

Paradise Sold: Resource Partitioning and the Organic Movement in the US Farming Industry

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Abstract

Resource partitioning theory maintains that in markets in which anti-mass-production cultural sentiments make producer identity relevant, there should be no direct competition between generalists and specialists. Nevertheless, anecdotal evidence suggests that after initial partitioning, such competition, and hence departitioning, is in some cases possible. We refine received insights of resource partitioning theory regarding the stability of niche markets, particularly those driven by identity movements, by introducing the notion that partitioning is a dynamic and even reversible process. Previous research has offered an answer to the question of *why* identity movements create partitioning: because they increase the dimensionality of the resource space and engender sanctioning of visible violations of the specialists' organizational form identity. In contrast, we offer an answer to the question of *how* and *when* markets may partition in a stable way: by generating sharply defined specialist form identities whose definitional code includes limits to organizational growth. Identity movements are underpinned with mechanisms that can facilitate or inhibit market partitioning, depending on their ability to generate sharp specialist form identities. We illustrate our argument through the case of organic farming in the United States, with reference to prior work on microbrews and micro-radio, and discuss implications for resource partitioning theory.

Keywords

identity movements, organic farming, resource partitioning

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Corresponding author: Katarina Sikavica, Institute of Strategic Management, Ludwig Maximilians University, Ludwigstrasse 28 RgB, 80539 Munich, Germany. Email: sikavica@bwl.lmu.de Resource partitioning theory provides a useful lens for investigating market structure and the viability of small, specialist organizations. Resource partitioning describes a market equilibrium where generalist and specialist organizations occupy distinct market niches so as not to tap the same resource space or enter into direct competition (Carroll, 1985; Carroll, Dobrev, & Swaminathan, 2002). Previous research portrays resource partitioning as a dichotomous and definitive outcome: markets are considered as either partitioned or not. Once partitioned, they are assumed to remain stable without much overlap between generalists' and specialists' niches. Although this theory is comprehensive with respect to the end state of market structure and partitioning, our research suggests that refinement is needed to account for market dynamics and specialists' viability over time.

Refinement is particularly appropriate for markets in which social movements, typically fuelled by anti-mass-production cultural sentiments, form the basis for partitioning. Movements are inherently dynamic phenomena, unfolding in stages: they emerge, grow, and eventually decline. Resource partitioning theorists reason that social and identity movements enhance specialists' viability by increasing the dimensionality of the resource space and by creating resource pockets for specialists to exploit (e.g., Carroll & Swaminathan, 2000; Greve, Pozner, & Rao, 2006; Soule & King, 2008). In the micro-brewing and micro-radio cases, for example, strong identity movements are found to be important drivers of partitioning and are identified as successful triggers of specialist proliferation. Nevertheless, the organic farming case indicates that this is not always true; after initial partitioning, the market for organic produce became much more unstable and unstructured than the micro-radio and micro-brew markets. Perhaps even more importantly, despite the movement's success and an ever-growing number of followers, conventional farmers were able to enter the organic space such that organic farmers were not shielded from direct competition with them, threatening the economic viability of the specialist organic farmers. It follows that while extant research provides the reason why movements induce partitioning, it is not unequivocally clear how and when this will be the case.

To better understand the conditions underlying durable partitioning and stable market niches, we take seriously the dynamic nature of movements and partitioning. We juxtapose the microbrew, micro-radio, and organic farming movements and seek to understand the similarities and differences between the three. We adopt a longitudinal view using "thick" qualitative data to reconstruct the organic farming movement as a historical case study, and engage in what Ragin (1994) termed "reciprocal clarification," using extant research on the micro-radio and micro-brew movements (Carroll & Swaminathan, 2000; Greve et al., 2006) to identify the key mechanisms that drive partitioning. We then compare and reconcile the similarities and differences between the mechanisms underlying previously studied movements and those underpinning the organic farming movement as it unfolded.

In line with previous research, we base our investigation on the assumption that market partitioning largely depends on the establishment of a specialist organizational form identity that is sufficiently narrow and sharply defined to sustain the boundaries between generalist and specialist organizations (McKendrick & Carroll, 2001). Narrow and sharply defined specialist form identities are important because they provide fertile ground for movement participants' identification with specialist organizations, which is necessary for the detection and sanctioning of visible form violations (Foreman & Whetten, 2002). We find that identity movements differ with respect to several mechanisms that drive organizational form identity: goal formation; framing and discourse; mobilization; and the nurturing of a supportive social infrastructure. We show that, despite initial market partitioning, the failure of the organic farming movement to generate a sharply defined specialist form identity rendered identification with specialists and sanctioning of specialist form violations difficult, and resulted in market de-partitioning, and ultimately repartitioning. Our analysis leads us to conclude that, beyond oppositional identity, a sharply and narrowly defined specialist form identity must include small-scale production and limits to organizational growth to generate stable partitioning; without these implicit limits to growth, a more complex and fractured market is likely to emerge. Our investigation thus challenges received insights of resource partitioning theory regarding the size and stability of niche markets by portraying resource partitioning in the presence of identity movements as a more dynamic, multifaceted, and potentially reversible process.

We proceed as follows. We first elaborate on our data and methods. Subsequently, we provide a brief historical narrative of the organic farming movement. We then use prior work on the microbrew and micro-radio movements to identify the mechanisms underlying stable resource partitioning and compare the similarities and differences with the organic farming movements. We close by offering a re-specification of the original resource partitioning model before moving to alternative explanations and a discussion of our results.

Research Design and Methods

Most research on resource partitioning adopts a quantitative approach, in the form of retrospective data collection and analysis where the factors that induced partitioning and influenced the shape of markets are analyzed post hoc, i.e., after the market structure has been identified as partitioned. However, as McKendrick and Carroll (2001) note, while such an approach may be very insightful for understanding what occurred, it is limited in its ability to explain why it occurred and when it is most likely to happen. In particular, there is a danger that the independent variables that are identified *a posteriori* in extant research on resource partitioning may be either spurious or insufficient for producing a partitioned market (McKendrick & Carroll, 2001). An additional difficulty with the quantitative statistical approach in studies investigating movements as triggers of partitioning is the dynamic and process-like nature of social movements: because movements unfold in stages it seems reasonable to assume that the factors pertinent to partitioning may change over the course of the movement, leading to path dependencies that may impede or enhance the likelihood of partitioning. As a result, the factors necessary and sufficient to induce partitioning may be even more difficult to detect, and a methodological approach that accounts for the embedded and temporally interconnected nature of movement stages seems indicated.

To overcome these "thorny inference problems" (McKendrick & Carroll, 2001, p. 665) we adopt a qualitative, case-based approach. We follow McKendrick and Carroll's (2001) interpretation of Ragin's (1994) approach and use a method described as "reciprocal clarification," a process that "clarifies concepts (the key analytical frames) and empirical categories in a reciprocal manner" (Ragin 1994, p. 88). In doing so, we assemble data on the organic movement and market structure of US farms over time and juxtapose this data to what we know from extant research at the intersection between social movements and resource partitioning theory – our key analytical frames or theoretical orienting ideas.

Like much qualitative research our approach is somewhat circular; knowledgeable about the premises of resource partitioning theory we started out with an empirical observation: examining the market structure of US farms, we were surprised to learn that despite the organic movement's success, the market for farming products in its present state cannot be described as partitioned. This observation motivated us to examine more closely what research at the intersection between

identity movements and resource partitioning had to say about the factors necessary and sufficient to induce partitioning and to use these analytical frames to inform our theory. Thus, the presence of a strong social movement gave us the opportunity to theorize about the role of identity movements in creating resource partitioning, thereby adding dynamism and refinement to the population ecology story. In doing so, much like McKendrick and Carroll (2001), we seek avoid the dominant retrospective analysis problem: because the organic movement is still at the peak of its popularity and the market for farming produce has not yet reached its end state, by observing what happens before its establishment we can learn more about the necessary and sufficient conditions generating it.

Case Methodology

Yin (1998, p. 18) defines a case study as an empirical inquiry that "investigates a contemporary phenomenon in depth and within its real-life context" which is particularly suitable when "the boundaries between phenomenon and context are not clearly evident." He further notes that the case-study inquiry is useful for dealing with the unfortunate situation of having more variables of interest than data; consequently, it incorporates evidence from multiple sources and relies on existing theory to guide data collection and analysis. According to Yin (1984), a case study thus is an all-encompassing method covering the logic of design, data collection, and data analysis. This was the approach we took in conducting our study: starting with a historical reconstruction of the organic farming movement in the USA and data about market structure, we used extant theory as well as research on the micro-brew and micro-radio movements to distill the mechanisms underlying resource partitioning. Subsequently, we compared the similarities and differences among the three movements to refine resource partitioning theory in terms of how and when identity movements will encourage partitioning.

In terms of data collection, we used multiple sources of evidence to triangulate data. To increase the validity of our study and corroborate the facts uncovered, we collected information from documentation, archival records, and interviews (see Yin, 1984). For the same purpose, we assured that multiple collectors (the authors and five research assistants) were engaged in gathering the data (investigator triangulation); and, to keep a good overview, we installed an Internet homepage where all investigators contributed to the case-study database and case-study protocol.

Moreover, we followed Ragin (1994) and McKendrick and Carroll (2001) and used both structured and unstructured methods of data collection. Our structured methods involved collection of as much quantitative data on the development of organic farming – which is sparse – as possible. The data available were collected in the 2007 Census of Agriculture, conducted by the National Agricultural Statistics Service of the US Department of Agriculture (USDA), as well as the Economic Research Service of the USDA, which in turn was collected by USDA-accredited state and private organic certifiers; although we have exploited these data to the fullest, the available statistics are quite limited. We also systematically reviewed the academic and popular literature on organic farming, including academic journals, books, and Internet searches. Our unstructured methodology involved interviewing and corresponding with experts in the organic farming movement and industry, including academics and representatives of non-profit agencies servicing organic farmers. All evidence collection was documented in our case-study protocol and stored in our case-study database for further analysis.

Our data analysis technique is best described by what Yin (1984) terms "pattern matching logic." According to the author, such a logic "compares an empirically based pattern with a predicted one." In our case, this translates into comparing the mechanisms that generate resource partitioning identified in extant research to the evidence from the organic farming movement. We present our case in an inductive manner starting with a historic narrative of the organic farming movement as well as data on the farming market structure at multiple points in time. Subsequently, we elaborate on the mechanisms we identified underlaying identity movements before "unpacking our case" and reconciling our theoretical orienting ideas with our evidence.

The Organic Farming Movement

In this section, we present the history of the organic farming movement and the industry it created. Our focus is on basic agriculture – farm production of grains, fruits, and vegetables – leaving aside the manufacture and distribution of processed organic foods. A summary of the major developments in US agriculture and the organic farming movement can be found in Table 1.

Movement Origins

The roots of the organic farming movement in the USA reach back to the 19th century, just as the use of synthetic fertilizers to increase crop yields took hold. During the Second World War, activists such as Jerome Rodale popularized the idea of a holistic approach to "natural," local, sustainable farming. While there was never a clear definition of organic farming practice, most early organic farmers used organic material in place of chemical fertilizers and pesticides, integrated livestock into a symbiotic farm system, and rotated multiple crops rather than cultivating single crops (Concord, 2001; Fromartz, 2006; Heckman, 2006). The movement gained a small, devoted following, but it was not until its ideals were taken up by environmental activists and members of the anti-establishment movement in the 1960s and 1970s that the movement really took root. The "back-to-the-land" and environmental movements that arose in response to urbanization, hyperindustrialization, and consumerism found common cause with the organic movement's ideals (Vos, 2000). During this period, consumption of organic produce was limited to those devotees willing to pay a premium. In the 1940s, the majority of organic produce was sold directly to the consumer, and could only be found in small, niche healthfood stores from the 1950s through the 1980s (Greene, 2001).

A turning point came during the farm crisis in the 1980s, when economizing conventional farms began to harvest crops without pesticides. Finding they could earn a premium, they entered the organic market for purely economic reasons (Sustainable Agriculture Research and Education, 2008) and encouraged other conventional farmers to enter the highly profitable organic sector. The result of the entry of these large-scale, quick-growing farms was a bifurcated industry comprising "agrarians" – small-scale, specialty farmers who viewed organic farming as an alternative to industrial farming – and "expansionists" – more business-minded, single-crop producers "without any of the early ideological baggage to hold them back" (Fromartz, 2006), interested in increasing scale and broadening the market.

The Struggle to Define Organic

As the organic movement grew, informal organizations defined and enforced standard practices at the local level. An early proponent of formal definition of standard practices was a certification program adopted by agrarian farmers, formalized as the California Certified Organic Farmers

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USDA collaborates with Rodale Institute			supply and would lead to large-scale	 Famers lobby for uniform standards to help small farmers 	mall tarmers
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Stage 2: Eroding boundaries and de- partitioning	• • •	 1990: Organic Foods Production Act passed by Congress with goal of creating uniform national standards for organics 1992: National Organic Standards Board (NOSB) formed to regulate organic standards 2000: National Organic Program (NOP) final rule published, covering all aspects of organic food production, processing, delivery and sale Shift from organic as loosely defined set of practices to politicized definition based on minimal production standards 	 I a states now have of a states now have or 23 states now have or 24 have of Organic F as legitimating organ producers and consupation of the goal of represent the interest mandate is to protect a conflict of interest. Because NOP standa and food processing, organic has changed, of a holistic system of a holistic syst	of organic products, realing to call of a summary organic 13 states now have organic programs ~ 60 third-party organic certifying agencies in the USA Passage of Organic Foods Production Act was seen as legitimating organic production Act was seen as legitimating organic production Act was seen producers and consumers desiring protection Although the goal of the NOP and NOSB were to represent the interests of organic farmers, the USDA's mandate is to protect conventional farmers, resulting in a conflict of interest Because NOP standards refer to means of production and food processing, the term connotation of the organic has changed, moving away from its initial sense of a holistic system of agriculture
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Period Agricultural developments Social movement developments Period Agricultural developments Social movement developments • Organic production can be achieved • Organic farmers participating in polit into two camps: downward pressure on prices • Organic farmers participating in polit into two camps: downward pressure on prices • USDA standards allow for some measure of synthetic chemical use sustainable standards is inversely related use sustainable standards is inversely related use organic consumption and mainstream organic, to farm size (Guthman, 2000) • Turnover among certified organic farme annually Stage 3: Present day • Turnover among certified organic farme annually • Many small farmers drop out to avoid h consumers Beyond • Many small farmers drop out to avoid h consumers • Many small farmers drop out to avoid h consumers • Oward re- • Micro eco-farming and urban homest annually • Micro eco-farming and urban homest and the consumers	Table I. (Continued)	ied)		
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fundamental organic practices		Present day	 Organic production can be achieved on large scale, leading to consolidation, downward pressure on prices USDA standards allow for some measure of synthetic chemical use Research shows that adherence to sustainable standards is inversely related to farm size (Guthman, 2000) 	 Organic farmers participating in political process fall into two camps: Agrarians or purists focus on principles of organic faring Expansionists focus on business opportunities and expansion of organic production;' want to increase organic consumption and mainstream organic food Turnover among certified organic farmers ~ 20% annually Many small farmers drop out to avoid high costs of certification or out of opposition to lax certification standards, sell directly to consumers Micro eco-farming and urban homesteading move away from organic certification and focus on fundamental organic practices

(CCOF) in 1973 (Guthman, 2004). Organizations like the CCOF typically consisted of independent farmers who favored standardization for the sake of consumer education and protection (Guthman, 2004). Because initial efforts were undertaken at the state or local levels, competing certification regimes emerged; the definition of organic farming thereby became subject to interpretation by the certifying agent, with some defining it as production using traditional organic methods employed by small, family farms in harmony with nature (King, 2007), while others emphasized sustainability, independence, and fair pricing (Fromartz, 2006), or environmental protection and repair (Ness, 2006), and still others were concerned with organic inputs rather than processes (Buck, Getz, & Guthman, 1997).

The idea of federal certification gained currency following the Alar apple pesticide scare in 1989 and a number of high-profile organic scams (Fromartz, 2006; Guthman, 2004). The 1990 farm bill included the Organic Foods Production Act (OFPA), creating the National Organic Standards Board (NOSB) to oversee certification and determine the methods to be included in the national organic standards (Nestle, 2007). The NOSB immediately came to blows with the USDA, which was seen to represent the "big boys" of the conventional farming industry (Fromartz, 2006), partially due to the influence of other government agencies and interests on the USDA's regulatory process (Fromartz, 2006) and the fundamental conflict of interest between agrarians and expansionists (Buck et al., 1997; Guthman, 2004; Vos, 2000). Whereas organic farmers' greatest challenge previously came from conventional farmers, now the greatest conflict came from *within* organic circles, which comprised two conflicting visions of the meaning of organic farming (Vos, 2000). Pollan (2006, p. 155) describes this divisive regulatory effort as a struggle "between Big and Little Organic – or…between the organic industry and the organic movement…Big Organic won all [the] arguments."

The Changing Organic Field

Whereas early organic consumption was limited to movement adherents and health fanatics, today a much larger proportion of the public regularly consumes organic produce. Today the number of consumers eating organic has grown to the point that discerning members of the movement are outnumbered by casual consumers. Recent research shows that only one-third of organic purchasers are committed, zealous organic consumers, while the majority are pragmatic consumers who try to fit organics into their lifestyles (Natural Marketing Institute, 2005). Similarly, conventional markets overtook natural food stores as the primary marketer of organics in 2000 (Sligh & Christman, 2003). Moreover, as new, expansionist producers entered the organic market, large corporations came to dominate, and there is evidence of consolidation among small organic farms due to the shrinking price premium for organic produce and the costs of maintaining organic certification, which disproportionally affects small farmers (Pollan, 2006). Consolidation down the value chain puts downward pressure on organic prices, creating pressure to exploit potential scale economies (King, 2007).

Whereas farms of agrarian movement adherents are generally small, the percentage of small farms with organic certification has decreased (Walz, 2004), while the number of larger farms has grown. As the total number of small farms has recently increased (see Table 2), this suggests that small farmers are either opting out of costly organic certification or are merging and consolidating into larger operations. Recent surveys show that, while gross sales acreage farmed organically in California has grown, the number of organic farms has fallen (Klonsky, Tourte, Kozloff, & Shouse, 2002), indicating consolidation. At the other end of the spectrum, the number of large farms (over 2000 acres) has grown, primarily at the expense of mid-sized farms, suggesting concentration

throughout the industry. The structure of the organic farming sector is growing to mirror that of conventional farming, with 3 percent of farms in each segment falling into the category of "very large farms" with over \$500,000 in sales (Lohr & Park, 2002). This is also suggested by growth trends in certified organic farmland (see Table 3). According to the USDA, the change in certified organic farms increased by 123 percent between 2002 and 2007, whereas the number of certified organic farms increased by only 55 percent (see Table 4 for details on certification); the clear inference is that recently certified organic farms are larger than earlier organic farms. Consolidation is distressing to agrarians, as farmers' ecological ratings tend to deteriorate as the scale of the farm increases (Guthman, 2000).

In response to organic farm consolidation, a small, dedicated band of agrarian-identified farmers recently launched the micro eco-farming movement. Micro eco-farms, defined as sustainable, local farms that range "from urban greenhouses to backyard gardens to small rural 1 to 25-acre parcels" (Center for the Micro Eco-Farming Movement, 2010), are committed to "earth regenerating and socially just mini-farming." The movement ideology harkens back to the Rodale-inspired organic movement, with an emphasis on bio-dyanamic farming, natural fertilizers, and saving and promulgating endangered varieties of fruits and vegetables, and is oriented towards commercialization. The movement is gaining traction through alliance with other groups associated with local food, fair trade, seasonal eating, nature education and eco-tourism, and environmental sustainability causes. Movement adherents are uninterested in organic certification, which they view as not only costly but also too watered down to have meaning (Barnett, 2011).

All Farms	2002		2007	
	Total	% Total	Total	% Total
Farms (number)	2,128,982	100.0%	2,204,792	100.0%
Farms (acres)	938,279,056	100.0%	922,095,840	100.0%
Total cropland farms (number)	1,751,450	82.3%	1,685,339	76.4%
Cropland farms (acres)	434,164,946	46.3%	406,424,909	44.1%
Harvested cropland farms (number)	1,362,608	64.0%	1,328,004	60.2%
Harvested cropland farms (acres)	302,697,252	32.3%	309,607,601	33.6%
Farms by acres harvested:				
I to 49 acres	688,492	50.5%	700,266	52.7%
I to 9 acres	223,038	16.4%	233,119	17.6%
10 to 19 acres	177,964	13.1%	182,514	13.7%
20 to 29 acres	126,713	9.3%	126,330	9.5%
30 to 49 acres	160,777	11.8%	158,303	11.9%
50 to 99 acres	186,980	13.7%	179,055	13.5%
100 to 199 acres	158,005	11.6%	141,875	10.7%
200 to 499 acres	163,027	12.0%	143,776	10.8%
500 to 999 acres	90,412	6.6%	82,211	6.2%
1,000 to 1,999 acres	54,281	4.0%	53,728	4.0%
2,000 acres or more	21,411	1.6%	27,093	2.0%

Table 2. US Agricultural Land Use, 2002 and 2007.

Source: The 2007 Census of Agriculture, National Agricultural Statistics Service, US Department of Agriculture, Volume I, Table 8.

	1992 1993		l 994	1994 1995 1997		2000	2001	2002	2003	2004	2005	2006	2007	2008
US certified farmland Total acres 935,450 % total farmland	-	mland 935,450 955,650		917,894	I,346,558	1,776,073	2,094,272	991,453 917,894 1,346,558 1,776,073 2,094,272 1,925,534 2,196,874 3,045,109 4,054,429 2,936,026 4,289,957 4,815,959 0.51%	2,196,874	3,045,109	4,054,429 0.51%	2,936,026	4,289,957	4,815,959 0.57%
acreage Total certified operations*	3,587	3,587 3,536	4,060	4,856	5,021	6,592	6,949	7,323	8,035	8,021	8,493	9,469	11,352	12,941
Change			1 992–1 997	97		1997–2002			2002-2007			2007–2008		
Total acres Total certified operations	perations		45% 40%			43% 46%			123% 55%			2% 4%		
*Number does not include subcontracted organic farm operations. Source: USDA, Economic Research Service, based on information from USDA-accredited State and private organic certifiers.	ot include conomic Re	subcontra esearch Se	cted orga rvice, basi	nic farm ol ed on infol	perations. rmation fro	m USDA-ac	credited Sta	ite and priva	ite organic c	certifiers.				

Table 3. US Certified Organic Farmland Acreage, 1992–2008.

Certifier	Headquarters	USDA	Produ	cers cert	tified				
		Accreditation Date	2002	2003	2004	2005	2006	2007	2008
State									
County of Monterey Agricultural	Salinas, CA	4/29/2002	12	10	12	12	8	11	8
Commissioner's Office									
Marin County Department of Agriculture	Novato, CA	4/29/2002	-	37	36	36	55	57	60
Idaho Dept. of Agriculture	Boise, ID	4/29/2002	153	149	170	162	162	188	203
Iowa Dept. of Agriculture and Land Stewardship	Des Moines, IA	4/29/2002	116	136	151	174	208	211	300
Maryland Dept. of Agriculture	Annapolis, MD	4/29/2002	75	75	59	60	93	89	111
Montana Dept. of Agriculture	Helena, MT	4/29/2002	-	75	67	86	91	98	98
New Hampshire Dept. of Agriculture	Concord, NH	4/29/2002	59	70	76	92	92	119	102
Texas Dept. of Agriculture	Austin, TX	4/29/2002	129	129	147	159	203	169	203
Utah Department of Agriculture	Salt Lake City, UT	4/29/2002	—	_	_	_	_	36	36
Virginia Dept. of Agriculture & Consumer Services ²	Richmond, VA	4/29/2002	120	_	_	_	_	_	_
Washington State Department of Agriculture	Olympia, WA	4/29/2002	544	553	558	552	554	629	697
Nevada Dept. of Agriculture	Reno, NV	5/13/2002	18	22	21	21	30	34	36
New Mexico Organic Commodity Commission	Albuquerque, NM	5/29/2002	93	93	78	99	152	184	193
Colorado Dept. of Agriculture	Lakewood, CO	10/16/2002	186	80	92	99	112	125	138
Rhode Island Dept. of Environmental Management	Providence, RI	10/22/2002	9	9	10	18	17	21	22
Oklahoma Dept. of Agriculture	Oklahoma City, OK	12/6/2002	15	21	30	28	34	56	56
Mississippi Dept. of Agriculture and Commerce	Meridian, MS	6/1/2004	—	_	_	6	23	22	22
Louisiana Dept. of Agriculture	Baton Rouge, LA	9/23/2004	—	_	_	10	12	12	12
Kentucky Department of Agriculture	Frankfort, KY	1/13/2006	—	—	—	—	—	—	55

Table 4. USDA-Accredited Organic Certification Programs Active in 2002 through 2008¹.

Table 4. (Continued)

Certifier	Headquarters	USDA	Produ	cers cert	ified				
		Accreditation Date	2002	2003	2004	2005	2006	2007	2008
Yolo County Department of Agriculture Private	Woodland, CA	1/22/2006		_		_	4	4	11
California Certified Organic Farmers	Santa Cruz, CA	4/29/2002	1,040	1,147	994	1,062	1,523	1,808	2,007
California Organic Farmers Association	North Modoc, CA	4/29/2002	П	П	22	22	42	43	48
Clemson Univ. Fertilizer and Seed Certification Services	Pendleton, SC	4/29/2002	—	4	6	8	14	64	25
Demeter Association's Stellar Certification	Aurora, NY	4/29/2002	57	75	75	75	73	76	76
Services FOG's Quality Certification Services	Gainesville, FL	4/29/2002	178	221	140	140	140	300	300
Georgia Crop Improvement Association	Athens, GA	4/29/2002	I	8	23	35	40	79	41
Global Organic Alliance	Bellefontaine, OH	4/29/2002	146	262	306	284	341	415	412
Guaranteed Organic Certification Agency	Fallbrook, CA	4/29/2002	—	251	256	333	326	408	384
Hawaii Organic Farmers Association	Haiku, HI	4/29/2002	110	110	108	98	128	78	115
Integrity Certified International, Inc.	Bellevue, NE	4/29/2002	12	12	28	35	_	_	_
Indiana Certified Organic International Certification Services–Farm Verified Organic	Clayton, IN Medina, ND	4/29/2002 4/29/2002	154 269	182 258	201 249	202 231	265 233	316 277	269 294
Maharishi Vedic Organic Agriculture Institute	Fairfield, IA	4/29/2002	_	4	3	2	_	_	_
Minnesota Crop Improvement Association	St. Paul, MN	4/29/2002	3	14	20	22	28	28	29
Midw est Organic Services Association	Viroqua, WI	4/29/2002	490	621	547	546	672	862	1026
Northeast Organic Farmers AssnMA	West Hatfield, MA	4/29/2002	90	90	120	119	118	133	138
Northeast Organic Farmers AssnNJ	Pennington, NJ	4/29/2002	68	55	56	54	54	60	64
Northeast Organic Farmers AssnNY	Binghamton, NY	4/29/2002	195	287	268	360	422	543	583
Nutriclean (formerly Scientific Certification Systems) ⁴	Oakland, CA	4/29/2002	5	5	_	_	_	_	_
Ohio Ecological Food & Farming Association	West Salem, OH	4/29/2002	195	214	179	250	250	404	661

(Continued)

Certifier	Headquarters	USDA	Produ	cers cert	tified				
		Accreditation Date	2002	2003	2004	2005	2006	2007	2008
Oregon Tilth	Salem, OR	4/29/2002	379	381	391	398	357	578	603
Organic Certifiers	Ventura, CA	4/29/2002	50	79	72	75	106	123	160
Organic Crop Improvement Association	Lincoln, NE	4/29/2002	1,136	953	1,048	985	872	852	833
Organic Forum International, Inc. ⁵	Paynesville, MN	4/29/2002	21	21	—	—	—	—	—
Pennsylvania Certified Organic	Centre Hall, PA	4/29/2002	202	223	270	287	287	320	408
Quality Assurance International	San Diego, CA	4/29/2002	408	408	179	256	379	344	346
Organic Growers of Michigan ⁶	Grand Rapids, MI	5/13/2002	39	55	—	—	—	_	—
Pro-Cert ⁷	Saskatchewan, Canada	5/24/2002	—	—	_	_	—	—	82
Maine Organic Farmers & Gardeners Association	Unity, ME	6/3/2002	259	259	286	286	316	349	632
North Carolina Crop Improvement Association	Raleigh, NC	7/9/2002	12	21	25	33	38	35	68
California Crop Improvement Association	Davis, CA	8/7/2002	_	_	12	12	—	—	_
Northeast Organic Farmer Vermont Organic Farm Rid		9/24/2002	253	289	332	366	394	487	535
Natural Food Certifiers	Scarsdale, NY	10/8/2002		7	I	I	_	_	_
Certified Organic, Inc.	Keosauqua, IA	11/12/2002	_	_	7	7	20	24	24
American Food Safety Institute ³	Davis, CA	2/10/2003	_	3	_	_	_	—	—
Global Culture	Crescent City, CA	4/14/2003	_	26	56	76	67	71	82
OneCert	Lincoln, NE	4/22/2003	_		21	89	114	143	207
Primuslabs.com	Santa Maria, CA	1/22/2006	—	—	—	—	—	2	I
Agricultural Services Certified Organic	Salinas, CA	4/7/2006	—	—	—	—	—	22	22
Nature's International Services	Viroqua, WI	2/12/2007	—	—	—	—	—	43	103
US total, state and private groups			7,312	8,015	7,808	8,363	9,469	11,352	12,941

Table 4. (Continued)

¹USDA's Economic Research Service only tracks operations certified by US-based certifiers. Numbers may not reflect subcontracted operations. A current list of certifiers is maintained by USDA's National Organic Program, www.ams. usda.gov/nop.

²Dropped certification program in 2003.

³Accreditation revoked in 2006, no information available for 2004 or 2005.

⁴Certifier did not provide certified acreage and livestock estimates.

⁵Dropped certification program in 2005, no information available for 2004 or 2005.

⁶Dropped certification program in 2006, no information available for 2004 or 2005.

⁷Canadian certifier that provides services in the US.

Source: USDA, Economic Research Service, based on information from USDA-accredited State and private organic certifiers.

Resource Partitioning Theory and Identity Movements

The case of organic farming is interesting from a theoretical perspective because it does not conform to the pattern of identity movement-led resource partitioning noted in previous studies. As the theory holds, identity movements nourished by post-materialist sentiments (Ingelhart, 1990) seek to challenge dominant logics and conformity pressures and inspire cultural change (Buechler, 1995; Mezias & Mezias, 2000; Pichardo, 1997; Weber, Heinze, & DeSoucey, 2008). They trigger partitioning by increasing the dimensionality of the resource space by introducing new tastes, needs or identities to it. They typically seize industries related to culture (Mezias & Mezias, 2000), food (e.g., Carroll & Swaminathan, 2000) or media (e.g., Greve et al., 2006; Pozner & Rao, 2006), and emerge as a reaction to the homogenization created by market concentration in the hands of a few dominant generalists. Such reactions translate into what Carroll and Swaminathan (2000) term "anti-mass-production cultural sentiment," a mindset embodying opposition to mass society, its production techniques, and its corporate organization (Peterson, 1997). This sentiment of anti-mass-production is typically embodied in the definition of the specialists' organizational form identity, which by its nature becomes oppositional to that of the generalists.

An organizational form identity is a recognizable pattern or a set of signals that takes on rulelike standing and is governed by an externally maintained normative code (Polos, Hannan, & Carroll, 2002). That is, it depends on the perceptions, opinions and actions of social actors as they encounter the organization. Organizational forms and codes that are perceived as meaningfully and sharply defined eventually become institutionalized, which enhances their viability by bestowing privileged status, access to resources, and thereby the ability to fend off challenges (Hannan, 1991; Polos et al., 2002). Because of the organizational form's rule-like status, visible violations are normatively sanctioned by identity movement adherents – typically, highly identified and dedicated social actors who are familiar with the definitions of the organizational form and who are ready to sanction, boycott or ridicule organizations who violate normative codes or attempt to masquerade as specialists (Carroll & Swaminathan, 2000).

Identity movements are, therefore, an important driver of resource partitioning, not only because they increase the dimensionality of the resource space, but also because they engender the personal identification that leads participants to sanction violations of the organizational form identity (Carroll & Swaminathan, 2000). This mechanism - the imposition of sanctions for violation of organizational form identity – is the key to understanding the difference between the organic farming case, where resource partitioning has not been stable, and previous cases, where markets are partitioned in equilibrium. That is, given that organizational forms vary in sharpness or specificity (McKendrick & Carroll, 2001), only when specialist organizations develop a sharply defined specialist form identity are they able to forestall competition from generalists, who by definition violate the normative code associated with the specialist form and are therefore not capable of meaningfully competing in the specialist space. Greve and colleagues confirm this with regard to micro-radio: "LPFM stations were the result of a broad identity movement, but were a tightly defined organizational form that had to conform to a regulatory code of conduct" (Greve et al., 2006, p. 808). Failure to generate a sharply defined specialist form identity creates the risk that violations will not be recognized and that generalists masquerading as specialists will not be punished. More specifically, we note that the ability of identity movements to narrowly define organizational forms and ensure market partitioning depends on a number of mechanisms which we find are critical in the partitioning of markets. In both the micro-radio and the micro-brew cases, identity movements spurred the establishment of a narrow and sharply defined specialist form identity, and in both cases, the mechanisms underlying the identity movements were similar.

Mechanisms Underlying Partitioning

We now turn to the mechanisms underlying market partitioning before examining the extent to which they differ in the organic farming movement as compared to the micro-brew and microradio movements. They include: the formulation of common goals pursued by movement adherents; the use of oppositional framing and discourse to portray generalists and specialists; the role of mobilization in obtaining a heterogeneous group of movement adherents; and the establishment and nurturing of a social and community infrastructure supportive of the emergence of specialist organizations.

Formulating common goals. Identity movements can only induce market partitioning when they articulate a clearly formulated, consistent and commonly shared movement goal. Studies of the micro-radio movement show how the mobilization of micro-radio activists was based on a common goal (Greve et al., 2006; Pozner & Rao, 2006), specifically to "challenge the domination of radio by corporate chains by putting new voices onto the airwaves, to attract an audience for these new voices, and ultimately to reduce the influence of chain-owned radio stations" (Greve et al., 2006, p. 809). Similarly, in their widely cited study on the proliferation of US micro-breweries, Carroll and Swaminathan (2000) documented how movement adherents united to distance themselves from corporate breweries and beer. By recognizing and formulating common goals, movement adherents unite and develop a "we-feeling," a sense of community that encourages mobilization, collective action, and loyalty in the pursuit of the common cause.

Oppositional framing and discourse. The case of micro-radio also highlights the importance of identity movements' use of framing and discourse that fosters expectations and inspires action, thereby delineating and reifying the boundaries between generalists and specialists. In other words, identity movements "depend on a salient enemy of concentrated mass producers, public discourse raising this concentration as a social problem requiring entrepreneurial problem solving, and community resources for creating anti-mass production organizations" (Greve et al., 2006, p. 809). Microradio activists were adept at mobilizing movement participants by framing the generalist form identity as a common enemy against which everybody who cared about the cause must rally (Greve et al., 2006; Pozner & Rao, 2006). They also used carefully crafted discourse to portray the specialist form identity as a solution to the homogenization problem emanating from increasing market concentration and generalist domination.

A common enemy is important to market partitioning because it drives the anti-mass-production sentiments that lead consumers to buy specialists' products. Anti-mass-production sentiment consists of two distinct yet related dimensions (Carroll & Swaminathan, 2000; Greve et al., 2006). On the one hand, it is directed at opposing mass *producers*, or the dominant generalists and their products. For example, micro-brew consumers opposed major corporate breweries and what they characterized as "industrial beer." Similarly, in the micro-radio case, the opposition was directed at chain-owned radio stations and the increasingly mainstream content they aired.

On the other hand, anti-mass-production cultural sentiment is also directed against mass *production*: the creation of homogeneous, undifferentiated products on a large scale. Opposition to mass-produced goods is spurred by consumers' need for products that convey a sense of exclusivity or represent an alternative to mainstream tastes, and is fueled by identity enhancement and identity expression motives. In the micro-brew case, Carroll and Swaminathan (2000) note that consumption of specialty beer is driven by consumers' need for products that convey a "sense of expertise, sophistication and refinement." In the micro-radio case, activists are driven by a need for

increasing diversity by putting new voices onto the airwaves (Greve et al., 2006). In both cases the common denominator seems to revolve around the notion of being different from others.

Both dimensions of anti-mass-production sentiment are tied to the means of production. Specialists proliferate because they respond to identity movement adherents' demands for authentic products delivered by producers embodying a specific, oppositional organizational form identity, which involves attributes such as unconventionality as well as purity, local craftsmanship, and traditional manufacturing. Because generalists cannot offer such products, the method of production associated with the specialist form identity is the primary driver of partitioning: movement adherents delineate boundaries by publicly criticizing generalists' production methods. For example, micro-radio activists criticized chain-owned broadcasters for replicating formats nationwide, for replacing local radio personalities with syndicated programming, and for eliminating local news departments (Greve et al., 2006). Public critique of generalists and their production methods helps reify the boundaries between the generalist and specialist form identities.

Not surprisingly, therefore, part of specialists' appeal hinges upon small-scale production, and both micro-brews and micro-radio stations have limits to growth imprinted in their organizational form identities. In the micro-brew case, small-scale production is ensured by limits to production capacity; the American Brewers Association defines a "micro-brewery" as a brewery whose production capacity does not exceed 15,000 barrels (Brewers Association, 2011). In the micro-radio case, the limitations concern the broadcast radius of a maximum of 3.5 miles and are achieved by restricting the technical specifications of micro-radio stations (Greve et al., 2006). As Carroll and Swaminathan (2000) note, small-scale production is associated with higher product quality in the eyes of consumers, who have great faith in the ability of small organizations to produce and deliver high-quality specialty products. Such attributions are socially constructed, however; as demonstrated in the micro-brew case, quality attributions are more about specialist identity and method of production than objective product quality. Carroll and Swaminathan (2000) document this with reference to perfectly content beer drinkers who look "crestfallen" when told that their specialty brews are actually produced by mass brewers. This suggests that those involved in identity movements make their buying decisions based on organizational form identity, rather than on product characteristics alone.

Mobilizing a broad base of adherents. Given the requirement of some unifying common enemy or goal, it is important to consider how much heterogeneity movements can tolerate while remaining a viable trigger for market partitioning. As studies of other movements suggest, increases in both the number and heterogeneity of participants and organizations help sustain movements (McAdam, 1999; Oberschall, 1973). Heterogeneity fuels movements' success by creating appeal to different constituencies, mobilizing different strata of the population, and increasing the number of alternatives for potential members and benefactors (McAdam, 1999; Oberschall, 1973). In addition, movement growth attributable to spillover from other movements seems to help movements succeed (Meyer & Whittier, 1994), provided that the goals pursued by the different movement participants are nested, if not common. For example, in the micro-radio case, the movement's narrow goal was to provide voices on the air in order to serve previously underserved segments. This goal was nested in the broader, more general goal of reducing the dominance of chains in the radio market (Greve et al., 2006). While the two goals appear to have a different effect on the distribution of resources between generalists and specialists, their differences did not impede the success of micro-radio, but benefited the movement by reinforcing boundaries between generalists and specialists. Thus a broad base of heterogeneous movement adherents and organizations pursuing similar goals benefit the specialist form identity and sustain partitioning.

Nurturing a supportive social and community infrastructure. A final mechanism decisive for how identity movements impact market partitioning concerns the nurturing of a supportive and dense social and community infrastructure. Greve and colleagues (2006) emphasize the role of community infrastructure and trained organization builders in spurring specialist proliferation. They claim that institutional actors such as voluntary associations, work groups, and other organizations serve as building blocks of identity movements. They help adapt goals to serve the needs of emergent causes and strategically frame issues in a way that bridges their connection to formal institutions. Formal institutionalize the oppositional specialist form identities and sustain market partitioning. In particular, certification organizations have been shown to encourage the development of new market sectors by legitimating new organizational form identities, particularly through differentiation from existing alternatives (Bartley, 2003; Lee, Sine, & Tolbert, 2011; Lounsbury, Ventresca, & Hirsch, 2003; Rao, 1994).

Similarly, dense and redundant social ties among movement adherents aid partitioning by allowing for rapid and pervasive information flow within the social network. Such efficient exchange of information not only aids specialists in promoting their organizational form identity while educating and challenging consumer perceptions, but is also indispensable for unmasking inauthentic generalists disguised as specialists. Carroll and Swaminathan (2000) find that identity management by generalists is difficult when movement adherents are strongly connected and form a dense network of self-styled experts. Because information is exchanged rapidly among micro-brew aficionados, the status of craft-style beers produced by mass brewers plummets along with the credibility of the generalist brewer. Hence, a thick and interconnected network of movement followers sustains market partitioning by exposing and sanctioning code violations and enhancing specialists' form identity (Carroll & Swaminathan, 2000).

Unpacking the Organic Case

In our search to better understand how identity movements impact market partitioning, we reason that, because the mechanisms underlying movements vary, identity movements may differ in their ability to generate a sharply defined specialist form identity, induce sanctioning of its visible form and, hence, engender stable market partitioning. We thus identify the key stages of the organic movement and examine the mechanisms related to goals, framing, mobilization, and nurturing of social infrastructure as the organic movement unfolds. We are particularly interested in how the organic case differs from the micro-brewery and micro-radio cases, as well as how these differences change over time, as a way to understand the organic movement's ability to create and sustain a partitioned market.

Stage 1: Towards a Partitioned Market

In the case of organic farming, the degree and stability of market partitioning seems to have changed along with changes in the underlying organic farming movement. In the first stage, which started with the rise of organic farms inspired by early activists' ideals and which lasted through the 1980s farm crisis, the mechanisms driving the organic movement were very similar to those found in the micro-radio and the micro-brew cases. As conventional farm productivity increased, fields grew bigger, farms larger, agribusiness consolidated, and – just as resource partitioning theory predicts – small, specialist organic farms sprouted up in response.

In its initial stages, the movement professed the clearly defined goal of combating the increased commoditization and industrialization of agriculture. Early movement adherents may have differed in their precise definition of organic methods, but they were unequivocal in their opposition to industrial methods, which they thought unnatural and damaging to people, animals and the Earth. Their production methods were sharply opposed to those of conventional generalists, employing craft production versus mechanization, traditional varieties versus hybrid and engineered seeds, natural versus synthetic fertilizers and pesticides. These methods were reflective of the ideology of each category of producer: staying close to the Earth and preserving its integrity in the case of movement adherents, increasing scale and profitability while satisfying growing food demands for generalist agribusiness. Small organic farmers and the holistic techniques they supported were positioned as the solution to the homogenization and health problems created by conventional agriculture. Consequently, the common enemy was readily identified as large conventional farmers who were interested in growing both production scale and profit at the expense of the environment and consumer wellbeing.

As the organic movement gained a broader base of adherents from the environmental movement in the 1960s and 1970s, the rhetoric and unity of the organic movement seemed to remain. Even if environmental groups added to movement heterogeneity, they pursued similar goals, as the discourse on threats to individual and environmental health were closely related. Thus, in the first stage of the organic farming movement, organic farmers fairly successfully developed oppositional strategies and united against conventional farmers in the pursuit of the common goal of promoting more balanced, chemical-free, healthy farming methods. This assertion is reinforced by consumers' reactions to organic products in this first stage of the movement. Long before organics and environmentalism became trendy, the social infrastructure of the organic movement was supportive of the development of an organic form identity. Contemporary and historical accounts indicate that early organic consumers were a zealous community of followers who did not shy away from paying higher prices for products they considered more natural, healthy, and ethical. Together with organic farmers, they formed a tight-knit community of devotees who identified strongly with the movements' ideals. Displays of symbolic consecration and loyalty are probably best illustrated by food festivals and farmers' markets. In the first stage of the organic movement, therefore, the market for farming produce can be described as partitioned; specialists served well-defined niches which generalists were not interested to exploit, hence specialists and generalists coexisted without competing directly.

However, although organic movement adherents successfully opposed large conventional farmers and their industrial production techniques, they were less successful at precisely defining their own production methods and, consequently, a clear organizational form identity. For example, Rudolph Steiner, an early advocate of organic farming, advocated "biodynamic agriculture" and emphasized the farmer's role in guiding and balancing the interaction of the animals, plants and soil, whereas Jerome Rodale's definition of organic revolved around the idea of a symbiotic farm system and the return to sustainable agriculture (see Table 1). While these meanings of organic production certainly overlap, they do not converge towards a single definition. More importantly, they do not include a precise definition of which techniques, production processes, and inputs constitute organic farming and which do not. It is this shortcoming that may have encouraged a mushrooming of organic farms and fuzzy definitions of organic production, which ultimately compromised the stability of market partitioning.

Moreover, although movement adherents opposed mass production techniques, their opposition to large-scale farming was not explicitly articulated, but rather implicit in their depiction of organic farming methods. Consequently, the idea that organic farms were by definition small-scale operations was not a constitutive element of the organic organizational form identity. Limits to growth are salient not only because they make the specialist identity more readily recognizable and violations more visible, but also because the consumption of goods made by small-scale producers induces the sense of exclusivity and distinctness pertinent to identity expression and identity enhancement motives. Had the organic ideology explicitly dismissed the possibility of bringing organic farming to scale, expansionists would have had no traction in framing themselves as authentic organic farmers. Moreover, organic consumers would have seen scalability as a violation of the organic form identity, further discouraging expansionists from entering the specialist resource space. Without such technical limits to growth, however, the already blurry definition of organic production in the early stages of the movement prevented the specialist form identity from becoming fully institutionalized, leading to problems as the movement entered its second stage. In sum, the weak definition of the organic organizational form prevented the movement from articulating clear, common goals and framing their movement in strong opposition to large-scale, conventional farming, and thus compromised the stability of market partitioning.

Stage 2: Eroding Boundaries and De-Partitioning

The failure of the early organic movement to generate a clearly oppositional and sharply defined specialist form identity ultimately led to market de-partitioning, allowing conventional farmers to approach organic farmers' resource space in the late 1980s and early 1990s and erode the boundaries between generalists and specialists. In this second stage of market development, the movement became increasingly heterogeneous and developed extremely loose social networks, leading to conflicting goals and rhetorical framing on the part of different movement fractions. Subsequent appeals to existing institutions did not reinforce market partitioning, but rather undermined the specialist identity form by encouraging competition between what would have previously been labeled generalists and specialists.

The process of de-partitioning began with the bifurcation of the organic movement in the late 1980s and 1990s into the agrarian and the expansionist camps. The introduction of heterogeneous actors with quite divergent goals compromised two important levers of identity-movement-driven market partitioning. First, it compromised the pursuit of the common goals thereby weakening the movement's potential to sustain the sense of community necessary for participants to coalesce. This impaired organic farmers' ability to frame discourse in terms of oppositional strategies to conventional farmers, whose methods became less and less distinguishable from those of expansionists. As the image of conventional farming as the common enemy faded and the scale of organic farming grew, agrarians found it increasingly difficult to articulate the organic form identity and its method of production as a solution to generalist dominance. In fact, generalist dominance became less of a problem for the modal organic consumer; even though produce could be labeled organic without strict adherence to movement ideals, at least some of those ideals are upheld in any certified organic production. The availability of organic fruits and vegetables raised in monoculture and sold in national supermarket chains benefits a tremendous number of casual consumers as well as the Earth, in terms of reduced use of synthetic fertilizers and pesticides. Once the problem agrarians fought could no longer be shown in such sharp relief, organic as a specialist form identity lost some of its raison d'être, compromising both common goals and oppositional framing.

As it turned out, malleability of the specialist form identity enabled expansionists to reach out to formal institutions responsible for defining and enforcing regulatory standards more successfully than the agrarians. As in the micro-brew and micro-radio cases, expansionists and agrarians relied on existing community infrastructures in their struggle to define the term organic. Agrarians pushed for standards at both the local (e.g., California Certified Organic Farmers certification) and national levels (e.g., the farm bill's inclusion of the Organic Foods Production Act). Lack of unanimity with respect to the organic form identity, however, resulted in competing regimes within the agrarian camp, which were ultimately unable to protect organic farmers from competition. Moreover, lack of unanimity with respect to what organic production means may have helped the expansionist camp to win the battle thanks to its stronger resource pool, connections, and lobbying strategies. Thus the poorly nurtured social infrastructure encouraged market de-partitioning, in sharp contrast to the micro-radio case.

Even more important was the perception of what organics meant to consumers. By failing to agree upon a clear definition of organic farming, agrarians missed an opportunity to educate consumers about what constituted the organic form identity, thereby engendering oppositional strategies to organizations that did not fit the bill. As a result, code violations could not be readily recognized by any but the most educated and motivated consumers, and therefore went unsanctioned by the vast majority of organic consumers. The inability of consumers to identify potential violations of the organic specialist form identity was not only a function of agrarians' missed opportunity, but also of changes to the composition of the organic consumer profile. In the 1990s and early 2000s the organic consumer profile expanded to include those who gravitated towards organic produce more for lifestyle than for ideological reasons. Thus, the more popular the organic movement became, the more it attracted individuals less inclined to publicly wave the flag for the movement's ideals, but for whom association with the movement was a symbolic – sometimes unconscious – act requiring little knowledge or expertise about producer and product authenticity. In effect, the success of the organic movement in finding a broad base of support actually compromised its integrity and organizational form identity. This is in sharp contrast to the micro-brew and micro-radio cases, which seem not to have grown to the point where movement identification would pose a problem to the loyalty of its adherents.

Much in line with works on the formation of collective identities across stages of social movements (Benford & Snow, 2000; Jasper, 1997; Polletta & Jasper, 2001), it seems reasonable to assume that the growth of the organic movement engendered lower levels of collective identification with its ideals, making detecting and sanctioning violations of the original organic form identity increasingly difficult. Consequently, the boundaries between organic and conventional farming became eroded, leading eventually to what can be described as a de-partitioning of the market. By the end of this stage of market development, large, expansionist farms converted part of their operations to organic certification, resulting in direct competition between the small, ideologically conservative agrarian specialists and larger, ideologically liberal expansionist organic farms. In sum, it was the successful mobilization of a broad base of support and reaching out to social infrastructure combined with a lack of success in articulating common goals and an oppositional framing that led to market de-partitioning as the organic movement grew.

Stage 3: Beyond Organic and Towards Re-Partitioning?

Although the fruits of its labor are yet to be seen, a recent counter-movement has arisen at the edges of the organic movement which is poised to engender market re-partitioning. Under the umbrella of micro eco-farming (Adams, 2004), proponents of this new form of agriculture unite around the common goal of reviving the organic movement's initial ideals of sustainable, symbiotic agriculture and a back-to-the-land ethos. As one of the movement's proponents, endorsed by Rodale's *New Farm Magazine* (the outlet of the Rodale Institute), writes: "There is a change among those

who farm in this century. They are not different than what they used to be. They are more of what they always were...They seem to have taken a long-lost power back" (Adams, 2004, p. 27). Micro eco-farmers are explicitly framing agribusiness as the problem to which their farming methods are a solution, effectively creating an oppositional discourse. "We don't need agribusiness to save us from starvation. Food is our excuse to co-create with nature instead of being passive recipients; to reach across species; to mingle with other humans; and to listen to an earthly problem" (Adams, 2004, p. 18).

In contrast to other organic farmers, micro eco-farmers are more consciously attempting to create an identity directly in opposition to large-scale farming, be it organic or conventional. They promote farming methods and use discourse that make of them even more "specialized specialists": instead of only local, they support homestead production; instead of simply natural, non-engineered seeds, they promote heirloom and open-pollinated fruit, grains, and vegetables; and instead of merely small-scale production, they emphasize self-sufficient farming (Center for the Micro Eco-Farming Movement, 2010). Moreover, rather than focusing on health, as did earlier organic proponents, micro eco-farmers invoke taste, shape, and flavor as motives for buying their produce which they claim is compromised in fruits and vegetables bred to survive lengthy shipping and storage (Center for the Micro Eco-Farming Movement, 2010).

By emphasizing both product characteristics and production methods, micro eco-farmers tap resources at the very edge of the resource space. As the term "micro eco-farming" suggests, the organizational form identity of this newly emerging specialist also echoes those of micro-brews and micro-radio, as it incorporates small-scale farming into its form definition. The movement defines itself as comprising "sustainable local mini-farms from urban greenhouses to backyard gardens to small rural 1 to 25-acre parcels" (Center for the Micro Eco-Farming Movement, 2010). This emerging counter-movement may thus generate a specialist identity sufficiently sharp and narrowly defined to become viable and sustain itself in the long run. By portraying themselves as a true and valid alternative to large-scale farming and by incorporating limits to organizational growth into its form identity, micro eco-farmers may satisfy the needs of those who are driven by both anti-mass producer and anti-mass production sentiments. This would enhance the new repartitioning of the farm produce market, with micro eco-farmers representing the true specialist form identity. Moreover, if micro eco-farmers are able to exploit their form identity successfully, they may become self-sustaining – as are micro-breweries – by reaping a price premium for their highly specialized products. They can do so by promoting their specialist form identity to signal uniqueness and refinement that neither organic nor conventional large-scale farmers are able to mimic. In addition, by portraying themselves as a true and viable alternative to large-scale farming, micro eco-farmers may better satisfy the needs of those consumers who are driven by anti-mass production sentiments. This would represent a re-partitioning of the farm produce market, with micro eco-farmers representing the true specialist form identity.

Finally, it is interesting to note that the micro eco-farming movement places itself in opposition not only to large-scale farming techniques but also to official organic certification programs. This seems to indicate a specialist form identity that could meet the needs of consumers seeking true "alternatives" to conventional produce, and whose purchasing decisions express a distinct, non-inclusive identity. Whether this form will eventually become established and institutionalized remains to be seen but, if successful, it should appeal to a broad but homogeneous base of strongly identifying adherents. The impression that we obtained from our interaction with micro eco-farming movement members is that – just as in the case of micro-brewers and micro-radio activists – their community resembles a tight-knit network of followers. When looking for our case data and contacting movement participants, we were readily directed from one movement organization to the other. Micro eco-movement members know each other; they know who their enemy is; and they know what their identity is about, which may facilitate the detection and sanctioning of violations of their organizational form identity necessary to sustain market partitioning. Through appropriate framing of movement goals, articulation of an oppositional strategy, and appeal to a targeted base and infrastructure, this movement may succeed in stably partitioning the market in a way that earlier organic farmers failed to accomplish.

Discussion

Our analysis offers three important contributions to extant research at the intersection of social movements and resource partitioning theory. First, we emphasize the role of movement dynamics in resource partitioning. Although shared goals, adept framing and discourse, and a supportive social and community infrastructure may indeed be fruitful drivers of market partitioning, they change as movements unfold, grow larger, and become more successful. As a result, by influencing the formation and nature of specialist form identities movement dynamics may trigger processes of de- and re-partitioning.

Second, we argue that because participants' identification with movement goals weakens as movements expand to attract more diverse adherents, the definition of the specialist form identity becomes increasingly important for sustaining market partitioning over time. Because movement participants' identification is critical to sustaining loyalty to the common cause and the investigation, detection and sanctioning of violations of the specialist form identity, those movements best able to grow their bases may ultimately sacrifice their strength. When movement participants do not recognize and sanction identity code violations, generalists are free to enter the specialist resource space, engendering direct competition between the two forms. Only by taking a dynamic view of identity movements does this tension become apparent.

Finally, we suggest that specialist form identities that incorporate limits to organizational growth are more viable than those that do not. We point to the rise of micro eco-farms, a new specialist form identity that satisfies this condition and may be more likely to sustain itself as a viable alternative to conventional farming as an important turning point in the broader organic movement. We conclude that this newly emerging, sharply defined specialist form identity may successfully induce a re-partitioning of the farming produce market in the current stage of the movement.

Limits to organizational growth have direct implications for the specification of the original resource partitioning model. Formal statements of the original theory maintain that, as the number of dimensions in the resource space increases, the total amount of space open to specialists expands which, in turn, leads to both higher founding and lower mortality rates of specialist organizations (Carroll et al., 2002). Given our conclusions regarding the limits to organizational growth for the specialist form, the specialist founding and mortality hypotheses must be refined. That is, we put forward limits to organizational growth as a necessary condition for movement-based resource partitioning and conjecture that, as the space open to specialists expands, there will be an increase in the viability of those specialist organizations to growth are present in the organizational form identity, increased demand for specialist products can only be met by an increase in specialist density, but not by the growth in scale of a few specialist resource space and competing directly with specialists, ultimately crowding them out.

Theoretical and Practical Implications

Our study has a number of important implications. First, the crowding out of specialist organizations in the event of de-partitioning may lead to excessive mortality rates of specialist organizations. The USDA statistics seems to confirm this assumption: as its statistics show, since the 1960s the number of farms has declined, although the average acreage per farm has increased (Dimitri, Effland, & Conklin, 2005).

Second, the fact that movement-based partitioning, regardless of size or success, may engender processes of re- and de-partitioning should be reassuring for movement adherents, producers and consumers, who spend significant time and resources fighting for their cause. Although the organic movement did result in significant, broad-based changes to farming practices and although as consumers we are able to purchase more organic fruits and vegetables at a more reasonable price, market de-partitioning puts organic farmers at an ideological crossroads: remain small, and find new bases for differentiation by remaining authentic and true to the movement's ideals, or resort to identity management, minimally adhering to both their core values and standards and competing directly with conventional farms. One problem associated with this outcome is that, if organic farms are only able to survive by abandoning some of their ideals and growing, these ideals may soon be lost. Another problem is that identity management may go beyond pretending that the produce comes from a small self-sufficient farmstead; rather, some farmers reap a considerable price premium for produce that does not meet consumers' expectations or that may be fraudulently labeled as organic. Consumer and other watchdog organizations have documented several incidents of produce being fraudulently represented as organic.¹

Our research also points to the importance of defining the specialist form identity in enhancing specialist viability and sustaining market partitioning. Identity movement leaders who push for change, therefore, should be wary of emerging specialist form identities that are too broad or too close to generalist form identities to be uniquely identifiable. Instead, they are well advised to push for standards representing narrow and sharply defined form identities that are unequivocally distinct from generalists. Moreover, in comparing the organizational form identity of micro-breweries, micro-radio broadcasters, and micro eco-farms, we suggest that specialist form identities that incorporate limitations to organizational growth may be more viable than those that do not.

Even if limitations to growth may be a fruitful avenue for specialists to explore, however, there remains the important issue of organizational diversity. That is, if only very small organizations are able to proliferate and survive in concentrated markets, then the meaningfulness of organizational diversity in the face of generalist domination is questionable. In the production of cultural goods like movies or print media, for example, where identity movements most frequently arise, preserving an open marketplace for ideas is indispensable for the functioning of democratic institutions. It follows that if specialists reach only small audiences because of their very small size and limited purview, this may have significant implications for society at large. Thus, despite its merits for re-partitioning, there may be a social cost to the incorporation of limits to size in specialist form identity.

Alternative Explanations

Although we kept an eye to evidence disconfirming our findings as we conducted our analysis, several alternative explanations merit particular attention. The primary alternative to our argument may be that the farming resource space may not lend itself to partitioning. In his canonical work on resource partitioning, Carroll (1985, p. 1272) enumerates seven assumptions underlying market

market partitioning. Another possible explanation is that we have improperly characterized the stages of movement and market development in building our case. That is, the movement never generated specialist organizations that served small, specialized niches and the growth of organic farming proceeded in as straightforward a manner as, for example, the use of poison pills or hybrid corn (e.g., Strang & Soule, 1998). Although one could argue that the popularity of organic produce has followed a traditional pattern of diffusion fueled by social movements, our reading of the organics story reveals a more nuanced interaction between movement and market; that is, as the movement progresses, it impacts the structure of competition itself. Our conversations with movement participants and scholars, as well as our engagement with the extant literature on the organic farming movement, all support our characterization of the market's development and its current state.

It is also possible that the current state of the organic market is entirely an artifact of the regulatory process. Standards, be they government- or self-imposed, are critical in protecting and institutionalizing specialist form identity; thus, it is possible that the certification process alone, not the organic farming movement, is responsible for the erosion of boundaries between generalists and specialists. We have considered this possibility at length, and suggest that, while the national organic standard indeed allows for a very broad definition of the organic farming, it is the outcome - not the cause - of market de-partitioning. The broad formulation of current US standards stems directly from the mechanisms underlying the organic movement. Prior research shows that the definition of the specialist form identity by movement participants precedes its institutionalization by formal institutions, such as government agencies and regulators (Carroll & Swaminathan, 2000; Greve et al., 2006). In identity movements such as micro-radio and micro-brews, where movement participants united around shared goals and an unequivocally identified common enemy, specialists were able to portray their form as the solution to generalist, homogenous domination, then bridge the gap to institutions that standardized those form identities. In the organic case, however, the lack of shared goals and the conflicting motives of agrarians and expansionists prevented both the establishment of a sharply defined organic form identity and its formal institutionalization. Even though both camps reached out for support from trained organization builders and pushed for the creation of standards, the contradictory motives within the organic camp prevented such standardization on the federal level. This spurred a de-partitioning of the market for farming products and allowed generalist organizations and those adopting more conventional farming methods to invade specialists' resource space. That the generalists were able to push for flexible and poorly enforced standards is thus a secondary effect, the consequence rather than the cause of a poorly defined organizational form identity.

Limitations and Conclusions

As all research, our study suffers from several limitations. First, although we have tapped a wealth of rich qualitative data, the limited availability of quantitative data on the structure of the organic farming industry precluded method triangulation: to corroborate our findings further, we initially strove to analyze our structured data through quantitative methods. We attempted to gather data on our own by contacting regulators, certifiers, social organizations, and academics who specialize in organic farming, but were unable to overcome this obstacle. In our qualitative review, however, we

found sufficient consensus about the growth and progress of the organic movement and industry that our presentation of the case is as accurate as it can be.

In addition, given that the term organic farming encompasses a number of very different farm products, including fruits, grains, and vegetables, another limitation of our study may be that we did not focus on a single product offering with more definable characteristics, such as organic dairy products or heirloom tomatoes. Admittedly, farm count and farm structure may differ across categories of produce, as does government regulation. Our choice was motivated by fact that the salient issue in our thinking is the *method* of production, rather than the product itself. In fact, as in similar cases at the intersection of identity movements and resource partitioning, it is the specialists' method of production rather than product characteristics that lead to market partitioning. As Carroll and Swaminathan (2000) note, micro-brew aficionados' buying decisions are driven not merely by quality, but also by the identity of the producer and its adherence to production methods considered to be authentic. Choosing organic farming broadly allows us to focus on broad production standards related to a broad movement, rather than techniques specific to particular farm products or characteristics thereof.

Future research might use quantitative techniques to test our arguments. While there are many important issues in this domain that could be fruitfully explored, we would like to highlight the role of individual and social identity in driving organizational founding. Although organizational ecologists recognize the role of identity movements in market structure, they have largely overlooked the role of movement participants' own identities in the process of specialist founding and viability. That is, existing research tends to conceptualize identity movements through the consumer, whereas producers are equally likely to belong and respond to identity movements. This is important, because if producers themselves are movement adherents, their product offerings may precede demand for their goods, in contrast to the traditional view that specialist foundings respond to already demonstrated market demand. Similarly, changes to movement participants' identification over time bear important implications for specialist viability.

Finally, as movements grow and become more heterogeneous, some adherents may splinter off into smaller groups, seeking balance between inclusion and distinctiveness (Brewer, 1991). Although not part of our original argument, this striving for optimal distinctiveness might have been one of the mechanisms that led micro eco-farmers to break away from the organic movement, develop a new specialist form identity, and engender a re-partitioning of the market for farm products. Thus future research might address how changes to producer identification with identity movements can lead to market re-partitioning.

This study uses a case that might have led to market partitioning to explore resource partitioning theory in a nuanced way. By bringing in the dynamics of identity movements, we have sought to understand the factors that led the organic farming industry to become de-partitioned over time, and which may well lead to re-partitioning in the near future. In addition, by comparing and contrasting our case to those in which the predictions of resource partitioning were borne out, we were able to refine the ecological argument by adding an important scope condition. This research is the first step in the development of a more dynamic view of resource partitioning theory.

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Note

1. See, for example, http://www.organicconsumers.org/sos.cfm.

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