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Making Space for Emotions: Empathy, Contagion, and Legitimacy's Double-Edged Sword

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Abstract. Legitimacy is critical to the formation and expansion of nascent fields because it lends credibility and recognizability to once overlooked actors and practices. At the same time, legitimacy can be a double-edged sword precisely because it facilitates field growth, attracting actors with discrepant practices that may lead to factionalization and undermine the coherence of the field's collective identity. In this paper, we investigate how organizations can mitigate the downside of legitimation by eliciting emotions that align increasingly discrepant actors and celebrate an inclusive collective identity. We leverage fieldwork and computational text analysis to examine the relationship between legitimation, collective identity coherence, and emotions in the context of the Makers, a nascent field of do-it-yourself hobbyists and technology hackers. In our quantitative analysis we show that legitimation was associated with increased field heterogeneity, but that collective events countered the diluting effects of legitimation. In the qualitative analysis of our interview data we demonstrate that activities at these events—demonstrations and hands-on experiences—elicited emotional contagion and empathy among actors. These emotions reconciled tensions among increasingly heterogeneous actors and bolstered the coherence of the Maker collective identity. We conclude by discussing our contribution to research on legitimacy, collective identity, and field-configuring events.

Introduction

Organization theorists have long recognized that legitimacy is essential to field formation, reproduction, and growth (Aldrich and Fiol 1994, Ruef and Scott 1998, Fligstein 2001, Deephouse and Suchman 2008). Legitimacy—defined as a "generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed systems of norms, values, beliefs and definitions"—is crucial for nascent fields because it increases their attractiveness to new entrants and to resource providers (Suchman 1995, p. 574). For example, investors are more likely to fund and consumers are more likely to buy from organizations in a legitimate field because member organizations are recognizable and conform to cultural sensibilities (Zimmerman and Zeitz 2002). Correspondingly, new ventures are more likely to seek entry to fields that they consider to be viable, and legitimacy provides that assurance. Thus, gaining and maintaining legitimacy is critical for both the growth and success of nascent fields.

However, legitimation has its downsides. Historically, scholars assumed a positive feedback effect between legitimation and expansion attributed to "strength in numbers" (Hannan and Freeman 1989). Yet recent scholarship has indicated that membership expansion can be a liability for a field (McInerney 2014, Lee et al. 2017). This is because actors who are drawn to a field as it becomes more legitimate often have discrepant attributes and practices, challenging the field's collective identity and making it appear less coherent to audiences (Wry et al. 2011). Scholars have described this as the double-edged sword of legitimacy, since greater heterogeneity in field membership can make it more difficult for external audiences to understand the characteristics that tie field members together (Wry et al. 2011, Lee et al. 2017). At its extreme, these dynamics can lead to conflicts among multiple competing collective identities, as actors with different criteria for membership compete to define the collective identity of the field and its members, further confusing audiences.

This raises the question of how organizations in a nascent field can maintain a coherent identity even as the field expands and becomes increasingly heterogeneous. Extant theories of collective identity legitimation emphasize how leading organizations in the field can help coordinate the field's expansion by clarifying the criteria for membership (Lounsbury and Glynn 2001, Weber et al. 2008). For example, Lee et al. (2017) describe how actors in the organic food field helped coordinate expansion and blunt the downside of increased legitimation by creating a standards-based certification organization that "codified standards for its producers and other interested parties that established what it meant to farm organically and produce organic products" (p. 454). In a similar vein, Wry et al. (2011) propose that leading members of the field can coordinate expansion by constructing and disseminating growth stories that redefine and clarify the field's collective identity. These "stories told by group members can make the boundary of a collective identity clear but still permeable to actors who share in the group's purpose and pursue variants on its core practices" (p. 456).

Although existing studies have identified several strategies for mitigating the downside of legitimacy in field emergence, these strategies mostly focus on clarifying the collective identity by strengthening the boundaries of the nascent field. We propose a different way to foster a coherent collective identity in emerging fields: celebrating the inclusiveness of the collective identity through events that elicit emotional contagion and empathy. These emotional processes connect members to one another and foster a commitment to a broader and more inclusive collective identity, building solidarity and understanding among members with different attributes and practices.

We explore these dynamics in the Maker field, as the Maker setting is well suited for this study. When the term Maker was coined in 2005 to describe members of this nascent field, Makers consisted of do-it-yourself technology hobbyists who valued open-source innovation and opposed mass production. The Maker field increased in legitimacy and heterogeneity during the study period (2005–2017). During this time, the Maker field expanded to include a wide range of domains and practices, such as crafts, arts, textiles, agriculture, biohacking, and cooking.

We employ a mixed-methods approach. We combine statistical modeling, computational text analysis, interviews, and direct observation to conduct a longitudinal case study of the Maker field. We first conducted a quantitative analysis of newspaper articles about Makers and Maker events to test whether field-configuring events moderated legitimation's effect on the heterogeneity of stories told about the Maker field and, as a result, its perceived coherence

(Wry et al. 2011).[1] We find that growing legitimacy was associated with greater divergence in the language used to describe the Makers, but that collective events aligned the stories told about the Makers, making the field's collective identity appear more coherent. We then conducted an in-depth qualitative analysis of the Maker field to understand the mechanisms through which these field-configuring events helped coordinate expansion in the increasingly heterogeneous Maker field. We found that demonstrations and hands-on experiences at Maker events elicited empathy and emotional contagion. This connected actors to a shared collective identity and created a sense of solidarity among members. Furthermore, these emotional mechanisms helped coordinate the stories told by field members by making them more resonant and inclusive.

These mechanisms explain why group members, who may have rejected the expansive definition of the collective identity put forward by leading members of the field in the cultural storytelling framework of Wry et al. (2011), come to accept, believe, and disseminate these inclusive stories. As a result, this study contributes to the literature on collective identity, legitimation, and field expansion by proposing a mechanism through which field-configuring events that elicit positive emotions preserve and enhance the coherence of a collective identity during field growth. The novelty of this study lies in demonstrating how leading organizations in the field can coordinate expansion without strengthening or clarifying field boundaries. It also shows how strategically organized events can foster micro-level individual interactions that affect field-level understandings.

In the following section, we describe legitimacy's double-edged sword and theorize how field-configuring events can elicit emotions that coordinate expansion. We then delve into the history and evolution of the Maker field to describe specific practices, norms, and structures central to Maker events. Next, we describe our quantitative data sources and measures, present the results of our analysis of media coverage of the Maker field, and then draw upon qualitative data to unpack the underlying mechanisms that help coordinate expansion. We conclude by discussing in greater detail how this study contributes to the study of legitimation, collective identity, and field-configuring events.

Theoretical Background
Collective Identity and Legitimacy's Double-Edged Sword

Collective identity can play a significant role in the legitimation of new fields. Field pioneers often attempt to garner legitimacy for an emerging field by constructing a clearly defined collective identity that specifies a prototypical set of attributes, practices, and

values that connect organizations in the field, marking them as part of the same category (Wry et al. 2011). By defining who field members are and what they do, a collective identity enables once-isolated actors to see themselves as part of a common arena (Glynn 2008, Navis and Glynn 2011). Moreover, a clearly defined collective identity can aid field formation, reproduction, and expansion by legitimating the field and making it "real" in the eyes of key audiences. This lends materiality to the emerging field, while also creating boundaries that allow audiences to distinguish it from other fields (Kennedy 2008, Wry et al. 2011). In turn, legitimation aids in field formation, reproduction, and expansion by attracting symbolic and material resources to sustain the field (Aldrich and Fiol 1994, Zimmerman and Zeitz 2002).

Yet organization theorists describe legitimation as a double-edged sword, because it can lead to membership expansion that undermines the coherence of the field's collective identity (Wry et al. 2011). As leading organizations seek legitimacy for the field, they often court members from neighboring fields and may also try to attract stakeholders who differ from field founders (Hiatt and Carlos 2019). These new recruits often have disparate backgrounds, practices, and values, making the identity of the field less discernible to external audiences and a point of contention for members (McInerney 2014, Lee et al. 2017). This line of theorizing suggests an inherent tension between the reach and coherence of a field: organizations in a growing field can either (1) police the boundaries of the field to maintain a crisp identity and risk being perceived as a marginal group because of its limited size, or (2) attract members and stakeholders from neighboring fields and risk diluting the coherence of the collective identity (Wry et al. 2011, McInerney 2014).

How can organizations in a growing field counteract the negative effects of membership expansion? Recent work on this topic suggests two ways field members can avoid the pitfalls of membership expansion: one standards-based and the other cultural. The study from Lee et al. (2017) of the legitimation and expansion of the organic food category shows how organizations can use standard-setting market intermediaries to manage the tensions of expansion. Specifically, they find that standards-based certification organizations allowed for a wider range of producer identities (including both small farmers and big corporations) by decoupling the organic label from a producer's ascriptive characteristics, instead focusing on the process through which organic food was produced.

Alternatively, Wry et al. (2011) draw on the cultural entrepreneurship literature to theorize how organizations can help maintain the coherence of a collective

identity as the associated field grows. They propose that leading members of the field can coordinate expansion by constructing and disseminating growth stories that clarify how members with discrepant practices fit with the field's collective identity. These stories are likely to succeed when they are consistently retold by members of the expanding field. This cultural account foregrounds the role of leading members in the field, assuming that other field members accept these stories because of the authority of these central members. The cultural account also highlights the content of stories, suggesting that stories will be deemed more acceptable if they describe the practices of new members as extensions of the collective identity's core practices.

Yet centrally coordinated expansion is not always accepted by the broader membership. The stories told by leading organizations in the field must resonate with members or risk facing organized opposition, particularly from more peripheral actors jockeying for a better position in the field (Fligstein 2001). Moreover, new members do not always take part in practices that are recognizable extensions of the collective identity's core practices (Grodal and Granqvist 2014). Thus, extant theories of coordinated field expansion neither adequately explain how members of the field come to believe in the collective identity claims of discrepant actors, nor do they theorize how actors coordinate expansion in a field where new members do not take part in practices that are clear variants of the field's prototypical core practices.

In the following section, we address these elisions and propose a mechanism through which leading organizations in the field can mitigate the downside of legitimation. We suggest that organizations in a nascent field can coordinate membership expansion by organizing field-configuring events that expand the field's criteria for membership. These field-configuring events are organized to elicit positive emotions that encourage the dissemination of broader and more inclusive stories among field members.

Field-Configuring Events as Coordinating Mechanisms

In recent years, organizational theorists and management scholars have begun to theorize how collective events such as fairs, festivals, trade shows, conferences, tournaments, and ceremonies help construct and reproduce organizational fields (Garud 2008, Glynn 2008, Schüssler et al. 2014, Wooten and Hoffman 2017). More specifically, researchers have focused on *field-configuring events*—physical gatherings that serve as "temporary organizations" where individuals and organizations "assemble periodically, or on a one-time basis, to announce new products, develop industry standards, construct social networks,

recognize accomplishments, share and interpret information, and transact business" (Lampel and Meyer 2008, p. 1026). These events may include ceremonies, performances, and unstructured activities that enable collective meaning-making and information exchange.

Prior research has shown that these spatially and temporally bound events are important for field formation (Meyer et al. 2005, Lampel and Meyer 2008, Schüssler et al. 2014). Field-configuring events allow for the construction of a field's collective identity (McInerney 2008, Zilber 2011), as these events provide an arena for members with similar interests to "produce, negotiate, and sustain a shared sense of meaning" (Gephart et al. 2010, p. 285) as they "create and maintain an intersubjective world" (Balogun and Johnson 2004, p. 524). For example, Hardy and Maguire (2010) found that field-configuring events provided actors with a venue to share information and to make sense of persistent organic pollutants. At these events, actors were able to alter the dominant narrative and, in the process, construct a new and coherent identity for the pollutants and for actors in the field. Ultimately, through field-configuring events, actors identify common interests and construct shared understandings central to the field (Wooten and Hoffman 2017), such as its collective identity (McInerney 2008, Zilber 2011).

Constructing a field's identity involves defining who is a part of the collective (and who is not) based on a set of shared beliefs and understandings regarding field membership and appropriate action in the field (Goodwin et al. 2000; see also Hunt and Benford 2004, McInerney 2008). This means that actors who conform to such accounts are more likely to be perceived as field members and to identify with one another. However, although scholars have theorized how field-configuring events can be used to forge a collective identity in a new field, they have not addressed how these events can maintain the identity coherence of an expanding field. We posit that if field-configuring events can bring actors together to forge a shared collective identity, they can also be used to maintain this connection and to integrate new members into the collective identity. We suggest that field-configuring events can have both short-term and long-term effects on collective identity expansion and maintenance. In the short term, actors who felt that they were in unconnected domains may see their commonality in the aftermath of an event. Building upon the Wry et al. (2011) framework, we propose that field-configuring events will diminish the negative effect of legitimation on collective identity coherence by helping to align the stories that describe the field. Specifically, we hypothesize that field-configuring events will moderate the effect of legitimation on language heterogeneity in stories

describing the field in the period following these collective events.

Although field-configuring events may have a short-term effect of connecting actors from heterogeneous domains and aligning their collective identity stories following an event, these feelings of shared identity may not last, particularly if actors return to their traditional domains. For actors to identify with and recognize one another as a part of the same collective identity in the long term, they may need to attend multiple events to reinforce this identity beyond an ephemeral experience. We suggest that repeated attendance at these events accretes into more durable connections, both among members themselves and between members and the expanding collective identity. As such, we propose that a history of repeated field-configuring events will dampen the negative effect of legitimation on collective identity coherence. In line with this logic, we hypothesize that the number of previous field-configuring events in a given area will moderate the effect of legitimation on language heterogeneity.

We do not assume that all field-configuring events will have the same effect on collective identity coherence. The structure and content of these events will affect whether they develop broad shared understandings or fragment and reify parochial interests (Zilber 2011, Schüssler et al. 2014). Specifically, they will affect whether heterogeneous actors come to see one another as part of the same broad and inclusive collective identity or whether they contest the inclusion of actors from different domains. In the following section, we propose mechanisms that explain the conditions under which field-configuring events coordinate expansion.

Emotions as Coordinating Mechanisms

As discussed above, the extant literature on how organizations manage legitimation's double-edged sword suggests that leading members in the field can help coordinate expansion through stories and standard-setting (Wry at al. 2011, Lee et al. 2017). Extending these theories to field-configuring events, it can be deduced that field-configuring events would help coordinate expansion by providing members with stories and standards regarding criteria for inclusion. These stories and standards would be deemed credible because they are constructed and disseminated by leading or central organizations in the field and because the domains and practices of new actors are recognizable extensions of core domains and practices (Wry at al. 2011). Thus, existing theories suggest that field-configuring events will facilitate coordinated field expansion when they help leading organizations in the field showcase these stories and apply these standards.

These explanations focus primarily on how leading organizations can align increasingly heterogeneous members by using standard-setting and growth stories to clarify the domains and practices that define the field's collective identity. Yet field-configuring events could subvert the efficacy of these standards and the resonance of these stories by including actors who tell their own collective identity stories—stories that do not credibly connect to the collective identity's core domains and practices. In these cases, field-configuring events could reinforce differences rather than reconcile them (Zilber 2011, Schüssler et al. 2014). To help explain why some field-configuring events help coordinate collective identity expansion while others do not, we turn our attention to emotions, which are undertheorized in both the literatures on field-configuring events and collective identity legitimation. We offer a mechanism for how emotions help coordinate expansion, and we theorize how they contribute to mechanisms that rely on storytelling and standard-setting.

Sociological theories identify emotions as a central component of collective identity. Polletta and Jasper (2001) define collective identity as "an individual's cognitive, moral, and *emotional connection* with a broader community, category, practice, or institution," and state that collective identity "carries with it *positive feelings* for other members of the group" (p. 285, emphasis added). Classical and contemporary theorists argue that organizations can forge and activate bonds of solidarity among group members by eliciting emotional contagion—the sharing of emotions (Barsade 2002, Durkheim 2008, Rao and Dutta 2012). Emotions are tightly connected to organizational actions. Emotions can be inspirational, as they motivate actors' engagement in the field and impel actors to disseminate narratives about the field (Grodal and Granqvist 2014). Yet emotions have been notably absent from organization theorists' accounts of collective identity legitimation and field expansion.

We propose that emotional contagion can commit individuals to a broader and more inclusive collective identity when it is accompanied by affective perspective taking, a form of empathy. A central component of affective perspective taking is seeing "the world from another's vantage point or imagining oneself in another's shoes" (Ku et al. 2010, p. 793). Theories of affective perspective taking in psychology and political science suggest that it can reduce intergroup prejudice by changing "people's perspectives so that they are coordinated with the experience of members of other groups" (Dovidio et al. 2004, p. 1537). Both laboratory studies and field experiments have shown that having a research subject imagine an outgroup member's feelings decreased prejudice toward members of the outgroup

(Broockman and Kalla 2016, Adida et al. 2018, Simonovits et al. 2018). Moreover, experiments have suggested that a "self-outgroup merging," in which taking an outgroup's perspective creates an implicit association between the experimental subject and the outgroup, typically leads to a more positive association regarding the outgroup (Galinsky and Moskowitz 2000, Todd and Burgmer 2013).

We posit that members of an expanding field will see themselves and others as part of the same collective identity if they understand the emotions that other members have for their respective domains and practices. We propose that field-configuring events, including activities that show members that they share common positive emotions regarding their own domains and practices, will make members' claims of inclusion in the field more credible to one another. This, in turn, will lead members from different domains to recognize one another's connection to the field's collective identity. We theorize that emotional contagion and affective perspective taking are interconnected. When members of one domain see that members of another domain share their passion and excitement, they not only realize their commonalities, but are also more likely to feel these emotions themselves.

Returning to extant theories of coordinated expansion, we suggest that these emotional mechanisms can facilitate storytelling and standard-setting, enriching these mechanisms. Groups that would normally discount the stories told by other members of the field—whether they are central members or merely actors from discrepant domains—will be more likely to accept these stories when these emotional mechanisms are in place (Benford 1997). This is because emotional contagion and affective perspective taking will make it more likely that stories told by leading organizations in the field resonate. They also make it more likely that field pioneers will recognize the domains and practices of new members as extensions of core practices, because they *feel* the similarities rather than discursively deduce their connection. Thus, we argue that positive emotions can help facilitate storytelling in a way that leads to inclusion and alignment of actors. Similarly, we posit that standard-setting at these events can facilitate a broader and more inclusive collective identity when the standards are applied to include activities that elicit positive emotions among attendees, rather than to codify ascriptive attributes of member domains and practices.

Methods, Analysis, and Results
Research Setting
The Maker collective identity has its roots in the do-it-yourself and hacker communities, drawing upon values of openness, sharing, and repurposing technologies. Makers built upon the "hacker ethic"—a set

of values and practices associated with technology and education which originated at the Massachusetts Institute of Technology (MIT) in the 1950s and 1960s, when students would come to "hack" the super-computer at the artificial intelligence laboratory by repurposing it in unexpected ways. Hackers shared an irreverence toward authority and espoused a common belief that "essential lessons can be learned about the systems—about the world—from taking things apart, seeing how they work, and using this knowledge to create new and more interesting things" (Levy 1984). These values and practices intersect with the long-standing American traditions of do-it-yourself tinkering and of garage entrepreneurship, both of which inspire the pragmatic approach of Makers to-ward repair, self-taught skill acquisition, innovation, and prototyping.

The term "Maker" was coined in 2005 by Dale Dougherty, a technology enthusiast and vice presi-dent at O'Reilly Media, a Bay Area publisher focused on information technology and programming books and courseware. In January 2005, O'Reilly Media first published MAKE Magazine, an outlet that "recog-nized that hackers were playing with hardware and, more broadly, they were looking at how to hack the world, not just computers" (Dougherty 2012). Dougherty hoped to create a movement that drew upon the hacker ethos but left behind the exclusionary aspects of the hacker identity. Much like their pre-decessors, Makers initially positioned themselves as an oppositional collective identity, fighting against the dominant commercial production model cen-tered on proprietary designs and mass production. Championing the motto, "If you can't open it, you don't own it," Makers flippantly (and sometimes il-legally) made unique gadgets and other creations by voiding commercial warranties and repurposing electronics in ways unintended by producers. For example, Makers hacked Microsoft's XBox Kinect Camera, creating open-source software that allowed other Makers to use Microsoft's hardware for novel design, art, and gaming projects (Carmody 2011).

Over time, Maker practices extended from repur-posing existing technologies to creating new ones. Makers started gathering in physical locations called Makerspaces for the purpose of sharing a wider range of tools—such as three-dimensional printers and laser cutters—and skills, largely in open source projects. Initially these spaces were targeted at hobbyists, but as the Maker movement grew, some of these hob-byists started entrepreneurial ventures, prototyping commercial products and commercializing ready-to-build kits for beginner Makers. The success of early Makers led media outlets to herald this movement as a new industrial revolution, where manufacturing was not large scale and offshore, but rather personalized

and local (Anderson 2012). At the same time, Makers gained legitimacy as many local, state, and federal government officials valorized them, describing them as an engine for economic development and job growth.

As the Maker collective identity gained legitimacy, the field expanded and became more heterogeneous.[2] This transformation came both from within the ranks of field pioneers and from individuals in distal and proximate fields. First, more and more hobbyists became full-time entrepreneurs. Second, the Maker field expanded in scope, attracting individuals from a much wider set of domains and backgrounds. Crafts-people, woodworkers, blacksmiths, biohackers, video-game creators, musicians, food hackers, gardeners, and automakers (among others) started participating in both Makerspaces and Maker events. The Maker field also attracted actors with values and interests that diverged from those of the field's founders. For example, al-though Makers initially positioned themselves in opposition to large corporations built upon closed-source designs and mass production, the success of the movement attracted large corporations, such as General Motors and Bose, to sponsor and participate in Maker events. Thus, in contrast to the "growth stories" theo-rized to coordinate expansion in the theoretical framework of Wry et al. (2011), the practices and identities of new members of the Maker field were not a clear extension of core practices and identities of the Maker field.

Maker Faires and Coordinated Expansion

Maker Faires are field-configuring events that are central to the Maker field. The first Maker Faire was organized in San Francisco by O'Reilly Media in 2006 and attracted more than 20,000 attendees. Maker Faire organizers describe it as the "greatest show-and-tell event on earth" (Make 2019b). Maker Faires are an effort to provide a space for do-it-yourself (DIY) enthusiasts to connect with each other, since DIY was "often invisible in our communities, taking place in shops, garages and on kitchen tables" (Make 2019b). Over the next decade, the O'Reilly spin-off organization Maker Media organized or sponsored hundreds of Maker Faires in cities and towns across the United States and internationally. Although the Bay Area (San Mateo) Faire is the largest "flagship" Faire, drawing more than 125,000 domestic and in-ternational attendees in 2017, most Maker Faires are locally organized "mini" Maker Faires, licensed by Maker Media and drawing Makers from the nearby community.

Maker Faires are intentional about bringing to-gether participants from a wide variety of domains and backgrounds, mixing individuals with different interests and goals. They feature hobbyists and stu-dents next to professionals, large corporations such as Google next to small nonprofits such as the SCRAP

Center for Creative Reuse. Ultimately, organizers strive for inclusion and integration of participants from wide-ranging technical and artistic backgrounds and skillsets. Certain applications for booth space from recurrent participants get rejected, and different types of skills and projects are interspersed in the same space. This ensures a heterogeneous mix of projects and generates both novelty and continuity at these events.

To analyze whether Maker collective events counteracted the downside of legitimation, we conducted a quantitative study of the relationship between legitimation, Maker events, and the convergence or divergence of stories told about Makers. After showing that Maker collective events were associated with greater convergence of stories about the Maker collective identity and that this moderated the relationship between legitimation and collective identity coherence, we draw upon fieldwork and interviews to understand the role of emotions in coordinating expansion (Kaplan 2015). Below, we describe the quantitative component of our study and results, followed by the qualitative component of our study and findings.

Quantitative Data and Measures

We quantitatively evaluate the extent to which Maker field legitimation and collective events affected the coherence of the Maker identity as it was portrayed in media coverage regarding the field. The news media is an intermediary that reflects cultural phenomena (Gamson and Modigliani 1989), mirroring the stories that Makers tell about themselves. The media also shapes "the perceptions of other external audiences such as the general public" (Wry et al. 2011, p. 460; see also Deephouse 2000), affecting both field formation and field expansion. During field formation, "media discourse embeds firms in shared cognitive structures" and affects perceptions that the field is "for real" (Kennedy 2008, pp. 271–272). During field growth, news coverage mediates field members' discourse regarding who is "counted" as part of the expanding collective identity. Greater convergence in the stories told by the news media about a growing field will help make the field and its associated collective identity appear more coherent and recognizable to audiences (Wry et al. 2011). In contrast, greater heterogeneity will make the field's identity appear less coherent and harder to understand.[3]

In our analysis, we rely on the language that news outlets used to describe the Makers. We first collected news coverage of the Maker field through an exhaustive Lexis-Nexis search of U.S. newspapers for the period between January 2005 and March 2017 using a set of keywords associated with Makers— *Makerspace*, *Maker movement*, *Make magazine*, *Maker Faire*, *hackerspace*, and spelling variations of these terms. The start date was chosen to coincide with the

first publication of *Make* magazine, which gave rise to the term "Maker" and the associated Maker movement.[4] This yielded 2,490 newspaper articles published during the 12-year-and-one-month study period. The distribution of media articles over time is illustrated in the online appendix in Figure A1.

To analyze the relative coherence or incoherence of the Maker collective identity as portrayed in the news media, we constructed a measure that captures the heterogeneity in media discourse at any given moment in time. We compared each article in our data set with every other article published within a 31-day window of the focal article to see whether, on average, the newspaper articles used similar or different language to describe the Makers during this moving window of time. Thus, every article was compared with other articles published on that day as well as articles published in the 15-day period before its publication and the 15-day period after its publication. All but 10 of the articles in our data set were published within a 31-day moving window of at least one other article, leaving us with a sample of 2,480 articles. We focused our comparison on contemporaneous articles because we wanted to make sure that we were comparing the news coverage of the same temporal instance of the Maker field, reasoning that if we had compared articles across years, we might capture heterogeneity due to changes in the field's composition over time. Similarly, we compared each focal article with every other article published in the United States rather than just the articles in the local geography because we are measuring how Maker events affected the coherence of the Maker field's collective identity as a whole, rather than within a local region.

Dependent Variable. Our dependent variable *Language Heterogeneity* measures the degree to which the news media language describing the Maker field diverged, indicating a less coherent collective identity (Wry et al. 2011). We constructed this variable using cosine similarity—a text-mining technique that transforms each observation in a text corpus (here, newspaper articles) into a vector of word counts (Manning et al. 2008) and relies on the Euclidean dot product formula to calculate the following measure:

$$CS_{ax} = \frac{\sum_{i=1}^{n} a_i \times x_i}{\sqrt{\sum_{i=1}^{n} a_i^2} \times \sqrt{\sum_{i=1}^{n} x_i^2}},$$

for each dyad formed by pairing the focal article *a* with every other article *x* within the comparison window, where *n* is the dimensionality of the word count vectors in this corpus. A cosine score of 0 means that two articles do not share any words, whereas a score of 1 indicates that two newspaper articles are

identical in the *n*-dimensional space created by the *n* unique words in the vector space. Since our dependent variable is *Language Heterogeneity*, not language similarity, we subtracted the cosine similarity measure from 1 to construct the cosine distance between each two articles. Then for each focal article, we calculated the average cosine distance between the focal article and each of the other articles within the 31-day moving window.

In the context of the literature on collective identity and legitimacy's double-edged sword, our language heterogeneity measure (i.e., cosine distance) is a proxy for the consistency and alignment of stories told about the Maker field. Stories that are aligned and describe the Maker field in consistent ways focus on the same features of the field and thus are more likely to use similar words to one another. In contrast, stories that are not aligned and portray the Maker field in less consistent ways focus on different features and use different words from one another. We expect that increasing legitimation will be associated with higher cosine distance (i.e., heterogeneity) among stories about Makers, because legitimacy will attract discrepant actors who tell divergent stories about the field, leading the news media to focus on different aspects of the Maker field and thus produce a less coherent picture of the field and its associated identity. We believe that Maker events will decrease the heterogeneity of stories told by field participants and that this will be reflected in media coverage of the Makers through greater convergence in the language used to describe the field, moderating the diluting effects of legitimation on field and collective identity coherence.

Explanatory Variables. To test our baseline hypothesis that legitimation will be associated with greater language heterogeneity, we constructed the variable *Legitimation*. We focus on sociopolitical legitimation because the support of the state can play an essential role legitimating nascent fields (Aldrich and Fiol 1994, p. 648; Lee et al. 2017). For example, the state can lend symbolic and material support for new groups and practices by shining a positive light on their previously unacknowledged or overlooked activities (Fligstein 2001). By describing a field and its members in a positive way, the state can focus the attention of external audiences and resource providers on the field.

To construct our *Legitimation* measure, we first collected government press releases—strategic acts of communication that brought attention to the Maker field. We collected all local, state, and federal government press releases referring to Makerspaces, Maker activities, and more generally, the Maker field from its founding in January 2005 to the end of the study in March 2017. We collected these data from the PR

Newswire service included in the Lexis-Nexis databases using the same keywords as for the media coverage search. During the study period, there were a total of 470 press releases disseminated by local, state, and federal governments. The distribution of press releases over time is illustrated in the online appendix in Figure A2.

In line with prior research, we assume that legitimation for a growing field accretes over time (Hannan and Freeman 1989, Kennedy 2008), and thus, we consider the cumulative number of press releases regarding the Makers published during the study period. We calculated this variable at geographically specific levels, linking press releases published by local municipalities with newspapers within a 50-mile radius. Similarly, we linked press releases published by a state government with all newspapers within that state and linked federal press releases with newspapers nationwide, assuming that press releases contribute to legitimating the field within their associated geographies. Thus, we created the variable *Legitimation* by adding up the number of local, state, and federal press releases linked to each newspaper article observation. For example, articles published by *The Columbus Dispatch* in Columbus, Ohio would be linked to the count of the sum of the number of press releases published by the federal government, the number of press releases published by the state of Ohio, and the number of press releases published by municipalities within 50 miles of Columbus, Ohio. We assume that initial press releases had a greater legitimating effect in the public eye than subsequent initiatives. For this reason, we log-transformed the variable to capture decreasing returns to scale.

To test whether field-configuring events moderated the relationship between legitimation and language heterogeneity, we leveraged the timing and location of Maker Faires to construct two explanatory variables, *Post-Maker Faire* and *# of Previous Maker Faires*. First, to estimate the effect of Maker Faires on the divergence of stories told about the Maker field, we created the variable, *Post-Maker Faire*, coded 1 if the article was published within 30 days following a Maker Faire that occurred within the region of the newspaper and coded 0 if it was published during any other period. To construct this variable, we accessed the official Maker Faire event database and collected the date and location of every Maker Faire that took place starting with the first Maker Faire in 2005 up to the end of our study period in March 2017 (Make 2018). We then linked newspaper articles to Maker Faires based on whether the Maker Faire was likely to draw Makers from the newspaper's geographic region as follows. Large, "flagship" Maker Faire events were linked to national newspapers in our data such that newspapers with a national audience, such as the New York Times, Wall Street Journal, Washington

Post, and Christian Science Monitor, were coded 1 following a Flagship Maker Faire and 0 otherwise. In contrast, much smaller "mini" Maker Faires only drew from the immediate local community and were likely to be covered by local paper; thus, local newspapers within 50 miles of a mini Maker Faire were coded 1 in the month following the event and 0 otherwise. Finally, "featured" Maker Faires drew more regionally, typically from the local community and adjacent communities and would be most likely to be covered by these papers. Therefore, we linked featured Maker Faires with newspaper articles such that articles published within 250 miles of the event were coded 1 if they were published in the 30 days following the event and 0 otherwise.

Second, we theorized that as individuals attended repeated Maker Faires, they became increasingly likely to tell similar stories about the Maker identity. Although their first time at Maker events was generally overwhelming and surprising, participants soon came to understand inclusivity and emotional connection as a part of the Maker collective identity. To capture this process, we created the variable *# of Previous Maker Faires,* measured as a count of the number of prior Maker Faires connected to the geographic area of the newspaper, based on the link logic for *Post-Maker Faire* described above. Thus, if a local newspaper was in an area where there had been two mini Maker Faires and one featured Maker Faire prior to the article's publication date, this variable would be coded as "3." We log-transformed this variable to account for diminishing returns, reasoning that hosting a first Maker Faire in a region sets the Maker community on a path toward increased coherence among participants' identity stories, whereas subsequent Maker events in the area function to maintain and extend the pre-established alignment.

In order to capture whether these field-configuring events moderated the effect of legitimation on the heterogeneity of stories told about the Makers, we interacted legitimation with *Post-Maker Faire* and with *# of Previous Maker Faires.* Assuming that our study confirms extant theories that legitimation is associated with greater incoherence (diverging stories captured through language heterogeneity), these interactions will capture whether Maker collective events counteracted the increasing incoherence and reduced divergence among stories told about the increasingly heterogeneous Maker field.

Control Variables. To control for the possibility that media content might converge (or diverge) because they were discussing the same Maker event, we created the dummy variable, *Maker Faire,* coded 1 if the article mentioned Maker Faire at least once and 0 if the article did not mention Maker Faire. Additionally,

we controlled for a number of article and newspaper characteristics that could affect the heterogeneity of news coverage. First, the type of newspaper could affect the type of language used. For example, national newspapers may have a different focus and use different language than local newspapers. To control for this, we created *National News,* a dummy variable coded 1 if a newspaper was a national paper, such as *The New York Times* or *The Washington Post*, and 0 if it was a local newspaper. Similarly, longer articles could be more likely to share similar words than shorter articles, so we controlled for article length (*Word Count*). We log-transformed *Word Count* to account for skewness. Finally, since we constructed our heterogeneity measure based on a moving window of contemporaneous articles, we controlled for the number of articles in the comparison set (*# of Articles*) such that we accounted for the volume of news coverage in a given period of time.

Model Specification
Since our language heterogeneity measure is a proportion between zero and one, all models are estimated using a generalized linear model with a binomial distribution, logit link, and robust standard errors. We include year fixed effects to control for variation associated with time.[5] Concerns have been raised about proportions data containing zeros or ones (McDowell and Cox 2001), because observations at the limit (zero or one) could be caused by a different process than noncensored observations, leading to sample selection issues. However, in our case, no articles are completely orthogonal or identical (meaning, having a heterogeneity score of one or zero), such that the use of a generalized linear model with logit link function and the binomial distribution represents an appropriate choice (Papke and Wooldridge 1996, McDowell and Cox 2001).

Quantitative Results
Testing the Relationship Between Legitimation, Collective Events, and Language Heterogeneity.
Table 1 presents descriptive statistics and correlations for all variables in our models. The mean language heterogeneity is 0.381, spanning a wide range from fairly similar articles (0.165) to very different ones (0.892). Legitimation was strongly correlated with the number of previous Maker Faires (0.447). This is not surprising as both of these variables are cumulative, increasing over time. We tested for multicollinearity and found that the variance inflation factor for all variables was in a safe range, below 3, and well under the cutoff of 10, where this would raise concern (Belsley et al. 1980). Additionally, our three event-related variables—a dummy for articles mentioning Maker Faires, a dummy for articles published

Table 1. Summary Statistics and Correlation Matrix Among Variables ($N = 2{,}480$)

	Variable	Mean	SD	Min	Max
(1)	*Language Heterogeneity*	0.381	0.091	0.165	0.892
(2)	*Legitimation* (log)	2.824	1.737	0.000	4.836
(3)	*Post Maker Faire* (30 days)	0.284	0.451	0.000	1.000
(4)	*# of Previous Maker Faires* (log)	1.434	0.997	0.000	3.135
(5)	*Maker Faire*	0.244	0.429	0.000	1.000
(6)	*National News*	0.110	0.313	0.000	1.000
(7)	*Word Count* (log)	6.597	0.774	3.912	8.743
(8)	*# of Articles*	41.749	22.219	1.000	82.000

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1)	*Language Heterogeneity*	1.000							
(2)	*Legitimation* (log)	0.264	1.000						
(3)	*Post Maker Faire* (30 days)	−0.069	0.070	1.000					
(4)	*# of Previous Maker Faires* (log)	−0.010	0.447	0.145	1.000				
(5)	*Maker Faire*	0.033	−0.183	0.159	−0.043	1.000			
(6)	*National News*	−0.192	−0.250	−0.093	0.281	0.014	1.000		
(7)	*Word Count* (log)	−0.283	−0.007	−0.009	0.035	0.062	0.184	1.000	
(8)	*# of Articles*	0.294	0.910	0.134	0.418	−0.110	−0.233	−0.002	1.000

in the 30-day period following a Maker Faire, and a log-transformed count of prior Maker Faires in a region—are not strongly correlated (all below 0.16).

Table 2 presents models 1–7 estimating the relationship between legitimation, Maker collective events, and language heterogeneity describing the Maker field. Model 1 includes only control variables. In model 2, we add legitimation to test extant theories that increased legitimation is associated with a decrease in the coherence of a field's collective identity. Models 3 and 4 add each of the explanatory Maker event variables to show how these collective events affected the divergence of stories told about Makers. To test our hypothesis that these collective events mitigate the downside of legitimacy, we interact these two Maker Faire variables with legitimation in model 5 and model 6, respectively. Model 7 includes both interactions.

In model 1, we find that longer articles and articles published by national news outlets are associated with less heterogeneous language than shorter articles and articles published by local news outlets. This is presumably because longer articles are more likely to share words with other articles and because national articles are less likely to reflect local idiosyncrasies than nonnational papers. Moreover, we find that articles about Maker Faires are associated with more heterogeneous language than articles that were not about Maker Faires. This relationship is positive and statistically significant. This makes sense as Maker collective events brought together many different actors who claimed membership to the Maker field in the same place at the same time, highlighting the heterogeneity of the field.

Model 2 shows that increased legitimation is associated with greater language heterogeneity. As more local, state, and federal government officials and agencies highlighted Makers and their activities, newspapers became less likely to describe the Maker field using similar language. The relationship between legitimation and language heterogeneity is positive and statistically significant at the $p < 0.1$ level in model 2 and is significant at the $p < 0.01$ level once we include the explanatory variables in the remaining models. This supports extant theories that describe legitimation as a double-edged sword: increased legitimation is associated with divergence in the stories told about the Makers.

Although models 1 and 2 suggest that articles about Maker Faires highlight the heterogeneity of actors and stories at these events, models 3 and 4 indicate that the events themselves serve to align the stories that are told about the field. Model 3 shows a large, negative, and statistically significant relationship between articles published in the 30 days following a Maker Faire and language heterogeneity, suggesting that newspapers use more similar language describing Makers following the Maker Faire than during other periods of time. Since we control for articles mentioning Maker Faire, this effect is not driven by the fact that these articles are describing the same event. Model 4 shows that the number of Maker Faires that have taken place within geographic proximity to newspapers discussing the Makers is associated with less language heterogeneity in media coverage, suggesting it is associated with greater consistency in the stories told about the Makers. Taken together, models 3 and 4 indicate that Maker Faires help align the stories told about the Makers in both the short term and long term. Articles describing the Makers were more similar immediately following a Maker Faire and as an area organized more and more Maker Faires over time.

Table 2. Generalized Linear Model of Language Heterogeneity of News Coverage Describing the Maker Field (31 Day Window)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
# of Articles	0.006***	0.005***	0.006***	0.006***	0.006***	0.006***	0.006***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Word Count	−0.136***	−0.136***	−0.136***	−0.139***	−0.138***	−0.140***	−0.139***
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
National News	−0.088***	−0.086***	−0.098***	−0.036	−0.037	−0.063*	−0.062*
	(0.022)	(0.022)	(0.022)	(0.026)	(0.026)	(0.029)	(0.029)
Maker Faire	0.064***	0.065***	0.083***	0.086***	0.083***	0.085***	0.083***
	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)
Legitimation		0.037+	0.060**	0.067**	0.071***	0.085***	0.088***
		(0.021)	(0.021)	(0.021)	(0.021)	(0.022)	(0.022)
Post-Maker Faire			−0.121***	−0.107***	−0.040	−0.107***	−0.043
			(0.016)	(0.016)	(0.025)	(0.016)	(0.025)
# of Previous MF				−0.044***	−0.042***	−0.001	−0.002
				(0.010)	(0.010)	(0.018)	(0.018)
Legit × Post MF					−0.023**		−0.022**
					(0.008)		(0.008)
Legit × # of Prev MF						−0.013*	−0.012*
						(0.005)	(0.005)
Constant	0.017	0.017	0.021	0.014	0.011	0.033	0.029
	(0.101)	(0.101)	(0.100)	(0.102)	(0.102)	(0.102)	(0.102)
N	2,480	2,480	2,480	2,480	2,480	2,480	2,480

Note. Legit, legitimation; prev, previous; MF, Maker Faire.
***$p < 0.001$; **$p < 0.01$; *$p < 0.05$; +$p < 0.1$.

In models 5–7, we examine the interaction of legitimation with the explanatory Maker event variables to see whether Maker Faires counteracted the effect of legitimation on language heterogeneity. Model 5 suggests that the interaction between legitimation and whether a Maker Faire had taken place in the previous 30 days is associated with a decrease in language heterogeneity. As the Maker field became more legitimate, the relationship between legitimacy and story divergence weakened in the aftermath of a Maker event, suggesting that Maker events helped coordinate the stories told about the Maker Field—mitigating the downside of legitimation. Model 6 shows that the number of previous Maker Faires moderates the relationship between legitimation and language heterogeneity, indicating that descriptions of the Makers diverged less in areas where more Maker Faires had taken place as the field became more legitimate. In model 7, we include both moderators and find that they remain statistically significant and relatively unchanged. This suggests that Maker Faires had both short-term and lasting effects moderating the effects of legitimation on language heterogeneity.[6]

Our quantitative study shows that legitimation was associated with greater divergence in the language used to describe the Maker field, confirming extant theories of collective identity legitimation. Additionally, we find that Maker collective events aligned stories told about the Makers, attenuating the diluting effect of legitimation on collective identity coherence. These Maker events had both temporary and durable effects, reducing the incoherence of the Maker identity such that articles published in the aftermath of Maker Faires and articles published in areas that had hosted multiple Maker Faires bore a stronger resemblance to one another than those that did not. In so doing, we show that field-configuring events have the potential to help coordinate the expansion of a field and to broaden its collective identity. Yet not all field-configuring events help coordinate expansion, suggesting that our quantitative analysis alone is insufficient for helping us to understand the underlying mechanism through which members of an increasingly legitimate but heterogeneous field come to see one another as members of the same group and to tell consistent stories about the field. As such, we conducted a qualitative study to explore the mechanisms through which Maker collective events can coordinate collective identity story alignment and field expansion.

Qualitative Methods

We designed the qualitative component of this study to better understand the mechanism through which leading organizations in the field used field-configuring events to align participants from different backgrounds. The qualitative component of the study is based on two

main sources of data: direct observation and interviews with Makers. Table 3 summarizes our qualitative sources of data. Direct observation began in 2012 when the first author attended her first Maker Faire event. She subsequently visited three Maker Faires and eight Makerspaces and hackerspaces, taking detailed notes at each. In addition, both the first and second author attended three Maker Faires in 2017, consisting of one flagship, one featured, and one mini Maker Faire. Table 4 provides a list of the Maker Faires that the authors attended and observed. These data helped us to analyze the Maker context, particularly as it related to the evolution of the Maker collective identity over time, the role of Maker Faires, and the growing heterogeneity of participants as more and more discrepant actors entered the field.

The second source of qualitative data consisted of two rounds of interviews. The first round of interviews served to deepen our understanding of the context. The first author systematically interviewed Makers about their sharing and collaboration norms, as well as their creative and entrepreneurial activities, as part of a different research project. This resulted in 62 interviews of individuals who identify as Makers as well as other Maker movement stakeholders, such as entrepreneurs providing goods and services to the Makers. After this first round of interviews and direct observations, we became interested in unpacking the role that Maker events played in the creation of a coherent Maker identity. As a result, we returned to the field to collect a second round of interview data that was specifically targeted at unpacking the mechanisms through which Maker Faire events contribute to coordinated expansion of the Maker collective identity. For this reason, our interview questions in the second round centered on the participants' reasons for being involved in Maker Faires and their experiences at these events. We interviewed two main types of actors: Maker Faires attendees and Makers who participated as exhibitors or workshop facilitators. We conducted either in-person interviews at Maker Faires or phone interviews with participants following the event. In-person interviews lasted between 5 and 30 minutes each, and phone interviews lasted between 50 and 90 minutes each. Interviewee-level information is

included in the online appendix in Tables A1 (first round) and A2 (second round).

We conducted 39 interviews in the second round. Interviews were semistructured, allowing us to gain in-depth information about a phenomenon that is poorly understood from the perspectives of those who were most knowledgeable about the context (Strauss and Corbin 1994). The semistructured nature of the interviews also provided us with the flexibility to pursue theoretically interesting leads. As such, we used the interview protocol as a general guide but adjusted our questions to more specific ones when necessary (Spradley 1979). Interviews were recorded and professionally transcribed. We used theoretical sampling, followed by snowball sampling, to identify additional informants who would be willing to participate in the study.

To understand the emotions that were present at Maker Faires, we began our analysis of the second round of interview data using a content analysis approach (Krippendorff 2004). Given our interest in emotional responses to the events, we followed the lead of other scholars in coding for emotional language (e.g., Saldaña 2015, Toubiana and Zietsma 2017). Saldaña (2015) proposed an approach that he referred to as "emotion coding," which he defines as labeling the feelings that participants experience and/or recall in a given context. As such, "Emotion Codes are a combination of In Vivo Codes and emotional states and reactions" (Saldaña 2015, p. 106). For example, in the following quote from our data, there are a combination of in vivo codes and emotional reactions that provide a sense of what the participant was experiencing at the Maker Faire:

> Yeah I definitely met people and I've been really inspired and intrigued. Like "oh, what are you doing? How did you get to this? What programs? Blah blah blah." And immediately I'm like "I want to do this. I want to do my version of this." And like "tell me your methods so that I can then apply it to my own." That's been really cool. (#68)

Consistent with emotion coding (Saldaña 2015), we were "looking for keywords and expressions that were highly emotive, relational, and expressed, consistent with our purpose of capturing social, not

Table 3. Qualitative Data Description and Use

Data source	Description	Use
Interviews		
First round	62 interviews of Makerspace founders, members, employees, and other stakeholders	Useful for gaining a general understanding of the Maker field
Second round	29 interviews of Maker Faire attendees and exhibitors	Useful for understanding how the Maker field coordinated field expansion
Direct observation	Three Maker Faires and eight Makerspaces and hackerspaces	Useful for gaining a general understanding of the Maker field

Table 4. List of Maker Faire Observed by the Authors

	Type of Maker Faire	Date	Location
1	Flagship	September 2011	Queens, New York
2	Mini	October 2012	Oakland, California
3	Flagship	May 2013	San Mateo, California
4	Mini	October 2013	Oakland, California
5	Mini	May 2018	Santa Cruz, California
6	Flagship	May 2018	San Mateo, California
7	Featured	October 2018	Denver, Colorado

physiological, emotive responses" (Toubiana and Zietsma 2017, p. 931). Furthermore, we coded both according to the specific words used to express an emotion, as well as how words were related to each other in context to express an emotion. In the above quote, "inspired" and "intrigued" provide in vivo examples of the emotions that the participant was experiencing, and the phrase "And immediately, I'm like 'I want to do this'" provides a contextual cue that the participant was experiencing excitement. We classified these emotionally laden codes as either positive or negative emotions.

In addition to coding for emotional responses, we also engaged in open coding of the interview data to determine sources of those participants' emotional reactions to the Maker Faires. We used the qualitative data analysis software NVivo12 to analyze the data. During open coding, we derived codes primarily from the language of the informants (Strauss and Corbin 1994). These included codes such as "being part of a group," "making friends," "come together," "collaborative environment," "sense of community," "life connection," "supporting," "melting pot," "intellectual overflow," "enormous skill base," and "everyone is a Maker" (Spradley 1979, Strauss and Corbin 1994). We also used axial coding (Corbin and Strauss 2008) to explore the relationships among first-order codes. We collapsed these codes into five emergent categories—"demonstrations and hands-on experiences," "affective perspective taking," "emotional contagion," "collective identity," and "aligning collective identity stories." We further abstracted these emergent themes to three broad theoretical categories: "eliciting emotions," "emotional mechanisms," and "identity outcomes." Additionally, while coding the data, we paid attention to possible alternative explanations for how these field-configuring events served to coordinate field expansion.

Qualitative Findings
Examining Coordinating Mechanisms at Field-Configuring Events.
A key finding of the qualitative analysis is that Maker Faires were organized to elicit positive emotional responses from participants. We found that these emotions included excitement, inspiration,

and satisfaction, which were drawn out through demonstrations and hands-on experiences. During these experiences, participants had opportunities for affective perspective taking and emotional contagion that supported the creation of collective identities and that motivated them to retell the stories that were put forward by the Maker Faire organization. Below, we explicate our findings.

Eliciting Emotions: Demonstrations and Hands-On Experiences.
The organizers of Maker Faires were intentional in establishing the atmosphere at events and setting standards for the types of exhibitors they wanted to attract. Specifically, organizers wanted exhibitors who could inspire attendees. This translated into exhibitors who could provide demonstrations and hands-on experiences. For example, in its call for exhibitors the Maker Faire website states, "Maker Faire provides Makers that are participating purely by sharing their project and inspiring others to make with exhibit space, tables, chairs, power, entry passes, etc., at no cost to the Maker" (Make 2019a). Additionally, the overall atmosphere at these events is important, featuring a fair amount of spectacle—such as a 25-foot tall robot with a monitor for a head that throws flames (Thomas 2019)—to create a carnival-like environment that could set the scene for eliciting these positive emotions (see Table 5 for supporting data).

One of the authors experienced the centrality of these hands-on experiences, where at a mini Maker Faire, he was invited to cut a piece of copper, imprint it with the design of a squirrel, and set it in a chemical solution that finished the handmade copper pendant. Maker Faire organizers anticipated that demonstrations and hands-on experiences would elicit emotional responses from participants. This was illustrated in an interview with Sandra, a Maker Faire employee:

> I think our role is really about curation. I like to think of us as a talent agency, as much as anything else. It's really about finding people who will come and participate and inspire others to say, not only, "Oh that's cool, I had fun." [...] what we really want is that moment where you think, "Hmm, that guy did it. I can do it too." That is the moment, the kind of Gestalt moment that we're looking for. (#80)

Through these hands-on experiences and demonstrations, participants were exposed to heterogeneous Makers and their crafts. One participant described Maker Faires as "a melting pot for creativity and technology" (#79). As an example, a participant stated:

> I think [there are] a lot of differences among everybody. We all have our own fingerprint. We build ideas off of each other. Someone can see a sculpture and think that could be great in a VR game or maybe not

Table 5. Representative Data: Eliciting Emotions

Like it's pretty freaking wild to watch kids make that connection of that's how servo motor works. And they're like "So all you got to do is just write the code? What's the code? And then I can just put this in and then that writes it? Oh sweet." And like having them experience that, make that connection, and then they're like "Oh we can do this. Can we put it on this." (#68)

I think it's when they do something hands-on, like our workshops that we're trying to organize here in our booth, as really reminders of what it's about. It's about just getting in there and using your hands to make something. And if somebody is successful at that and has that moment of pride, often it is a revelation for them. So, especially for young kids. So when they have that moment of "Oh, it's fun. I made it", that can really spark a whole line of inquiry from them that changes their thinking about themselves. [...] It's about agency. (#80)

I don't know if it's maybe [participants] came into it ready to be excited about what everyone's doing and ready to be, I think it's also like it has to do with the interactive element. [...] Here we get to interact with people and if they're like stand-offish to it at first maybe we'll like break down their barriers a little bit to creative and to creation and like, no you really can do this. And then people are really excited. (#84)

When you get to hands-on things, you get to play with them, and there's a sense of playfulness and a sense of possibilities, a ... sort of an inspiration of, "Wow, look at all these creative people doing all of these different things." I left just super excited about. Like, "Oh, if they could all do all these exciting things, what can I do?" (#98)

We're creating things for you to feel like you're, I don't know, creating something. You created this. We worked with like six or seven kids yesterday creating this unicorn wolf sculpture and they were like so innovative and all I did was hand them the tools to do that and it felt really, really, really empowering for them and for me. So it was cool. (#84)

as a sculpture but as an art card for Burning Man. [...] Bouncing ideas off of each other as a community, a Makers community where it takes a village to raise someone. It takes a community to create something. (#89)

Ultimately, this exposure generated positive emotions such as excitement in participants. One participant expressed it this way, "Everyone's just super excited to share what they can do and find out more of what they can do and what everyone else can do. It's super positive" (#88). Another participant stated, "I might not know the electronics, but you might not know the glitter. And if I can bring my horns and you can bring your EL wire and we can wire this up and now we have a glow in the dark unicorn horn. That's awesome" (#66).

The above quotes suggest that demonstrations and hands-on experiences provided opportunities for participants to interact, share positive emotions with one another and gain information about one another and their crafts. Sandra, the Maker Faire employee, further described how these hands-on experiences supported an emotional connection that "converts" the Maker Faire participant: "I don't want to overdo the religious analogy, but there is kind of a conversion moment." She continued, "We think that your hands and your brain and your emotions have a special physiological relationship to each other" (#80). With these statements, she connected the physical acts of participating in hands-on experiences with the cognitive and the emotional experiences. Our data suggest that these emotions supported participants' willingness to receive additional information about disparate participants and to use it to see their commonalities. In this way, the in-person demonstrations and hands-on experiences differentiated Maker Faires from other mediums that are primarily discursive or information-based, as illustrated below:

I try to communicate and try to be positive and friendly with people I know, so they can see there's a lot more human contact to the art. You're out there, explaining what they're doing and showing what they're doing and communicating with people who are watching you [live], which is a lot of different than if, say, you were watching on video tutorial, or something like that. (#105)

Next, we detail how inclusive shared understandings emerged through emotional mechanisms that we describe as emotional contagion and affective perspective taking.

Emotional Mechanisms: Emotional Contagion and Affective Perspective Taking

Our interviews indicated that this connection to a larger collective identity was facilitated by two interconnected emotional mechanisms: *Emotional Contagion* and *Affective Perspective Taking*. Emotional contagion, or the sharing of emotions, was a dominant theme throughout the data (Table 6).

One Maker described how those emotions spread:

The first day I came here, I was like [...] maybe I'm not so much a part of it. But as the days kind of progressed I was like, oh, actually people are really excited about our project more so even than other booths perhaps because it's so hands-on and it's so creation- and creativity-based and it's something that I feel very comfortable with and I felt really good having people feel so inspired by it. (#84)

Exhibitors acknowledge the emotional benefits that come from engaging participants in the experience. Joshua, a sculptor, describes this process:

Getting people involved is twice as good [as selling products]. It gets them more excited about the process and the project. It connects them to creativity ... if that

Table 6. Representative Data: Emotional Mechanisms

His like enthusiasm was infectious about this thing and I was "like dude this could be. . . ." He's like "it could be used for blah blah blah blah blah. Let's cast this out of bronze." I'm like "Let's do aluminum, let's do bronze, let's do everything." Like it's this huge indestructible. (#68)

And a lot of kids, there's a fair amount of kids here. And some of those will be inspired. Some little girl who maybe didn't think that science was for her might come away thinking, "Oh, I can be an engineer, I can do something interesting." [...] I think it's also that they want to inspire and provoke some kind of action afterward. (#83)

And so, it is this really deep satisfaction and pride that you get and of course, there's a deep emotional connection because then you get to share that with people and to have that . . . I think the reason why makers choose to show up, especially if they're not a vendor. [...] It's because they want to be seen and they want to be celebrated. And that appreciation is one of the rare things that you get after thousands of hours of work. (#66)

[Awkwardness] is supported. It's okay. You're super weird, but you're into this robot, come on in. So you're already there. On what emotions come up; openness, sharing, caring, just like encouraging. Like it's pretty freaking wild to watch kids make that connection of that's how servo motor works. (#68)

There are a lot of stares that are like, "Hey! Yeah! You're like me in this way of like we just did this thing and we're both doing something cool and we're passionate about it." And people are ... I mean I'm a unicorn, and people are pretty friendly. (#66)

In a way, we're all kind of artists. I've been to some craft fairs and that sort of thing, and seen a lot of really cool stuff. But, it wasn't until I went to a Maker Faire and saw not only that, but the more technical stuff, that it really struck me as, "Everybody here's doing the same thing." They're creating something from basic materials, or putting together things that nobody thought of to put together before, and making something different. (#86)

[engaging with my art] has an emotional reaction, but then also creative reaction, that has a huge potential for change and hopefully to do some good. (#97)

In turn, participants also experienced positive emotions through these interactions with other Makers and through the discovery that they were a part of something bigger than themselves. One participant stated:

Everybody is here because it's what they wanna do. And that energy's kind of catchy. It sometimes, something totally unrelated, just gives you an idea or gives you some motivation. I hate to get into the wacky spiritual, but you know, the energy here, the aura. I don't know if there's an aura, but there's that kind of effect. The fact that somebody is excited about something helps you get excited about something. (#74)

Attendees saw themselves as transferring energy and emotions through their interactions and saw that transfer as allowing them to feel connected to one another and to the overall field. Through this transferring of emotions, they saw commonalities between themselves and other participants (i.e., affective perspective taking) who they first thought to have nothing in common with themselves. As such, the shared positive emotions that were inherent to affective perspective taking allowed Maker attendees of distinct backgrounds to feel connected to the overall Maker collective identity. Emotional contagion and affective perspective taking were closely connected, as individuals shared a sense of collective excitement and at the same time saw their affective commonalities. James, an artist, describes this sentiment: "It [Maker Faire] gives platform for presentation, connection, sharing. Like there's this one guy here who's obsessed with this particular angle, like 19.2 degrees. I've never seen somebody more jazzed on an angle. His enthusiasm was infectious" (#68). Affective perspective

taking was evident in another quote by an attendee—an entrepreneur whose Maker exhibit consisted of building tiles for teaching math and geometry:

This group of people with hula hoops. This year, for the first time, we were next to each other. We are this bunch of nerds, you know, mathematicians, engineers, and they are a bunch of New Age, you know, older hippies. [...] My point is, we have very little in common. But we get to talk to them. And to me, at the beginning, they look like nomads, gypsies. [But] it turned out that they are very serious in what they're doing. And we got to talk about [the] mechanics of how to make hula hoops and how this is a technology and how they [reinvented the design]. I admire what they're doing. . . . They wanted to make some other things kind of based on the same technology. (#103)

This quote illustrates that Maker Faires created a space for Makers who were seemingly different to interact, to understand the perspective of the other, and to discover their shared identity.

Identity Outcomes: Inclusive Collective Identity. We found that, through the sharing of positive emotions, Maker Faires fostered an inclusive and expansive collective identity among attendees (see Table 7 for additional data on identity outcomes). First, in line with theories of field-configuring events and collective identity, we found that individuals who had not yet connected their idiosyncratic domains and practices to a collective identity discovered they were part of a larger group—something bigger than themselves. Prior to attending the Faires, many attendees were expressing themselves creatively but did not have a language to describe their domain or practices in a way that was recognizable to external audiences. Furthermore, they often worked in isolation, with a narrow perspective of who else shared

Table 7. Representative Data: Identity Outcomes

Some I relate to more than others. It's definitely, I would say we're a fringe group. In the sense that not everybody is interested in making things themselves. A lot of people are just consumers. (#74)

That could be a religious service, or that could be a motivational speaker, that could be a business seminar. I think everyone comes together. I mean, first of all, by definition we have a common experience. So we are all in the same place at the same time. We can say, "I was there," "I saw this," or "I remember this." There's a common group identity that's formed just by virtue of being in a place and having a common experience. [...] "Yeah, I was there and I'm part of this and I feel like I'm part of something greater than myself. (#83)

I have worked in the tech world for many, many years so as soon as I was here [...], is that it's that moment of like, recognizing your tribe. "Hello! How are you?" (#80)

[Being in the Maker community] was a lot like finding out if you were adopted, that you have a whole family that really would like to meet you ... that you didn't know about before. (#86)

Everybody can be a maker. And I think that's what I see a lot of at Maker Faire, which I really love, is like that encouragement of, like, anybody can do this. (#69)

[A maker is] someone who makes. I know that's bad to define it by the word itself, but ... Like creators is such a broad term that I think Makers is going for a more inclusive and vague thing. (#71)

I think everyone is a Maker. I think that again, we are all born with that imagination and that creativity. I mean you look at a kid who's like four or five and they are just the most brilliant, genius, and like creative person. It is actually how we learn and live through the world. (#66)

their specific interests. Maker Faires provided them with a place to connect to a community of people with similar idiosyncrasies and interests. For example, one of the participants had this to say:

> I think it's really important to continue bringing events like this to the public domain and proliferating the Maker movement, the Maker identity, because really some of these folks are being interpreted as crazy people for what they do. Non-conventional. They're in the backyard or their garage tinkering at wee hours of the night or on weekends. Not everybody here makes a career out of it, but everybody can be inspired by it and by being around making. (#79)

Secondly, we found that attendees of Maker Faires describe events as places where they discovered their connection to a collective identity that transcended the parochial boundaries of their specific domains and practices. Interview respondents describe how they had identified themselves as sculptors, jewelers, teachers, and so on, but did not see at first how they were connected to other creators who did not fit within their practice domains. Their initial visit to Maker Faires helped them to see the connections between themselves and other creators. One of the participants explained it by stating, "I feel like maybe I wouldn't have identified as someone who would be at Maker Faire until I came here and realized the work that we're doing is very much so a part of it" (#84).

Another participant discussed how she did not identify as a Maker prior to attending Maker Faires but that, once she started going, she concluded that she was indeed a part of the inclusive Maker collective identity. She stated, "these are our people. I think it's neat to be such a wide net. I think it's really productive" (#63). Another participant stated, "once you discover the Making community, I think it is kind of like finding a new family, you know?" (#87) In each of

these cases, participants describe Maker Faires as events that helped them connect to a broad and inclusive collective identity. This was encapsulated by the commonly shared slogan "We Are All Makers" (#80). Moreover, they describe this identification in terms of emotion rather than domain or practice content. This sharing of emotions allowed participants to broaden their perspective of how closely they were connected to others in the Maker community despite their ascriptive differences. A participant expressed it this way, "It was a lot like finding out if you were adopted, that you have a whole family that really would like to meet you—that you didn't know about before" (#86).

Evidence of a shared collective identity was visible in how participants and exhibitors referred to themselves as a part of the group. The following quote by a participant expresses this collective identity and its link to affective perspective taking and emotions:

> I believe that we all have that magic inside of us. I think that we are all made of glitter, as I say. You know, it's the stardust of the universe and that we have this imagination and the creativity is the connecting force that brings all of these different Maker people together. Because if you're a person who's making amazing cheeses and you're a person who's making amazing robotics, you're still taking materials that are in existence and changing them and transforming them into something else that you envision. And I think that that is that unifying piece. [...] [Then there is] the happiness that you get from accomplishment, from achieving something. (#66)

Identity Outcomes: Aligning Collective Identity Stories. By fostering bonds between different participants and the shared Maker identity, Maker Faires helped *align the stories* that Makers told about the field and what constitutes a Maker. Maker Faires aimed to spread the

belief that anyone can be a Maker. This was evident in a statement by one of its employees that "We are all Makers and we really believe that to be true. That everybody has something that they want to create and put out there into the world. And those stories are what make the world interesting, and we believe that that is true and our mission is to show people" (#80). Once participants started attending Maker Faires, experienced positive emotions as a result of participating, and came to accept individuals from other domains as members of their in-group, they converged in terms of the stories they told about Maker Faires and Maker identity.

For example, there was consistency in their inclusive definitions of who is a Maker. They stated things like, "any[one] and everyone is a Maker. [...] The movement is about not limiting" (#68); "I guess anyone who likes to build, do something with their hands. Build something from scratch with their hands. Or make something new with their hands. Cooking, building computers, writing software" (#90); "A Maker is somebody who takes found objects, or invents something, or uses his own brain, and not buying something off a shelf. A Maker is someone who makes it himself" (#92); and "anybody who's creative in thinking of ways of changing something" (#95). Another participant describes the expansiveness of the Maker identity, "Like there's just people with a bunch of random junk and tools, like nuts and bolts and nails and just nail it all together and you're making a sculpture. And I'm like 'I freaking love that'" (#68) and "There's nothing profane or illegal here [at Maker Faires], just the scope and the breadth and creativity here. Every aspect of science, art, bio, pretty much anything robotics and stuff. Pretty much everyone is just crafting something new" (#77). These stories were consistent in that they revolved around the diversity of creative interests within community and the community's acceptance of those interests. These stories allowed for the field to continue to grow, as the definitions were sufficiently broad to draw in new participants. It is important to note that, although participants and exhibitors were retelling stories that were crafted by the Make Media organization, they believed in these stories because of the positive emotions that came from Maker events.

In summary, our qualitative field work and our quantitative analysis show when and how field-configuring events can help coordinate expansion. We illustrate these relationships in Figure 1. The quantitative portion of the figure illustrates that legitimation is associated with greater language heterogeneity describing the Maker field and collective identity, and that field-configuring events moderate this relationship. The qualitative portion of the figure opens up the black box of field-configuring events that is central to our quantitative analysis. It describes how field-configuring events can counteract the downside of legitimation by featuring activities that elicit emotional contagion and affective perspective taking which, in turn, lead field members to tell more inclusive and aligned collective identity stories.

Discussion

Our study of the Maker field contributes to current understandings of collective identity, field legitimation, and field-configuring events. Specifically, we demonstrate the importance of emotions in combating the downsides of legitimation. We show that shared understandings within a field are not only discursive, but also emotional (Voronov and Vince 2012, Creed et al. 2014, Grodal and Granqvist 2014).

Figure 1. (Color online) Path Diagram
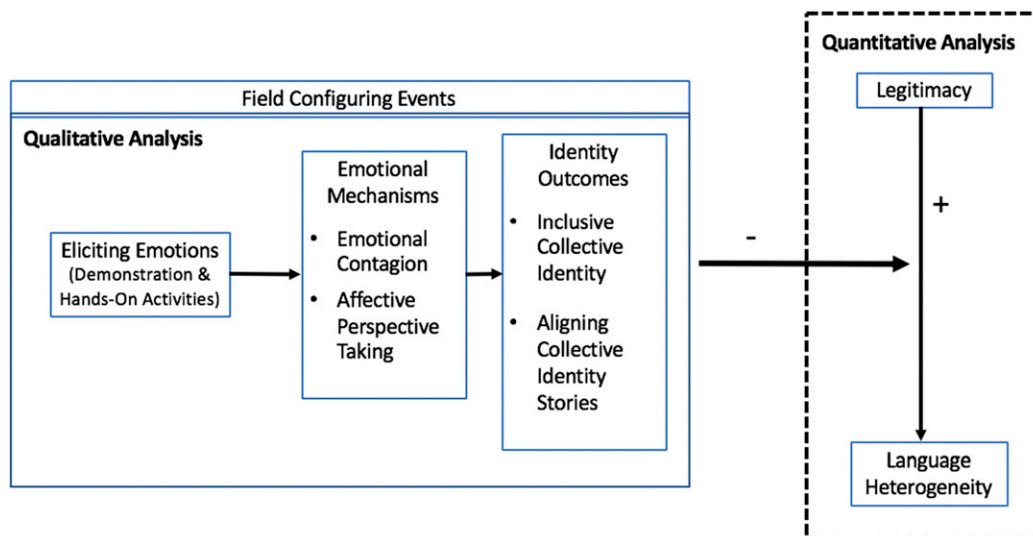
We found that emotional contagion and affective perspective taking, a form of empathy, helped actors recognize their connections to one another and to the field, lending credibility to different actors' claims to the collective identity despite their varied backgrounds. In turn, these emotional mechanisms encouraged heterogeneous members to broaden their criteria for inclusion in the field and connect with a more inclusive identity. We also found that these emotional mechanisms add nuance to alternative mechanisms proposed in prior research (Wry et al. 2011, Lee et al. 2017). Below, we elaborate.

Legitimacy

Extant theory has shown that, although legitimacy is critical to the survival of organizations within a field, the field often faces tensions in maintaining its legitimacy as it grows. A generative stream of research has considered approaches to mitigating the downsides of legitimacy (e.g., Wry et al. 2011, Lee et al. 2017). We add to this literature by considering the role of emotions in allowing fields and their associated collective identities to maintain legitimacy even as they expand and become more heterogeneous. Emotions are a crucial yet undertheorized component of institutional work (Voronov and Vince 2012), and our study contributes to filling this gap. Specifically, we link the emotional mechanisms of affective perspective taking and emotional contagion to a field's ability to successfully avert the conflicts that often arise when members with varied backgrounds and perspectives engage with one another.

Lee et al. (2017) demonstrated that standard-setting contributed to the preservation of collective identity coherence and the legitimacy of the organic food category by clearly establishing and certifying the boundaries of this field. In our setting, we found that leading organizations engaged in standard-setting, but that they did so in service of fostering an environment supportive of the generation and proliferation of positive emotions that would act as the glue that connects disparate participants. We found that standard-setting was used as a tool in organizing Maker events, such that they were used to ensure that exhibitors provide experiences designed to elicit positive emotions from event participants. For example, in contrast to leading organizations in the organic food field, Maker Faire organizers did not seek to erect categorical boundaries, but rather to loosen the definition of membership criteria and to encourage potential members to *feel* instead of rationalize what it means to belong to the Maker field. These positive feelings connected participants to one another and to the field's collective identity. As such, our study highlights the neglected role of emotions in field legitimation and productive expansion.

Emotions have been shown to be consequential for the successful functioning of organizations and teams. For example, positive emotions in employees result in greater satisfaction in customers (Pugh 2001) and emotional contagion affects the cooperativeness of individuals in organizational work groups (Barsade 2002). Conversely, negative emotions can result in resistance to change within organizations, threatening organizational legitimacy (Huy et al. 2014). These studies are primarily focused on the subconscious processes involved in the transfer of emotions among individuals. In our study, we show that while the sharing of emotions among individuals continues to be subconscious, organizations within a field can be agentic in facilitating an environment that is conducive to the spread of positive emotions, thereby attenuating the tensions that fields encounter when balancing legitimacy and growth.

We further add to the literature on legitimacy by illustrating the link between cultural resources and emotions. Organization theorists have described how organizations in a growing field can manage the downside of legitimacy by acting as cultural entrepreneurs and aligning membership expansion through storytelling. They propose that members of a growing collective identity can maintain the group's coherence by telling growth stories—"stories told by group members theorizing (Greenwood et al. 2002) opportunities for new actors to affiliate with the group and pursue variants on its core practices" (Wry et al. 2011, p. 451). Wry and colleagues (2011) posit that members of the field are more likely to retell these stories if they are told by leading organizations in the field. However, this theoretical framework does not explain how or why actors come to accept the stories told by leading members of the field or the domain, and practice-specific stories told by one another, particularly when the practices at the center of these stories are not the readily apparent extension of core practices.

We found that in the Maker field, shared emotions were important mechanisms for aligning the stories of heterogeneous actors because they enabled these actors to recognize themselves in one another. This is consistent with the view that actors can be supportive of an institutional order if they are emotionally invested in it and if it "offers meaning and pleasure and/or reduces anxieties and fears" (Voronov and Vince 2012, p. 69). Through their positive emotional responses and their connection to the collective identity, individuals at Maker Faires were validated in their diverse interests. We found that this facilitated members' acceptance of one another's claims to membership in the field and made them amenable to aligning their stories regarding the field's collective identity. We argue that this process mitigated the diluting effects of an increasingly heterogeneous collective

identity. This is, in part, because stories that resonate emotionally are more likely to be deemed credible (Benford 1997, Voronov and Vince 2012). A great story—whether it is told around a campfire, in a church, at a political demonstration, or at a startup pitch competition—is one that evokes an emotional response from audiences. When people emotionally connect to stories, they are more likely to further disseminate those stories (Heath et al. 2000). As such, future research on storytelling and its role in managing the downsides of legitimacy should not only focus on the consistency and informational content of stories, but also on the affective content of these stories and on how they are conveyed.

Field-Configuring Events

The literature on field-configuring events also describes how organizations can align diverse members by constructing shared understandings regarding the field. Scholars of field-configuring events have described how interactional openness, "the temporary spatial copresence of diverse actors that can interact in the context of overlapping formal and informal space" can lead to informational exchange and the development of trust, contributing to the rise of mutual understanding that enables compromises among different actors (Schüssler et al. 2014, p. 143; see also Maskell et al. 2006, Torre 2008). In our study, we add to this work by showing that while information-sharing was present at Maker events, participants were more likely to use that information to see their commonalities when the discursive information was accompanied by shared positive emotions. Demonstrations and hand-on experiences were a vital component of Maker Faires, allowing individuals within the field to interact by sharing their ideas, skills, and knowledge, facilitating affective perspective taking and emotional contagion, and making them more open to the information that was being shared. This mechanism lends support to the notion that individuals influence and are influenced by the contexts in which they are embedded (Voronov and Vince 2012). As such, we add to extant understandings of how field-configuring events impact field legitimacy and collective identity coherence and expansion. We propose that field-configuring events that provide a platform for individuals to hear one another's stories *and also* feel one another's feelings can help with generating collective identity and field coherence, and mitigate the double-edged sword of legitimacy. Future research on field-configuring events should identify other mechanisms for eliciting positive emotions from participants.

It is not a given that field-configuring collective events will lead to the development of shared

understandings regarding the field. For example, Schüssler et al. (2014) argue that frequent, routinized, "regular" events may lead different groups to retrench and focus on their own parochial interests. In contrast, we found that regularly scheduled field-configuring events were important for fostering shared understandings between heterogeneous actors, but only in as much as they are able elicit shared emotions that affected individuals' ability to forge and maintain shared understandings. In so doing, we show how individual micro-level interactions at these events influenced broader field-level understandings. Thus, our findings suggest that field-configuring events are not just shared discursive spaces but also, in some cases, shared emotional spaces.

Limitations

This study shows how shared emotions of excitement and empathy can unite members of an increasingly heterogeneous field as a part of a shared collective identity. These emotions do not arise in a vacuum but rather are elicited at collective events through face-to-face interactions, humanizing individuals from different backgrounds. We suspect if these same actors were to interact anonymously online, they would be less inclined to feel shared emotions of excitement and empathy. An interviewee who works on Maker Media's digital products describes their difficulties in recreating the Make Faire experience online: "I try to create a digital experience that somehow...replicates our Maker Faire experience. It's hard.... *There's no way to really capture that kind of magic in a bottle online*, but we try to...support people's ability to participate in the community" (#80). Thus, our findings may only hold when emotions are elicited among individuals who connect in a shared physical space, such as a collective event.

A second scope condition is related to the Maker identity itself. The Maker identity was constructed, in part, in opposition to the exclusive and edgy hacker identity. Makers focus on inclusion ("We are all Makers") as a core attribute of participants in the field. Emerging fields with more exclusive collective identities—focused solely on specific attributes and practices—may have trouble managing the double-edged sword of legitimacy. Future research could explore how the content of a collective identity affects the ability of field pioneers to manage the trade-offs that come with legitimacy.

Although we conducted a case study of a somewhat extreme context (Baum and McKelvey 2006), we expect our findings to have applicability to other contexts, as many fields or collectives must contend with aligning disparate actors, particularly when there is

not a prototypical example of the identity. As such, we see our findings being relevant to fields with heterogeneous and/or adversarial actors who do not at first consider themselves to belong to the same in-group. For example, in the cannabis industry, "suits"—those with a formal business background and no connection to marijuana's illegal and counter-cultural history—and "stoners"—those who were deeply enmeshed in this illegal market and counterculture—come together at the Cannabis Cup, where they take part in demonstrations and hands-on activities that elicit positive emotions, helping them find their commonalities. In a more formal context, institutional and individual investors—who have different backgrounds, positions, interests, and investing strategies—make the pilgrimage to Omaha to bond at Berkshire Hathaway's lively and irreverent annual meetings. Field-configuring events that bring these actors together and feature activities that elicit emotional contagion and affective perspective taking help emphasize connections over disagreements.

In this paper, we have considered shared positive emotions. Future research could examine whether field-configuring events eliciting shared negative emotions could have similar effects on field legitimacy. For example, could having anger and outrage (toward a common target such as Wall Street, police violence, or sexual assault) bring together actors from varied backgrounds, such as those found in Occupy Wall Street, Black Lives Matter, and the Women's Movement, such that they too see themselves as part of the same collective identity?

Implications for Practitioners

Finally, our study contributes to practice by highlighting a series of actionable steps that practitioners can pursue to encourage both intragroup and intergroup solidarity. At the organizational level, practitioners can promote collective identity and group cohesiveness in a changing environment by organizing activities that elicit shared emotions and empathy among different actors, thereby allowing them to see past their differences and connect to a common overarching organizational identity. For example, organizations undergoing a merger, consolidation, or acquisition could use demonstrations and hands-on activities that elicit shared positive emotions and empathy to assimilate different actors under a shared overarching collective identity.

At the field level, practitioners and organizations can harness the power of shared emotions and empathy to generate support for a growing field. By orchestrating activities that elicit shared emotions and empathy among attendees, a leading organization can not only attract new members into the field, but also realign the existing membership, fostering internal bonds of solidarity and further legitimating the growing field.

Endnotes

[1] As our archival and qualitative analysis shows that Maker collective events were field-configuring, we use the terms "field-configuring event" and "Maker collective event" interchangeably throughout the paper.

[2] Although the Maker field includes a heterogeneous mix of domains and practices, both scholars and journalists have noted that the Maker field lacks demographic diversity with regard to gender, race, and socio-economic status (Davies 2017).

[3] Although the news media has editorial discretion, we assume that journalists on the whole attempt to accurately report the collective identity stories that are presented to them by members of the field.

[4] From these articles, we dropped duplicate articles and articles that were shorter than 50 words, assuming the latter represent image captions or brief announcements and not articles. We then classified United States media coverage by year and by type, distinguishing between national newspapers, such as *The Wall Street Journal* and *The New York Times*, and regional newspapers, such as *The Pittsburgh Post-Gazette, The Austin American Statesman,* and *Detroit News.*

[5] We included year fixed effects rather than a continuous time variable, because the continuous time variable was highly correlated with legitimation, leading to collinearity issues.

[6] We conducted sensitivity analyses for our language heterogeneity measure, looking at 7-day and 61-day intervals for the window of articles considered in the calculation. These results are consistent with our main analysis.

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