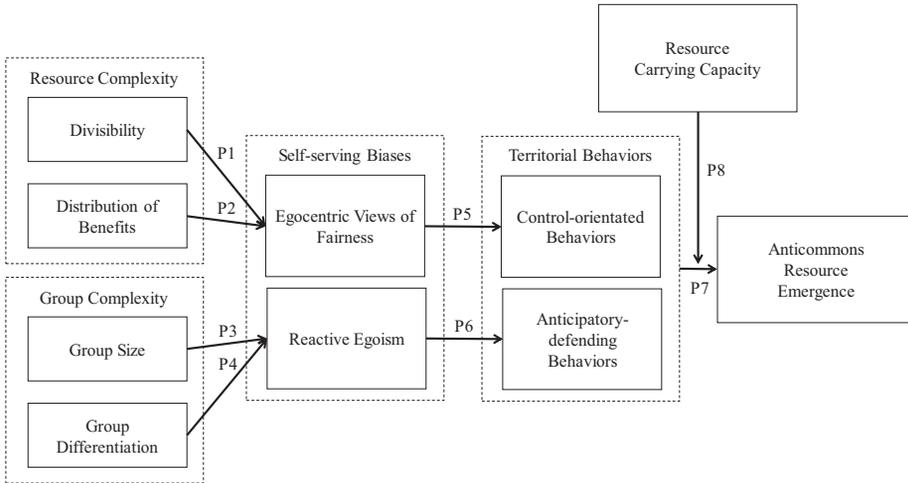


Figure 2. A bottom-up model of how the tragedy of the anticommons emerges in organizations.

uncertainty arises as to what constitutes a fair division (Messick, 1993) and power asymmetry may impact what is considered culturally appropriate behavior (Kopelman, 2009; Kopelman, Hardin, Myers, & Tost, 2019).

A second structural characteristic of a shared resource is the value distribution to users. Often the distribution of benefits of a commons resource is not uniform to users. Some individuals value the resource more (or get more value out of it) than others (Northcraft et al., 1996). With such asymmetry, distributing the shared resource’s benefits is challenging. Asymmetric distributions of benefits are more common than symmetric (Murnighan & King, 1992; van Dijk & Wilke, 1993), and, important, because asymmetry generates conflict about what is perceived to be an appropriate and fair distribution of the resource (Bazerman et al., 2000; Wade-Benzoni, Tenbrunsel, & Bazerman, 1996).

As a commons resource becomes more difficult to subdivide, what constitutes its fair distribution becomes complex to discern (Budescu, Rapoport, & Suleiman, 1990; Messick, 1993). Lumpy resources—such as an office-commons with one computer and three users—cannot be easily parceled: Some are left with more than others (Taylor & Ward, 1982). The lumpiness of the resource may increase diverse perceptions of what might be considered appropriate behavior (Arora et al., 2012; Kopelman, 2009; Kopelman et al., 2019; Weber, Kopelman, & Messick, 2004). For example, should computer access be a function of employee tenure, workload, or skill? In such situations, individuals find it cognitively easier to access, retrieve, and process positive information about the situation that favors self-interests (Babcock & Loewenstein, 1997). Consequently, individuals are likely to make judgments through an *egocentric view of fairness* or fairness judgments that favor oneself as compared to others (Paese & Yonker, 2001). Thus, we propose that:

Proposition 1 (P1). *The difficulty in dividing the commons resource increases egocentric views of fairness.*

Proposition 2 (P2). *Asymmetry in the distribution of benefits across potential users of a commons resource increases egocentric views of fairness.*

Group Structure and Reactive Egoism

The complexity of group structure using the commons resource also can influence the tendency of an individual to react egocentrically to others. People often believe they are relatively fair and more

cooperative than others (Krueger & Acevedo, 2007; Messick et al., 1985). As a result, while considering others' needs, contributions, preferences, and interests when allocating resources, people become suspicious that others will be unfair to (and take advantage of) them (Epley, Caruso, & Bazerman, 2006). Reactively, they take steps to protect themselves from others' opportunism (Rockmann & Northcraft, 2008). The "self-serving behavior in reaction to the [perceived] egoistic behavior of others" is termed *reactive egoism* and explains why individuals overuse a commons resource when they think about what others will do (Epley et al., 2006: 873).

As the number of users of a commons resource increases, so does the ambiguity and uncertainty about what those users will do with that resource (Messick & Rutte, 1992). Indeed, social dilemma research (Marinoff, 1999; McCarter, Rockmann, & Northcraft, 2010) suggests that as group size increases, individuals become more concerned with what others will do. Similarly, groups that are fractured into subgroups experience greater competition among subgroups over using a commons resource (Kramer & Brewer, 1984). The reason for the competition is because in-group members (those perceiving to belong to one subgroup) favor their own members while being uncertain about the intentions of out-group members (Brewer & Silver, 1978) and become more competitive with those outgroups (Bornstein & Ben-Yossef, 1994). As group complexity increases, and justification to others diffuses (de Kwaadsteniet et al., 2007), an individual becomes more susceptible to the self-serving bias of reactive egoism. Thus,

Proposition 3 (P3). *The number of potential users of a commons resource increases reactive egoism.*

Proposition 4 (P4). *Group differentiation increases reactive egoism.*

Self-serving Biases and Territorial Behavior

We maintain that the self-serving biases of egocentric views of fairness and reactive egoism lead to territorial behaviors toward a commons resource: potentially excessive marking and defending. Research about territoriality in organizations submits that individuals mark or defend resources without having actual (legal) ownership of them (Brown et al., 2005). While marking and defending a resource can reduce conflict and avoid exploiting an organization's resources (Acheson, 1975), this only occurs when there is agreement about what allocation rules are acceptable among psychological owners (Brown et al., 2005). When there is disagreement about allocation rules, conflict persists. When multiple people perceive they own a resource and disagree on allocation rules, conflict may arise as these individuals seek to (re-)gain control from intruders (Brown & Robinson, 2011). Because different individuals may perceive they own a (portion of a) resource (Alchian, 1977), they may attempt to unilaterally mark and defend, forming de facto property rights over the same portions of a commons resource.

As Brown et al. (2005) suggests, when individuals psychologically own an object, and when there is lack of clarity surrounding what should "belong" to whom, they express that ownership through control-oriented marking and anticipatory defending. Control-oriented marking communicates to others an individual's claim over a resource; for example, stating "this is mine and not yours." Anticipatory defending involves an individual making it difficult for others to access (or, more generally, use) a resource in the future. If it becomes difficult to determine a fair distribution of a resource, it becomes easier for individuals to access, retrieve, and process information that supports their own interests and needs compared to attempting to do the same for others (Messick & Sentis, 1979; Messick & Sentis, 1983).

Merging these ideas from territoriality and egocentrism, when there is uncertainty about what constitutes a fair distribution of a commons resource, individuals, psychologically owning that resource, will interpret its distribution egocentrically and over mark. Furthermore, if they anticipate that others will not be as cooperative and fair as they perceive themselves to be (Messick et al., 1985), then individuals may over defend a territory through anticipatory defenses. Thus,

Proposition 5 (P5). *Egocentric views of fairness increase control-oriented marking territorial behavior.*

Proposition 6 (P6). *Reactive egoism increases anticipatory defending territorial behaviors.*

Territorial Behavior and Anticommons Emergence

We maintain that as control-oriented marking and anticipatory defending behaviors increase, there is a higher likelihood that a commons resource transforms into an anticommons resource. Research about property rights (Alchian, 1977) and territoriality (Brown et al., 2005) suggests that individuals can perceive to own the same (or overlapping) portions of a resource. Alchian (1977) observed that property rights can be partitioned: Individuals can hold rights over different aspects of the same resource. Schlager and Ostrom (1992) observed that property rights may be “bundled” such that one individual can access a commons resource but may not have the right to use (withdraw from) that resource, while another can have withdrawal rights but not the ability to alter how others use the resource, and yet another individual may have authority to transfer their rights to another but cannot access or withdraw from the resource.

The more individuals mark and defend portions of a commons resource, the more challenging it becomes for others to access and use the resource. This marking and defending can be exacerbated because individuals perceive they either deserve to control more of the resource or fear that others will be greedy when marking and defending a territory. As a result, access to the commons resource is limited, increasing the likelihood of it becoming an anticommons resource. Thus,

Proposition 7 (P7). *As control-oriented marking and anticipatory defending behavior increases, the likelihood of an anticommons resource emerging increases.*

The Moderating Effect of Carrying Capacity

The carrying capacity of the commons resource may moderate the impact control-oriented marking and anticipatory defending behaviors have on the likelihood of anticommons resource emergence. When it is scarce, a commons resource can be used only so much before it is exhausted—exceeding its carrying capacity (Kramer, 1989; Schiff, 1995). As the commons resource reaches its carrying capacity, uncertainty over whether others will exercise self-restraint might increase (Kramer, 1989) and individuals who perceive that a commons resource is approaching its carrying capacity may aggressively attempt to secure a portion of that resource for themselves (Samuelson & Messick, 1986). If the commons resource is scarce, it may take little marking and defending portions of the commons resource before it becomes no longer useable. In contrast, where there is a bounty of a commons resource available, even individuals marking and defending what is perceived as more than their fair share will be less likely to lock up the resource. Thus,

Proposition 8 (P8). *The carrying capacity of the commons resource will moderate the relationship between territorial behavior and the emergence of an anticommons resource such that the likelihood of territorial behavior leading to anticommons resource emergence will be greater when the carrying capacity of the commons resource is low, compared to when it is high.*

General Discussion

We integrate research about property rights, territoriality, social dilemmas, and self-serving biases to posit how anticommons resource emerges from commons resources from the bottom up. In organizational settings, individuals may come to psychologically own overlapping portions of a commons

resource, mark and defend those overlapping portions, and transform a commons resource into an anti-commons resource. In doing so, the resource ceases being vulnerable to overuse and becomes subject to underuse. This is because multiple individuals have means and motive to restrict each other from using the resource. We proposed that resource and group complexity can create an environment in which commons resource governance generates an anticommons problem. Complexity makes individuals susceptible to the self-serving biases of egocentric views of fairness and reactive egoism, resulting in marking and defending a commons resource to the point of it becoming an anticommons resource. This theoretical model provides groundwork for future empirical research on psychological ownership in the context of commons and anticommons resource dilemmas.

Theoretical, Empirical, and Practical Implications

A bottom-up approach to anticommons emergence pushes our understanding of ownership in several ways. First, consider the social dilemma and privatization process that typically mitigates a tragedy of the commons. Paradoxically, individuals, seeking to manage a shared resource and avoid overuse (an inefficient outcome), may take action leading to its underuse—still an inefficient outcome (Mukhija, 2005). This social dilemma has particular importance to managers who encourage subordinates to psychologically own their work, in hope of increasing work morale, output, and accountability (Vandewalle, Van Dyne, & Kostova, 1995). If the perceived-to-be owned resource is shared, then what is rational for the individual may conflict with what is rational (and efficient) for the organization.

Theorizing how territorial behaviors lead to an emergence of anticommons resources highlights the importance of interdependence when multiple individuals perceive they own (portions of) the same resource. The current model focuses on how one individual's territorial behavior not only impacts how they use a commons resource, but also how others use it. In discussing the consequences of territoriality in organizations, research on territoriality primarily focuses on individual outcomes, such as individual commitment, desire to be isolated from others, and preoccupation (Brown et al., 2005; Brown & Robinson, 2011). The current research complements Brown et al.'s (2005: 587) theorizing by looking closer into what can happen when "territorial behavior . . . [does not] create socially agreed upon territories." That is, the social interdependence experienced among users of a commons resource may create an environment where one's territorial behavior results in a resource being underutilized by others.

Interdependence also plays a role in how an individual perceives another's territorial behavior. Tenbrunsel and Northcraft's (2010) research on perceptions in social dilemmas suggests that individuals may intentionally mark and defend a territory to be a wise steward over what is (perceived as) theirs while unintentionally coming across to others as noncooperative. The result of this unintentional cooperation is encouragement of others to also be noncooperative when using the commons. Ironically, while we tend to consider privatization as a means of independence, our model demonstrates how privatization can increase interdependence (McWilliams, 2011). However, whether those unintentionally creating the anticommons are aware of their interdependence is a different question. Individuals do sacrifice personal welfare to avoid a social burden when they believe that they are (even partially) the cause of the crisis compared to when they are not (Kahneman et al., 1993). Thus, future research may benefit from examining whether the emergence of the anticommons can be averted as a function of whether (or not) people generating it are aware of their shared fate.

Furthermore, it is important to consider the social processes influencing property rights formation (Eggertsson, 2003). We discuss how "psychological property rights" (van den Bergh, 2007) can emerge over a commons resource, and because of self-serving biases such as reactive egoism and egocentric views of fairness, these psychological, de facto property rights regimes can turn a commons resource into an anticommons resource. Whereas previous property rights research focuses on how incentives lead to property right formation (Alchian, 1977; Demsetz, 1967; Hart & Moore, 1990), this article brings the role of perceptions into the five decade-long discussion of property rights scholarship. This refocus on social

perceptions may encourage property rights theorists to consider how incentives to psychologically privatize, not only alter the payoffs of a decision, but also how the decision maker's behavior is perceived and responded to by other decision makers. Individuals may be merely responding rationally to incentives to mark and defend portions of a commons resource that they perceive as theirs, while being perceived by others as being irrational and inappropriate.

The current article also complements existing social dilemma research. Previous work assumes the only action available to individuals using commons resources is taking behavior (for reviews see, Dawes, 1980; Kopelman et al., 2002). We extend this thinking by discussing how territorial behavior over a commons resource can keep others from take behavior. However, doing so creates a second-order social dilemma. To avoid the tragedy of the commons, it is in everyone's self-interest to mark and defend portions of the commons resource that they psychologically own. However, if too much of the resource is psychologically privatized, the outcome is in no one's interests: A tragedy of the anticommons emerges. Thus, whereas previous research maintains that perceiving to be an owner over portions of a commons resource improves the collective's well-being (Cass & Edney, 1978; van Dijk & Wilke, 1997), we suggest that perceived ownership may backfire when too many users are armed with the ability to restrict (or at least impede) access.

Finally, we extend the burgeoning work on the anticommons by proposing how the "psychological biases" discussed by Heller (1998, 2008) lead to anticommons emergence. Whereas the literature describes a top-down process or assumes the anticommons' existence *ex ante* (Buchanan & Yoon, 2000; van Hiel, Vanneste, & de Cremer, 2008; Ziedonis, 2004), the current article shifts focus to how this troubling inefficient resource underuse may come into being. A bottom-up approach pushes the discussion of anticommons—predominantly among legal scholars—from market situations where formal authorities (e.g., the state) create anticommons resources using *de jure* property rights regimes, to organizational situations where individuals use *de facto* property regimes to create an anticommons resource out of a commons resource. It shifts the focus from institutional solutions to behavioral cooperation. Considering future negotiation and conflict management research directions on intergroup conflict (Halevy & Cohen, 2019), cultural norms (Ramirez Marin, Olekalns, & Adair, 2019), emotions (Rees & Kopelman, 2019), and hierarchy, power, and status (Bendersky & Hays, 2012; Greer & Bendersky, 2013; Greer & Chu, 2020; Greer, Van Bunderen, & Yu, 2017), as well as resource characteristics of the task, such as how ambiguity and uncertainty play a role in fairness perceptions (Blader, 2007; Smith, 1987), may help better understand the dynamics around psychological ownership and cooperation in anticommons resource dilemmas. Behavioral cooperation elicited by psychological factors pertaining to the social and task setting of commons resource dilemma (e.g., for a review see Kopelman et al., 2002) may further illuminate—whether through symmetry or asymmetry (van Hiel, et al., 2008; Vanneste, Van Hiel, Parisi, & Depoorter, 2006)—the theoretical mechanisms illustrated in our model and serve as mediating or moderating variables that impact the emergence of an anticommons; or serve as solutions to mitigate it.

In discussing how psychological factors enhance the likelihood of anticommons emergence, our approach suggests an alternative for how to navigate anticommons resource dilemmas. Heller's work (2008), as well as recent experimental economic articles on the anticommons (DeSantis, McCarter, & Winn, 2018; Winn & McCarter, 2018), would advocate altering the incentives and structure of property rights through either legislation or markets. Our conceptual model, in contrast, suggests that shared psychological logics about appropriate commons management (Arora et al., 2012; Kopelman, 2009; Kopelman et al., 2019; March, 1994; Messick, 1999; Weber et al., 2004) could elicit cooperation and mitigate the emergence of an anticommons resource. This behavioral psychology perspective may be particularly attractive for organizations that value decentralized control and a meditative approach to resolving employee disputes (Feldman & Khademan, 2000) and may have consequences for psychological ownership dynamics in teams (Gray, Knight, & Baer, 2019). The ongoing pursuit of cooperation in social dilemmas in organizational settings aligns with a positive lens to organizational scholarship (Spreitzer, Myers, Kopelman, & Mayer, 2019) that enables transcending beyond a tit-for-tat approach to

transforming conflict into peaceful harmony, à la Anatol Rapoport (for a review, see Kopelman, 2019). We hope the conceptual model presented in this article—a conceptual model Matthew McCarter innovatively explored and passionately finessed—spurs empirical research that illuminates the relationship between resource dilemmas at both ends of the property spectrum (tragedy of the commons and anticommons), considering psychological ownership alongside the interpersonal and task dynamics at play. Empirical research inspired by this conceptual model will help understand whether reactive egoism that creates territoriality can exist with or without a need for psychological ownership (real or perceived) and what individual- or group-level behavioral solutions might mitigate the emergence of an anticommons.

Conclusion

An English proverb states that “too many cooks can spoil the broth,” implying that too many people involved in the same task reduces the chances of that task being achieved (Ammer, 2006: 446). We theorized how too many psychological claims to territory can spoil a commons resource by transforming it into an anticommons resource. Privatizing a commons resource can be an effective way to navigate a tragedy of overuse, but only when either there is a “leviathan” to dictate and enforce rules (Hobbes, 1907 [1651]) or an agreed upon set of culturally informed appropriate logics (Kopelman, 2009; March, 1994; Weber et al., 2004). Absent the former, individuals may seek to manage a commons resource through territorial behavior. Absent the latter, individual territorial behavior in organizational settings may lead to the emergence of an outcome unfortunate for everyone: a tragedy of the anticommons.

May this article serve as an *amuse bouche* that inspires researchers to empirically test the proposed behavioral model of anticommons emergence; for in the domain of scholarship, it takes many cooks to theoretically develop and test ideas that enable leadership and benefit society.

References

- Acheson, J. M. (1975). The lobster fiefs: Economic and ecological effects of territoriality in Maine lobster industry. *Human Ecology*, 3(3), 183–207. <https://doi.org/10.1007/BF01531640>
- Alchian, A. A. (1977). Some economics of property rights. In A. A. Alchian (Ed.), *Economic forces at work* (pp. 127–149). Indianapolis, IN: Liberty Press. <https://www.jstor.org/stable/43206327>
- Allison, S. T., & Messick, D. M. (1990). Social decision heuristics in the use of shared resources. *Journal of Behavioral Decision Making*, 3(3), 195–204. <https://doi.org/10.1002/bdm.3960030304>
- Ammer, C. (2006). *The facts on file dictionary of clichés*. New York, NY: Facts on File Inc.
- Arora, P., Peterson, N. D., Krantz, D. H., Hardisty, D. J., & Reddy, K. S. (2012). To cooperate or not to cooperate: Using new methodologies and frameworks to understand how affiliation influences cooperation in the present and future. *Journal of Economic Psychology*, 33, 842–853. <https://doi.org/10.1016/j.joep.2012.02.006>
- Babcock, L., & Loewenstein, G. F. (1997). Explaining bargaining impasse: The role of self-serving biases. *Journal of Economic Perspectives*, 11(1), 109–126. <https://doi.org/10.1257/jep.11.1.109>
- Bazerman, M. H., Curhan, J. R., Moore, D. A., & Valley, K. L. (2000). Negotiation. *Annual Review of Psychology*, 51, 279–314. <https://doi.org/10.1146/annurev.psych.51.1.279>
- Bendersky, C., & Hays, N. A. (2012). Status conflict in groups. *Organization Science*, 23, 323–340. <https://doi.org/10.1287/orsc.1110.0734>
- Blader, S. L. (2007). What determines people’s fairness judgments? Identification and outcomes influence procedural justice evaluations under uncertainty. *Journal of Experimental Social Psychology*, 43, 986–994. <https://doi.org/10.1016/j.jesp.2006.10.022>
- Bornstein, G., & Ben-Yossef, M. (1994). Cooperation in intergroup and single-group social dilemmas. *Journal of Experimental Social Psychology*, 30(1), 52–67. <https://doi.org/10.1006/jesp.1994.1003>
- Brewer, M. B., & Silver, M. (1978). Ingroup bias as a function of task characteristics. *European Journal of Social Psychology*, 8, 393–400. <https://doi.org/10.1002/ejsp.2420080312>

- Brown, G., Lawrence, T. B., & Robinson, S. L. (2005). Territoriality in organizations. *Academy of Management Review*, *30*, 577–594. <https://doi.org/10.2307/20159145>
- Brown, G., & Robinson, S. L. (2011). Reactions to territorial infringement. *Organization Science*, *22*(1), 210–224. <https://doi.org/10.1287/orsc.1090.0507>
- Buchanan, J. M., & Yoon, Y. J. (2000). Symmetric tragedies: Commons and anticommons. *Journal of Law & Economics*, *43*(1), 1–13. <https://doi.org/10.1086/467445>
- Budescu, D. V., Rapoport, A., & Suleiman, R. (1990). Resource dilemmas with environmental uncertainty and asymmetric players. *European Journal of Social Psychology*, *20*, 475–487. <https://doi.org/10.1002/ejsp.2420200603>
- Cass, R. C., & Edney, J. J. (1978). The commons dilemma: A simulation testing the effects of resource visibility and territorial division. *Human Ecology*, *6*, 371–386. <https://doi.org/10.1007/BF00889415>
- Dawes, R. M. (1980). Social dilemmas. *Annual Review of Psychology*, *31*, 169–193. <https://doi.org/10.1146/annurev.ps.31.020180.001125>
- Dawes, R. M., & Messick, D. M. (2000). Social dilemmas. *International Journal of Psychology*, *35*(2), 111–116. <https://doi.org/10.1080/002075900399402>
- de Kwaadsteniet, E. W., van Dijk, E., Wit, A., & de Cremer, D. (2006). Social dilemmas as strong versus weak situations: Social value orientations and tacit coordination under resource size uncertainty. *Journal of Experimental Social Psychology*, *42*, 509–516. <https://doi.org/10.1016/j.jesp.2005.06.004>
- de Kwaadsteniet, E. W., van Dijk, E., Wit, A., de Cremer, D., & de Rooij, M. (2007). Justifying decisions in social dilemmas: Justification pressures and tacit coordination under environmental uncertainty. *Personality & Social Psychology Bulletin*, *33*, 1648–1660. <https://doi.org/10.1177/0146167207307490>
- Demsetz, H. (1967). Toward a theory of property rights. *American Economic Review*, *57*, 347–359. <https://www.jstor.org/stable/1821637>
- DeSantis, M., McCarter, M. W., & Winn, A. (2018). Land assembly with taxes, not takings. *Applied Economics Letters*, *26*, 604–607. <https://doi.org/10.1080/13504851.2018.1488047>
- Eggertsson, T. (2003). Open access versus commons property. In T. L. Anderson & F. S. McChesney (Eds.), *Property rights: Cooperation, conflict, and law* (pp. 73–89). Princeton, NJ: Princeton University Press.
- Epley, N., Caruso, E., & Bazerman, M. H. (2006). When perspective taking Increases taking: Reactive egoism in social interaction. *Journal of Personality & Social Psychology*, *91*, 872–889. <https://doi.org/10.1037/0022-3514.91.5.872>
- Feeny, D., Berkes, F., McCay, B. J., & Acheson, J. M. (1990). The tragedy of the commons: Twenty-two years later. *Human Ecology*, *18*(1), 1–19. <https://doi.org/10.1007/BF00889070>
- Feldman, M. S., & Khademian, A. M. (2000). Managing for inclusion: Balancing control and participation. *International Public Management Journal*, *3*(2), 149–167. [https://doi.org/10.1016/S1096-7494\(01\)00035-6](https://doi.org/10.1016/S1096-7494(01)00035-6)
- Gray, S. M., Knight, A. P., & Baer, M. (2019). On the emergence of collective psychological ownership in new creative teams. *Organization Science*, <https://doi.org/10.1287/orsc.2019.1307>
- Greer, L., & Bendersky, C. (2013). Power and status in conflict and negotiation research: Introduction to the special issue. *Negotiation and Conflict Management Research*, *6*(4), 239–252. <https://doi.org/10.1111/ncmr.12021>
- Greer, L. L., & Chu, C. (2020). The contradictory effects of power, status, and hierarchy on group versus individual outcomes. *Current Opinions in Psychology*, *33*, 162–166. <https://doi.org/10.1016/j.copsyc.2019.07.040>
- Greer, L. L., Van Bunderen, L., & Yu, S. (2017). The dysfunctions of power in teams: A review and emergent conflict perspective. *Research in Organizational Behavior*, *37*, 103–124. <https://doi.org/10.1016/j.riob.2017.10.005>
- Halevy, N., & Cohen, T. R. (2019). Intergroup conflict 2020. *Negotiation and Conflict Management Research*, *12*(2), 161–173. <https://doi.org/10.1111/ncmr.12148>
- Hardin, G. (1968). The tragedy of the commons. *Science*, *162*, 1243–1248. <https://doi.org/10.1126/science.162.3859.1243>
- Hart, O., & Moore, J. (1990). Property rights and the nature of the firm. *Journal of Political Economy*, *98*, 1119–1158. <https://doi.org/10.1086/261729>
- Heller, M. A. (1998). The tragedy of the anticommons: Property in the transition from Marx to markets. *Harvard Law Review*, *111*, 621–688. <https://doi.org/10.2307/1342203>

- Heller, M. A. (1999). The boundaries of private property. *Yale Law Journal*, 108, 1163–1223. <https://www.jstor.org/stable/797326>
- Heller, M. A. (2008). *The gridlock economy: How too much ownership wrecks markets, stops innovation, and costs lives*. New York, NY: Basic Books.
- Heller, M. A. (2011). The anticommons lexicon. In K. Ayotte & H. E. Smith (Eds.), *The research handbook on the economics of property law* (pp. 57–74). Cheltenham, UK: Edward Elgar Publishing.
- Heller, M. A., & Eisenberg, R. S. (1998). Can patents deter innovation? The anticommons in biomedical research. *Science*, 280, 698–701. <https://doi.org/10.1126/science.280.5364.698>
- Hobbes, T. (1907 [1651]). *Leviathan*. New York, NY: Routledge and Sons.
- Ingram, P., & Inman, C. (1996). Institutions, intergroup competition, and the evolution of hotel populations around Niagara Falls. *Administrative Science Quarterly*, 41, 629–658. <https://doi.org/10.2307/2393870>
- Kahan, J. P. (1974). Rationality, the prisoner's dilemma, and population. *Journal of Social Issues*, 30(4), 189–210. <https://doi.org/10.1111/j.1540-4560.1974.tb01760.x>
- Kahneman, D., Ritov, I., Jacowitz, K., & Grant, P. (1993). Stated willingness to pay for public goods: A psychological perspective. *Psychological Science*, 4, 310–315. <https://doi.org/10.1111/j.1467-9280.1993.tb00570.x>
- Kollock, P. (1998). Social dilemmas: The anatomy of cooperation. *Annual Review of Sociology*, 24, 183–214. <https://doi.org/10.1146/annurev.soc.24.1.183>
- Kopelman, S. (1999). *The tragedy of the anticommons: Implications for research on social dilemmas*. The 8th International Conference on Social Dilemmas (ICSD), Israel.
- Kopelman, S. (2009). The effect of culture and power on cooperation in commons dilemmas: Implications for global resource management. *Organization Behavior & Human Decision Processes*, 108(2), 153–163. <https://doi.org/10.1016/j.obhdp.2008.06.004>
- Kopelman, S. (2019). tit-for-tat and beyond: The legendary work of Anatol Rapoport. *Negotiation and Conflict Management Research*. <https://doi.org/10.1111/ncmr.12172>
- Kopelman, S., Hardin, A. E., Myers, C. G., & Tost, L. P. (2019). Cooperation in multicultural negotiations: How the cultures of people with low and high power interact. *Journal of Applied Psychology*, 101, 721–730. <https://doi.org/10.1037/apl0000065>
- Kopelman, S., Weber, M. C., & Messick, D. M. (2002). Factors influencing cooperation in commons dilemmas: A review of experimental psychological research. In E. Ostrom, T. Dietz, N. Dolsak, P. C. Stern, S. Stovich, & E. U. Weber (Eds.), *Drama of the commons* (pp. 113–156). Washington, DC: National Academy Press. <https://doi.org/10.17226/10287>
- Kramer, R. M. (1989). When the going gets tough: The effects of resource scarcity on group conflict and cooperation. In E. Lawler & B. Markovsky (Eds.), *Advances in group processes* (Vol. 7, pp. 151–177). Greenwich, CT: JAI Press.
- Kramer, R. M. (1991). Intergroup relations and organizational dilemmas: The role of categorization processes. *Research in Organizational Behavior*, 13, 191–228.
- Kramer, R. M., & Brewer, M. B. (1984). Effects of group identity on resource use in a simulated commons dilemma. *Journal of Personality & Social Psychology*, 46, 1044–1057. <https://doi.org/10.1037/0022-3514.46.5.1044>
- Krueger, J. I., & Acevedo, M. (2007). Perceptions of self and other in the prisoner's dilemma: Outcome bias and evidential reasoning. *American Journal of Psychology*, 120, 593–618. <https://psycnet.apa.org/record/2008-00886-004>
- Kumar, K., & van Dissel, H. G. (1996). Sustainable collaboration: Managing conflict and cooperation in interorganizational systems. *MIS Quarterly*, 20(3), 279–300. <https://doi.org/10.2307/249657>
- March, J. G. (1994). *A primer of decision making: How decisions happen*. New York, NY: Free Press.
- Marinoff, L. (1999). The tragedy of the coffeehouse: Costly riding and how to avert it. *Journal of Conflict Resolution*, 43, 434–450. <https://www.jstor.org/stable/174611>
- Maurer, S. M. (2006). Inside the anticommons: Academic scientists' struggle to build a commercially self-supporting human mutations database, 1999–2001. *Research Policy*, 35, 839–853. <https://doi.org/10.1016/j.respol.2006.04.008>

- McCarter, M. W., Rockmann, K. W., & Northcraft, G. B. (2010). Is it even worth it? The effect of loss prospects in the outcome distribution of a public goods dilemma. *Organizational Behavior & Human Decision Processes*, 111(1), 1–12. <https://doi.org/10.1016/j.obhdp.2009.06.003>
- McWilliams, W. C. (2011). *The democratic soul*. Lexington, KY: University Press of Kentucky.
- Messick, D. M. (1993). Equality as a decision heuristic. In B. A. Mellers & J. Baron (Eds.), *Psychological perspectives on justice: Theory and applications* (pp. 11–31). Cambridge, UK: Cambridge University Press.
- Messick, D. M. (1999). Alternative logics for decision making in social settings. *Journal of Economic Behavior & Organization*, 39(1), 11–28. [https://doi.org/10.1016/S0167-2681\(99\)00023-2](https://doi.org/10.1016/S0167-2681(99)00023-2)
- Messick, D. M., Bloom, S., Boldizar, J. P., & Samuelson, C. D. (1985). Why we are fairer than others. *Journal of Experimental Social Psychology*, 21, 480–500. [https://doi.org/10.1016/0022-1031\(85\)90031-9](https://doi.org/10.1016/0022-1031(85)90031-9)
- Messick, D. M., & Brewer, M. (1983). Solving social dilemmas. In L. Wheeler & P. Shaver (Eds.), *Review of personality and social psychology* (Vol. 4, pp. 11–44). Beverly Hills, CA: Sage Publications.
- Messick, D. M., & Rutte, C. (1992). The provision of public goods by experts: The Groningen study. In W. B. G. Liebrand, D. M. Messick, & H. Wilke (Eds.), *Social dilemmas: Theoretical issues and research findings* (pp. 101–107). London, UK: Pergamon Press.
- Messick, D. M., & Sentis, K. P. (1979). Fairness and preference. *Journal of Experimental Social Psychology*, 15, 418–434. [https://doi.org/10.1016/0022-1031\(79\)90047-7](https://doi.org/10.1016/0022-1031(79)90047-7)
- Messick, D. M., & Sentis, K. P. (1983). Fairness, preference, and fairness biases. In D. M. Messick & K. S. Cook (Eds.), *Equity theory: Psychological and sociological perspectives* (pp. 61–64). New York, NY: Praeger.
- Michelman, F. I. (1967). Property, utility and fairness: Comments on the ethical foundations of just compensation law. *Harvard Law Review*, 80, 1165–1258.
- Mukhija, V. (2005). Collective action and property rights: A planner's critical look at the dogma of private property. *International Journal of Urban & Regional Research*, 29, 972–983. <https://doi.org/10.1111/j.1468-2427.2005.00632.x>
- Murnighan, J. K., & King, T. R. (1992). Using leverage in asymmetric dilemmas: Alternation and cooperation in complex mixed motive conflict. In W. Liebrand, D. Messick, & H. Wilke (Eds.), *A social psychological approach to social dilemmas* (pp. 163–182). Oxford, UK: Pergamon Press.
- North, D. C. (1990). *Institutions: Institutional change and economic performance*. New York, NY: Cambridge University Press.
- Northcraft, G. B., Neale, M. A., Tenbrunsel, A., & Thomas, M. (1996). Benefits and burdens: Does it really matter what we allocate? *Social Justice Research*, 9(1), 27–45. <https://doi.org/10.1007/BF02197655>
- Ostrom, E. (1990). *Governing the commons*. New York, NY: Cambridge University Press.
- Ostrom, E., Dietz, T., Dolsak, N., Stern, P. C., Stovich, S., & Weber, E. U. (2002). *Drama of the commons*. Washington, DC: National Academy Press. <https://doi.org/10.17226/10287>
- Paese, P. W., & Yonker, R. D. (2001). Toward a better understanding of egocentric fairness judgments in negotiation. *International Journal of Conflict Management*, 12(2), 114–131. <https://doi.org/10.1108/eb022852>
- Parisi, F., Schulz, N., & Depoorter, B. (2004). Simultaneous and sequential anticommons. *European Journal of Law and Economics*, 17(2), 175–190. <https://doi.org/10.1023/B:EJLE.0000014575.00312.15>
- Parisi, F., Schulz, N., & Depoorter, B. (2005). Duality in property: Commons and anticommons. *International Review of Law and Economics*, 25, 594–613. <https://doi.org/10.1016/j.irl.2005.12.003>
- Pierce, J., Kostova, T., & Dirks, K. (2001). Toward a theory of psychological ownership in organizations. *Academy of Management Review*, 26(2), 298–310. <https://doi.org/10.5465/amr.2001.4378028>
- Ramirez Marin, J., Olekalns, M., & Adair, W. (2019). Normatively speaking: Do cultural norms influence negotiation, conflict management, and communication? *Negotiation and Conflict Management Research*, 12(2), 146–160. <https://doi.org/10.1111/ncmr.12155>
- Rees, L., & Kopelman, S. (2019). Logics and logistics for future research: Appropriately interpreting the emotional landscape of multicultural negotiation. *Negotiation and Conflict Management Research*, 12(2), 131–145. <https://doi.org/10.1111/ncmr.12152>
- Rockmann, K. W., & Northcraft, G. B. (2008). To be or not to be trusted: The influence of media richness on defection and deception. *Organizational Behavior & Human Decision Processes*, 107(2), 106–122. <https://doi.org/10.1016/j.obhdp.2008.02.002>

- Samuelson, C. D., & Messick, D. M. (1986). Alternative structural solutions to resource dilemmas. *Organizational Behavior & Human Decision Processes*, 37(1), 139–155. [https://doi.org/10.1016/0749-5978\(86\)90049-X](https://doi.org/10.1016/0749-5978(86)90049-X)
- Schiff, M. (1995). Uncertain property rights and the Coase theorem. *Rationality & Society*, 7, 321–327. <https://doi.org/10.1177/1043463195007003005>
- Schlager, E., & Ostrom, E. (1992). Property-rights regimes and natural resources: A conceptual analysis. *Land Economics*, 68(3), 249–262. <https://doi.org/10.2307/3146375>
- Smith, R. T. (1981). Resolving the tragedy of the commons by creating private property rights in wildlife. *CATO Journal*, 1, 439–468. Retrieved from <https://www.cato.org/cato-journal/fall-1981>
- Smith, V. K. (1987). Nonuse values in benefit cost analysis. *Southern Economic Journal*, 54(1), 19–26. <https://doi.org/10.2307/1058800>
- Spreitzer, G., Myers, C. G., Kopelman, S., & Mayer, D. (2019 March 1; online first). The conceptual and empirical value of a positive lens: An invitation to organizational scholars to develop novel research questions. *Academy of Management Perspectives*. <https://doi.org/10.5465/amp.2015.0056>
- Taylor, M., & Ward, H. (1982). Chickens, whales, and lumpy goods: Alternative models of public-goods provision. *Political Studies*, 30, 350–370. <https://doi.org/10.1111/j.1467-9248.1982.tb00545.x>
- Tenbrunsel, A. E., & Northcraft, G. B. (2010). In the eye of the beholder: Payoff structures and decision frames in social dilemmas. In R. Kramer, A. E. Tenbrunsel & M. H. Bazerman (Eds.), *Social decision making: Social dilemmas, social values, and ethical judgments* (pp. 95–115). New York, NY: Psychology Press.
- van den Bergh, J. C. J. M. (2007). Evolutionary thinking in environmental economics. *Journal of Evolutionary Economics*, 17, 521–549. <https://doi.org/10.1007/s00191-006-0054-0>
- van Dijk, E., & Wilke, H. (1993). Differential interests, equity, and public good provision. *Journal of Experimental Social Psychology*, 29(1), 1–16. <https://doi.org/10.1006/jesp.1993.1001>
- van Dijk, E., & Wilke, H. (1997). Is it mine or is it ours? Framing property rights and decision making in social dilemmas. *Organizational Behavior & Human Decision Processes*, 71(2), 195–209. <https://doi.org/10.1006/obhd.1997.2718>
- van Hiel, A., Vanneste, S., & de Cremer, D. (2008). Why did they claim too much? The role of causal attributions in explaining level of cooperation in commons and anticommons dilemmas. *Journal of Applied Social Psychology*, 38(1), 173–197. <https://doi.org/10.1111/j.1559-1816.2008.00301.x>
- Van Lange, P. A. M., Joireman, J., Parks, C. D., & van Dijk, E. (2013). The psychology of social dilemmas: A review. *Organizational Behavior and Human Decision Processes*, 120(2), 125–141. <https://doi.org/10.1016/j.obhd.2012.11.003>
- Vandewalle, D., Van Dyne, L., & Kostova, T. (1995). Psychological ownership: An empirical examination of its consequences. *Group & Organization Management*, 20(2), 210–226. <https://doi.org/10.1177/1059601195202008>
- Vanneste, S., Van Hiel, A., Parisi, F., & Depoorter, B. (2006). From “tragedy” to “disaster”: Welfare of commons and anticommons dilemmas. *International Review of Law and Economics*, 26(1), 104–122. <https://doi-org.proxy.lib.umich.edu/10.1016/j.irl.2006.05.008>
- Wade-Benzoni, K. A., Tenbrunsel, A. E., & Bazerman, M. H. (1996). Egocentric interpretations of fairness in asymmetric, environmental social dilemmas: Explaining harvesting behavior and the role of communication. *Organizational Behavior & Human Decision Processes*, 67(2), 111–126. <https://doi.org/10.1006/obhd.1996.0068>
- Weber, J. M., Kopelman, S., & Messick, D. M. (2004). A conceptual review of decision making in social dilemmas: Applying a logic of appropriateness. *Personality & Social Psychology Review*, 8(3), 281–307. https://doi.org/10.1207/s15327957pspr0803_4
- Williamson, O. E. (1979). Transaction-cost economics: The governance of contractual relations. *Journal of Law & Economics*, 22(2), 233–261. <https://doi.org/10.1086/466942>
- Winn, A., & McCarter, M. W. (2018). Who’s holding out? An experimental study of the benefits and burdens of eminent domain. *Journal of Urban Economics*, 105(3), 176–185. <https://doi.org/10.1016/j.jue.2017.10.001>
- Zahra, S. A., Ireland, R. D., Gutierrez, I., & Hitt, M. A. (2000). Privatization and entrepreneurial transformation: Emerging issues and a future research agenda. *Academy of Management Review*, 25, 509–524. <https://doi.org/10.5465/amr.2000.3363324>
- Ziedonis, R. H. (2004). Don’t fence me in: Fragmented markets for technology and the patent acquisition strategies of firms. *Management Science*, 50, 804–820. <https://doi.org/10.1287/mnsc.1040.0208>

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