

# Cycling into Headwinds: Analyzing Practices That Inhibit Sustainability

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## Abstract

Using the example of cycling, the authors contribute to public policy debates surrounding sustainability. They employ practice theory to shift the debate away from consumer choice and agency to examine instead why sustainable practices are not always available to consumers. Therefore, rather than asking, “Why don’t people cycle?” the authors ask, “Why isn’t the practice of cycling thriving?” Practice theory focuses on material, meanings, and competences as the components of a practice, positing that a practice can thrive and grow only when these elements come together. By looking at how practices compete for the same set of elements, the authors demonstrate how some practices (e.g. driving, schooling, policing) come to dominate or inhibit others (i.e., cycling). In terms of the theme of this special issue, then, instead of excavating anticonsumption as a precursor to practices (i.e., a choice not to engage in those practices), by unpacking practices, the authors examine the mechanisms through which this choice is restricted.

## Keywords

cycling, policy, practice theory, practice, sustainable consumption, anticonsumption

In this article, we shift the debate away from consumer choice and agency in sustainable consumption to examine instead why sustainable practices are not always available to consumers. To date, debates on anticonsumption have largely focused on “reasons *against* consumption” (Lee, Fernandez, and Hyman 2009, p. 145), making the study of not consuming mainly a matter of consumers’ deliberate attitudes toward avoiding, boycotting, and abstaining from consumption (Kozinets, Handelman, and Lee 2010; Lee, Cherrier, and Belk 2013). Cherrier, Black, and Lee (2011, p. 1757) have also explored the idea of “incidental non-consumption” as resulting “from choice towards a preferred alternative.” We would like to unsettle this debate by asking, What if there is no preferred alternative available? What if there is limited or no opportunity to consume sustainably? This contextual or systemic approach to sustainable consumption may also help in understanding some of the reasons for the “green gap” (Black 2010, p. 404) in which consumers profess sustainable beliefs and values and yet continue to consume in unsustainable ways (see, e.g., cases of recycling [Hargreaves 2011] and cycling [Claudy and Peterson 2014]). Consequently, a range of consumer studies have critiqued the individualization of consumer responsibility (Evans 2011; Shove, Pantzar, and Watson 2012; Stewart 2015). Policy incentives following the so-called “ABC mantra” (A for

attitude, B for behavior, and C for choice) have been particularly criticized for their overreliance on mindset and deliberate action (Shove 2010).

Our theoretical approach examines this problem from a different viewpoint. Our focus on practices (as opposed to consumers) “deprotagonizes” consumers, conceptualizing them as both “locked” (Newell et al. 2015, p. 537) into unsustainable patterns and locked out of sustainable patterns as a consequence of practice arrangements (Schatzki 1996, 2013, 2016; Shove 2010; Shove, Pantzar, and Watson 2012; Shove and Spurling 2013; Watson 2013). Within such a framing, consumers are viewed as being recruited to practices or carriers of practices (Shove and Pantzar 2005), and as such, they are no longer the key actors in the story. This view also allows a role for the unreflexive, routine, and habitual nature of much consumer behavior (Hill, Canniford, and Mol 2014).

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We also argue that it is not enough to focus on a single practice; rather, we need to understand the relations *between* practices to grasp how and why some practices thrive and come to dominate while others struggle. Although a series of studies in consumer research have explored the synergetic dynamics *within* practices' various elements (e.g., Arsel and Bean 2013; Gram-Hannssen 2011; Magaouda 2011; Schau, Muñiz, and Arnould 2009; Woermann and Rokka 2015), few have fully explored the dynamics of relations *between* practices. To use Nicolini's (2009b) terminology, these studies provide good examples of "zooming in" to a practice at the micro level to explore its internal dynamics. However, relatively few studies have "zoomed out" to explore how practices themselves intersect, compete, and potentially clash with one another. This is because previous studies have mainly focused on practices that are already well-established and uncontested. Thus, we argue that to fully explore a practice that is marginalized (and struggling to develop), we need to explore how elements intersect both *within* the practice (in our case, urban cycling) and *between* urban cycling and other related practices (e.g., driving, schooling, policing). This second strand of our approach enables us to explore the politics of practices—that is, how some come to dominate and others are marginalized.

Consequently, this article addresses the following questions:

1. Why might sustainable practices (such as urban cycling) fail to thrive?
2. What are the implications of a practice based approach for the design of policy surrounding sustainable consumption?

The article begins by exploring the reasons the literature has provided to date for nonparticipation in cycling and the suggestions made to remedy this. Scholars have called for a much more integrated systemic approach to understanding cycling. Drawing on this call, we offer our argument for studying cycling using a practice based-approach. We follow this with more detail on integrative practices, practice bundles, and action hierarchies to help understand the relations between practices.

## Nonparticipation in Urban Cycling: An Overview of the Literature

Popular quantitative studies of cycling (Martens 2004; Pucher and Dijkstra 2000) perpetuate a dominant belief that external factors (e.g., infrastructure) and cycling facilities (e.g., flat surfaces, well-connected and segregated cycle paths) are "key components" (Larsen and El-Geneidy 2011, p. 172) to increasing cycling participation (Kritzek and Roland 2005; Telfer et al. 2006). However, studies on the barriers to cycling (Horton, Rosen, and Cox 2007) show that individual perceptions of fear, safety, experience, distance, and comfort could have equally negative impacts on transport mode choice (Horton 2007; Martens 2004; Pucher and Buehler 2008; Pucher and Dijkstra 2000). As a result, studies have recommended that

both internal and external factors should be taken into account, as they are said to have reciprocal impact on each other and, thus, on people's decision to cycle (Heinen, Van Wee, and Maat 2010; Horton, Rosen, and Cox 2007; Martens 2004; Nilsson and Küller 2000; Pucher and Buehler 2008; Pucher and Dijkstra 2000; Susilo et al. 2012). Because the quantitative field captures people's transport choices mainly through rational categories, it has been critiqued for its "preconceived" ideas about what cycling "should be" (Spinney 2009, p. 818). In recognizing such a limitation, some studies (Buehler and Dill 2016) have called for a more nuanced and in-depth understanding of cycling in various contexts, using different methodological tools. For example, Buehler and Dill (2016) call for studies that examine cycling holistically, taking into account "bikeway networks," which link infrastructural information to cycling levels in the general population. Such networks include cycle lanes, tracks and paths, local pedestrianization, and accommodations for cyclists at intersections. Work has also explored relationships between cycling policies and infrastructure (Dill 2009; Pucher, Dill, and Handy 2010), reinforcing the centrality of public policy in cycling promotion. However, this work also underlines the need for associated interventions that include infrastructure and probicycle programs, supportive land use planning, and restrictions on car use (Pucher, Dill, and Handy 2010).

While quantitative accounts have found a way to integrate material aspects into their analysis, qualitative cycling scholars have further questioned the general and "static, undifferentiated account of people's understandings and experiences" (Skinner and Rosen 2007, p. 84) characteristic of quantitative research. Spotswood and Tap (2011), for example, argue that the promotion of cycling has to go beyond common cognitive appeals, and they observe that perceived barriers to cycling are too narrow to understand bicycle (dis)use (Skinner and Rosen 2007). Parkin, Ryley, and Jones (2007, p. 80) further argue that cycling research should "encompass some of the wider, more cultural, issues that may affect the choice for the bicycle." The use of cultural insights is intended to increase the acceptability of policy programs, as these might be more likely perceived as authentic and credible (Bye 2003) and, as such, facilitate voluntary behavioral change (Horton, Rosen, and Cox 2007). As Horton, Rosen, and Cox (2007, p. 7) suggest, "attempts to promote cycling could be much more effective if they incorporated greater understanding of cycling's complexity and diversity, even within a single society." Dalpian, Da Silveira, and Rossi's (2015) study of the cycling group Critical Mass<sup>1</sup> explores the shared and individual meanings of cycling held by this collective. In doing so, they take a more holistically informed approach to cycling, exploring the significance of meanings, beliefs, and objects (the bike) in establishing cycling

<sup>1</sup> Critical Mass is a global social movement involving direct action events where cyclists meet at a set time and location to cycle together through city streets, thus reclaiming them from motorists (Blickstein and Hanson 2001; Carlsson 2002; Furness 2007).

as a counterhegemonic practice. Studies of this type have begun to make inroads into a culturally embedded, fully embodied, and action-oriented view of cycling, but more work is needed. We believe that a practice theory approach helps address this.

### Studying Urban Cycling Using a Practice-Based Approach

Building on the work reviewed in the previous section, we propose that a practice-based approach is appropriate to integrate the cultural, material, and infrastructural elements that are necessary to understand cycling. As a vital part of the practice's existence, infrastructure is not treated as "simply the backdrop or context to where the real action is" (Latham and Wood 2015, p. 303) but appreciates that the action occurs as much *because* of the infrastructure and material arrangements as it does within them (Schatzki 2010). The importance of such materiality becomes clear given that the situated "bodywork" (Aldred 2013, p. 46) of urban cycling (i.e., the active physical endeavor) is integral to the normative, material, and semiotic aspects of the practice (Spinney 2011), which practice-based research conveniently crystalizes.

The notion that "social relations are spatially organized" (Urry 2007, p. 34) becomes crucial because places contain collective memories and determined forms of moving through which a community expresses dominant behaviors. Thus, encountering a different way of moving from the one that a community has historically practiced can potentially evoke resistance (Urry 2007). Urban cycling, as a statistically underperformed practice, is thus likely perceived as "a new old thing" (Vivanco 2013). Despite car driving being the "predominant form of mobility...[subordinating] other mobility-systems of walking, cycling..." (Urry 2007, p. 85), the relationships between mobility practices have largely been overlooked. Although abundant literature exists analyzing the dominance of automobility (Bohm et al. 2006; Conley and McLaren 2009; Furness 2010; Mees 2010; Merriman 2007), only a few studies have juxtaposed urban cycling and car driving by explicitly questioning the taken-for-granted marginalized position of the former within the domination of the latter (Fincham 2006; Latham and Wood 2015). Studies on urban cycling have noted the unequal allocation of resources among transportation practices but have not further conceptualized the mechanics through which such allocation happens and how urban cycling occupies its marginalized position.

As we have discussed, sociologists have called for a more sustained focus on the systemic issues that prevent cycling from becoming a dominant mode of transport (Horton, Rosen, and Cox 2007; Spinney 2009). In this respect, practice-based approaches seem promising because they explore "orderly materially mediated doing[s] and saying[s] ('practices') and their aggregation" (Nicolini and Monteiro 2017, p. 111). Although these studies have attracted growing interest in management studies and consumer research, they differ in their conceptualization of what constitutes a practice. Nevertheless, scholars insist that practice-based studies share fundamental

commonalities (Nicolini and Monteiro 2017; Schatzki 2016; Shove, Pantzar and Watson 2012). First, such practice-based approaches share the orientation that "social and organisational life stem from and transpire through the real time accomplishments of ordinary activities" (Nicolini and Monteiro 2017, p. 110). In other words, practice studies believe that the world is made of practices, and thus they are committed to a "flat ontology" (Schatzki 2016, p. 29). In this context, "flat" means that practices reject the idea of a single agentic entity, because all the elements that compose the practice are equally important to its existence. Second, and consequently, the commitment to this flat conceptualization of practices decentralizes agency, in that nonhuman and material aspects as well as embodied knowledge are as integral to the practice as the actual consumer (Schatzki 2016). A practice approach therefore "deprotagonizes" the consumer and his or her identity (Warde 2005). Third, a flat ontology highlights how practices are carried out through space and time in a "here and now" that is a fundamental part of the formation, maintenance, and disappearance of a practice (Shove and Pantzar 2007). Inspired by Shove and Pantzar's (2007) examination of how practices capture and retain practitioners (as well as Shove, Pantzar, and Watson's [2012] later observations of practices as recruiting carriers), we examine the "social structuring of opportunity" (p. 164) in which, through exposure and history, a practice offers people the (im)possibility of participating. Because the practice under study is a marginalized one, we are also interested in what Shove and Pantzar (2007) call "parallel process[es] including those of resistance and defection" (p. 164).

### Integrative Practices, Practice Bundles, and Action Hierarchies

Returning to bodywork as a central aspect of cycling (Spinney 2011), we follow one of the most popular definitions of practice in consumer research by Schatzki (1996), who emphasizes embodied knowledge through his focus on "attunement and understandings" (Schatzki 2001, p. 69). He defines a practice as a "temporally and spatially dispersed but organized nexus of doings and sayings... [These] doings and sayings are linked through (1) practical understandings, (2) rules, (3) teleoaffective structure (ends purposes beliefs and emotions) and (4) general understandings" (p. 89). Schatzki's concept of practices invites the researcher not only to examine a single practice but also to capture relationships among "bundles" of practices. Such bundles are characterized by action hierarchies (Schatzki 2012), in which basic activities together compose hierarchical organized activities that build practices that, in their bundle, constitute larger practices, and so on. Pedaling, for example, is a basic activity in cycling that is performed in various integrative cycling practices such as race-cycling and BMX riding. It is an essential subpractice of cycling, but it is a basic action that can easily be performed in a spinning lesson without further knowledge of how to cycle on the road. Pedaling must bundle up with other subpractices such as breaking, parking, storing, ringing the bell, and reacting in traffic through the use of the

aforementioned actions to become urban cycling. We then move to higher-level practices such as working, going to school, running errands, and so forth. In viewing practices this way, it becomes clear that single practices encompass a range of activities that simultaneously intersect with other practices of daily life and, thus, cannot be analyzed in isolation. In studying relationships among practices, we can understand not only the evolving process of an emerging practice but also its “social life” (Schatzki 2016, p. 23), which transpires from the hierarchical relations of bundles of practices.

The bundle perspective underscores the importance of distinguishing urban cycling from other cycling practices because its basic activities (or subpractices) are completely different from sportive race cycling or leisure pursuits. To perform urban cycling, certain bodily and mental know-how are needed to handle the bicycle and one’s own body within traffic in which practitioners (ideally) follow rules and norms and (re)act to other traffic participants. It also implies purpose—that is, to move from point A to point B in a defined time span mostly imposed by other practices (e.g., working, shopping) that require the ability to park the bicycle at the destination. The purpose of getting around quickly in performing such “higher-level” (Schatzki 2012, p. 3) practices most likely requires the cyclist to carry things around (e.g., clothes to change into, documents, shopping bags). Thus, urban bicycles are characterized by their utility, offering the ability to carry items in baskets or panniers with stable frames, comfortable seats, and grippy wheels. Safety is foregrounded, whereas speed is less emphasized through gears with fewer levels. In contrast, the features of race cycling are entirely different. Instead of rolling along at an inner-city pace, race cycling is done on highways or interurban roads, where the coexistence with cars presents high risks. Competences regarding how to behave outside the city in this context are therefore different than those within the city; for example, changing lanes is not required as much as in city traffic, as there is not as much stop-and-go. Therefore, the use of hand signals with cars is less required—and in fact would be unsafe for maintaining concentration and balance at high speed. The purpose of race cycling is to train for speed competitions and is not a mode of transportation; this, in turn, requires different material equipment. Thus, lightweight bicycles with special gears and special clothes are at play, yet the overall quality and prices of the race bikes are high end. Because the purpose of this practice is sportive, there is no need to park the bicycle unsupervised, as in the case of urban cycling—indeed, the bicycle is mostly transported by vans to and from the training sites. The same distinctions can be made for mountain biking. The competences of jumping, gliding, and braking down rocky, muddy, or dusty soil are not necessary during urban cycling. Consequently, the materials necessary for mountain biking (e.g., wide handlebars) need to support the activity of balancing on steep paths. Traffic rules do not apply in open nature; thus, someone who is passionate about mountain biking is not necessarily able to ride in city traffic.

Although Schatzki’s (1996, 2012) definition is perhaps the most insightful for exploring cycling, Shove, Pantzar, and

Watson (2012) offer a succinct approach for categorizing the necessary elements of a practice by reducing them to material, competence, and meaning. Material concerns “things, technologies, tangible physical entities and the stuff of which objects are made” (Shove, Pantzar, and Watson 2012, p. 14). Competence includes “skill, know-how and technique” (Shove, Pantzar, and Watson 2012, p. 14), and meaning categorizes “symbolic meanings, ideas and aspirations” (Shove, Pantzar, and Watson 2012, p. 14). We merge the Schatzki and Shove, Pantzar, and Watson frameworks and group the elements that are necessary for the existence of urban cycling into the following schema:

- *Material Elements*: We looked for bodies, vehicles, and bicycles, facilities such as storage opportunities (e.g., bike racks, buildings for bicycle parking), access to private and public buildings (e.g., town hall, shopping malls), and so on. We examined the city’s infrastructure—the places and spaces assigned to the different urban transportation practices. In addition, we looked for bike shops that offer bikes, accessories, and repair services.
- *Competence*: We looked for people with the skills and physical abilities to ride bicycles, a practical understanding of urban moving, and awareness of rules and norms in traffic. We focused on how bodies move as well as how bicycles are moved and parked in the street. We wanted to observe whether and how rules are actually performed in traffic.
- *Meanings*: In addition to symbolic meanings, we examined the teleoaffective structures of urban cycling. These entail “a set of ends that participants should or may pursue, a range of projects that they should or may carry out for the sake of these ends and a selection of tasks that they should or may perform for the sake of those projects” (Schatzki 2001, p. 80). Furthermore, we included general understandings of urban cycling and urban moving, which “are expressed in the manner in which people carry out projects and tasks” (Schatzki 2001, p. 86).

We used this hybrid framework to analyze urban cycling in relation to other practices of urban moving, contributing to our limited understanding of how unsustainable ways of moving are still the “predominant form of mobility . . . [subordinating] the other mobility-systems of walking, cycling” (Urry 2007, p. 85). We know little about how this “subordination” comes about and how multiple practices negotiate their existence in a dynamic world that affects consumption.

## Methodology

The present research draws on a practice-based ethnography in Las Palmas, Gran Canaria (Canary Islands), carried out by the first author. The study is based on two periods of fieldwork of four months and eight months, respectively, over a three-year

period. Eminent practice scholars suggest that ethnography is the most appropriate methodology for practice-based research (Halkier, Katz-Gerro, and Martens 2011). Schatzki (2012, p. 24), for example, argues that it is only through ethnography that we can “uncover [the] ethereal” nature of practices as we engage with urban cyclists to unravel the “action hierarchies” of sayings and doings that compose practices. Nicolini (2009a, 2012, 2017) proposes a rhizomatic strategy to collect and represent data to accomplish these aims. He characterizes practices as relational and indeed “rhizomatic” (i.e., spread out like roots that pop up at the surface with connections and links underneath the surface only to pop up somewhere else). What makes this characterization special is that it enables us to examine practices in unexpected ways, tracing relationships even though these might be invisible at first. Insights from one practice may lead to insights about another practice, which in turn leads to insights about another practice, and so on. In this regard, Nicolini (2012) postulates that “we need to develop a variety of approaches for appreciating and representing practice in all its complexity . . . identifying methods that capture different aspects of practice” (p. 209). As we follow this rhizomatic approach, we make use of multiple methods to access these “practices spread out over space and time” (Schatzki 2012, p. 24). These include unstructured (group) interviews, participant observation, and documentary analysis as we “zoom in” to local accomplishments of urban cycling while “zooming out” to tease out the role of urban cycling within bundles of integrative practices in situ (Nicolini 2009a). In line with Hill, Canniford, and Mol (2014), who argue that researchers should seek “novel ways to describe and track the distributed world of consumption . . . to attempt to capture the ongoing flow of everyday life,” Nicolini’s (2012) notion of rhizomatic and relational data collection and representation is a valuable contribution in representing the “non-representational” (Hill, Canniford, and Mol 2014, p. 384).

Our data analysis and representation were of a hybrid inductive nature. Inspired by recent discussions on the usefulness of ethnographic research (Woermann 2017) and ethnographic work using a practice-based framework (Woermann and Rokka 2015), we collected a heterogeneous set of data and analyzed it following a basic practice theory distinction between materiality, competence, and meaning. Because of the relational character of practices, the data fit into more than one category, creating overlaps; however, to allow for overlaps in writing and to describe scenes that could also have happened elsewhere embodies the rhizomatic character of this research. Themes under these three main categories “crystallized” (Fetterman 2010, p. 110) as we oscillated between literature, visual and secondary data, field notes, and diaries (Goulding 2005).

Having lived on Gran Canaria for extended periods, the first author was familiar with Canarian vernacular and culture. Her proficiency in Spanish was also helpful in this regard. An initial four-month period of fieldwork enabled her to familiarize herself with the cycling field and make contact with key informants who served as vital gatekeepers in the second period of the research. During the eight-month period of fieldwork, the

first author investigated the setting in two phases (see Table 1). In the first phase, she explored the field by zooming in to the local accomplishment of urban cycling. Saddling up on her own bicycle, she conducted a “mobile ethnography” (Spinney 2011, p. 161). Venturing into Las Palmas traffic with a video camera taped to her helmet, she cycled with participants, talking with them (when possible) along the way about their cycling experiences. Prior to these mobile observations, she conducted in-depth interviews with participants about their cycling routines. A total of 42 participants were interviewed and observed in this way. In the second phase, the first author turned to secondary sources, collecting a variety of documents covering issues such as regulations, traffic norms, and urban planning. She also collected netnographic data during this phase, joining a series of Facebook cycling activist groups and monitoring and contributing to the Twitter feeds of politicians, businesses, and activist groups. These two phases of fieldwork overlapped significantly, with the first phase of interviews and mobile ethnography running alongside the secondary data collection in the second phase.

The first author quickly became part of the local urban cycling community by attending and engaging in local events (e.g., participating in the monthly Critical Mass and other cycling events in the city) and became an associate member in the local activist not-for-profit organization, “Las Palmas en Bici.” Through this activist move, the first author gained access to important politicians and policy makers, whom she subsequently interviewed and shadowed in their campaigning practices. During this eight-month period in the field, she cycled for 164 days for an average of 35 minutes per day. She used the bicycle not only for observational purposes but also for her own daily urban transportation. She kept a field diary of these experiences and observations, which embody a “spaghetti junction” of written notes, video clips, pictures, and voice notes. The fieldwork adds up to 40 typed pages of diary, 846 minutes of video material, and 36 hours of taped interviews. The data set grew progressively through the integration of documentary data, such as traffic regulations, historical data, statistics, and urban planning outlines.

## Findings

When the fieldwork began, urban cycling was an almost-nonexistent practice in Las Palmas. Bicycles were mostly absent from the streets, which were packed with car traffic; cycling was instead used primarily in leisure and sportive contexts. Today, the practice is slowly emerging but remains marginal, as Aday, a bicycle retailer, explains:

You cannot ask, “How does it work?,” because it doesn’t work at all. And that’s how simple it is. “Is it going well?” What? We don’t know if it’s going well because it’s not going at all. . . . You *cannot* say, “That’s it; we’ve arrived.” We are not even on our way. (Aday)

According to Aday, to understand this practice, you cannot ask how things work; you need to adopt a different way of looking

**Table 1. Fieldwork Overview**

| Time                          | Research Phase  | Research Methods  |
|-------------------------------|-----------------|---|
| May 2012–<br>September 2012   | Familiarization | <ul style="list-style-type: none"> <li>• Recruitment and initial observation/ad hoc conversations and interviews</li> <li>• Mobile ethnography (participant observation and regular cycling for private transportation)</li> <li>• Twelve in-depth interviews with practitioners</li> <li>• One in-depth interview with a politician</li> <li>• Riding with the Critical Mass monthly cycling group</li> <li>• On-going graphic/audiovisual observation, field notes, and diary (voice, video, and photo recording of Las Palmas traffic)</li> </ul>  |
| December 2014–<br>March 2014  | Phase One       | <ul style="list-style-type: none"> <li>• Refamiliarization with the field, recruitment, and initial observation/ad hoc conversations and interviews</li> <li>• Mobile ethnography with 30 practitioners (participant observation and 24/7 cycling for private transportation)</li> <li>• Joining and participating in the local procycling activist nongovernmental organization</li> <li>• In-depth interviews with 30 practitioners</li> <li>• Attending political events</li> </ul>  |
| March 2014–<br>September 2015 | Phase Two       | <ul style="list-style-type: none"> <li>• Riding with the Critical Mass monthly cycling group</li> <li>• In-depth interviews with three political parties</li> <li>• On-going graphic/audiovisual observation, field notes, and diary (voice, video and photo recording of Las Palmas traffic)</li> <li>• In-depth interviews with six bicycle retailers (shop owners and employees)</li> <li>• Accompanying public bicycle repair service members during their shift</li> <li>• Documentation of municipal traffic regulations, brochures of explanatory norms and rules for cycling, and public transport regulations regarding onboard bicycles</li> <li>• Documentation of urban planning outlines and strategies</li> <li>• Netnographic screening of social media/apps</li> <li>• Tours with the local police on bicycles</li> <li>• Documentation of electoral campaigns (newspaper articles; viral spots; and other video material, interviews, and statements)</li> <li>• Documentation of car lobbying (newspaper, sponsorship, clubs, and presentations)</li> <li>• In-depth interviews with bicycle retailers (shop owners and employees)</li> </ul> |

at the absences (and, therefore, the struggles) of urban cycling. At present, urban cycling is practiced only by a marginalized group. The adoption of a practice-based approach enabled us to examine the complexities of absences and presences, domination and struggles. We present the data using the categories of material elements, competences, and meanings; however, this categorization must be viewed as fluid rather than discrete.

## Material

The material world of urban cycling is a key element in the structure of the practice. As a crucial part of the analysis of practices, material arrangements are highly complex and intrinsically bound to activity, as Schatzki (2013, pp. 33–34) describes:

Activity inevitably transpires in a material world that it appropriates as its setting. . . . Material arrangements form immense interconnected networks through which causal processes work, affecting both the arrangements themselves and the human activity that transpires amid them.

Within this reciprocal relationship, material arrangements accommodate the meaning and competences necessary for practices and are thus intimately related to these two other elements. “Material” is sophisticated in character, accounting

for elements as diverse as bicycles, bodies, places, and spaces as well as the infrastructure of the city. We tackle four main issues that emerge from the data. First, we show that material arrangements of urban cycling are lacking and incomplete. Second, we demonstrate a struggle between urban cycling and other practices (e.g., theft, driving, policing) for the same material resources. Third, we show how this competition and the resulting lack of material arrangements negatively affects urban cycling’s subpractices (e.g., parking, storing) to an extent that they cannot sum to form Schatzki’s (2012, p. 15) “higher level actions . . . and practices.” Struggles and competition between practices hamper the “alignment” (Bulkeley, Broto, and Maassen 2014, p. 1473) of the required elements and, thus, the formation of a stable nexus of urban cycling as a practice. Fourth, we reveal how seemingly unrelated practices (those of policing and governance) operate in the background of mobility practices. These have a negative impact on cycling, thereby indirectly supporting unsustainable ways of moving.

### *The Lack of Material Arrangements: Poor Parking Opportunities, Ineffective Bike Lanes, and a Dysfunctional Public Bike Service*

One of the city’s recent initiatives to encourage cycling is the introduction of new bicycle lanes. However, as the literature



**Figure 1.** New Bicycle Lanes

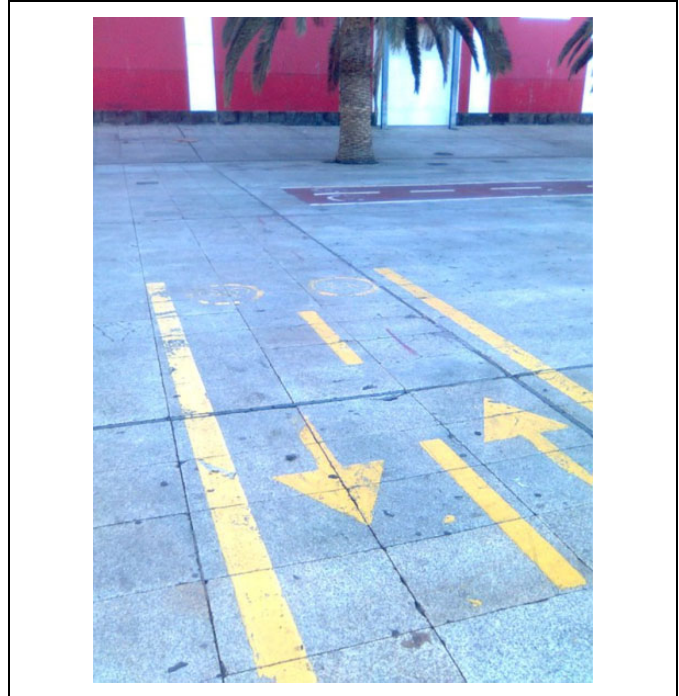
has suggested (Aldred 2013; Oldenziel and De la Bruheze 2011), this spatial segregation of bicycles seems to reinforce the inferior role of urban cycling, which, as a practice, does neither “occupy [a] spatial position” nor fit into the “events and activities” (Schatzki 2001, p. 19) of daily urban traffic. Indeed, cyclists are rarely—and in some cases, never—able to use the bicycle lanes. As Belén, mother and novice cyclist, comments,

They are not connected to anything. It’s totally for leisure. The lane in Mesa y Lopez is absurd. It’s absurd because in good weather cafes use the terraces and put chairs in the middle of the lane. Then the bus stop is on top of it so it’s like, I can’t ride on this, it’s not a bicycle lane! It’s anything but a bicycle lane. It’s there because it looks nice, because it’s green, the colors and the lines, but it’s absurd. (Belén)

As such, these bicycle lanes are typically unusable—they often end without any warning, are confusing, and lack explanatory signs (see Figures 1 and 2). It is not surprising, therefore, that bikes and cars often clash dangerously and cyclists feel vulnerable—their space is constantly invaded (see Figures 3 and 4). A second problem is the lack of parking opportunities:

Well, there aren’t many bike racks anyway. There are some, but I just lock my bike discretely to road signs, or to street lamps. . . . I noticed a couple of years ago that there are quite a few racks down by the beach, but when I need my bike in the city center, these are not helpful. (Rosalva)

The illogical provision of an abundance of bicycle parking at the beach juxtaposed against a dearth of such facilities in the city center sends a strong implicit message that cycling is not a “serious” mode of urban transportation but is best confined to the sphere of leisure. This combined lack of material arrangements hinders the practice of urban cycling from being anything other than a leisure and sportive activity practiced only in areas distant from city traffic, such as parks and beach promenades (see Figures 5 and 6). The organization of the material environment, then, as Canniford and Shankar (2013) also note, can seriously constrain the development of a practice.



**Figure 2.** Old Bicycle Lanes



**Figure 3.** Space Invasion

Contemporary cycling regulations also restrict bicycle parking options. The *ordenanza municipal* [the municipality regulation] requires bicycles to be parked at a bike rack within a radius of 50 meters from your current location to be *recogidas* [in order, tidy] (Ayuntamiento de Las Palmas de Gran Canaria 2015). However, locating these bike racks is extremely difficult, as they are scarce and do not feature in city maps. A second regulation relates to the transport of bikes on buses. Access to buses by bikes is granted only under conditions that are difficult to fulfil. Because Las Palmas does not have any metro or trains, buses are the only available mode of public transport, and thus these restrictions further reduce the likelihood of bike usage.

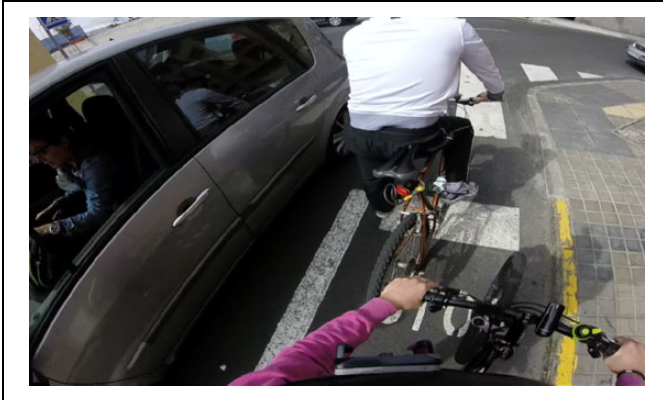


Figure 4. Encounter Between Bicycles and a Car



Figure 5. Segregated Cycling in the City

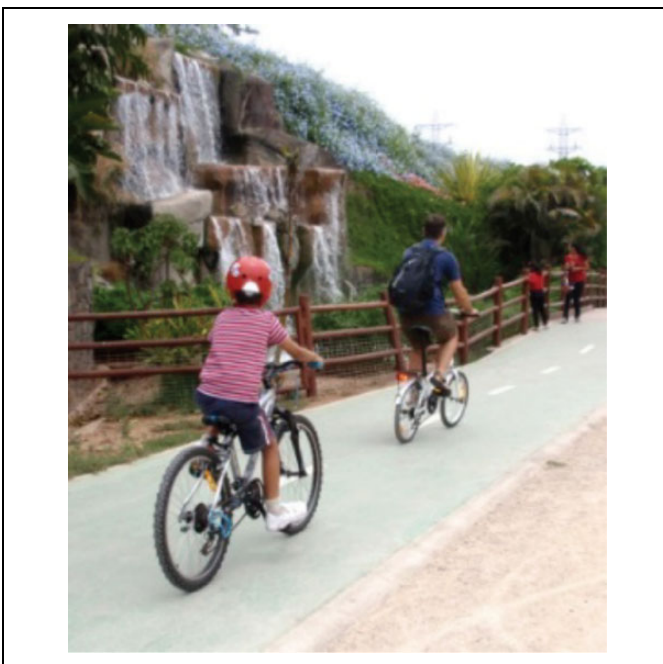


Figure 6. Children Bicycling in the Park

Even seemingly laudable policy incentives to promote urban cycling, such as the public bicycle service “ByBike” are mired in material difficulties, as Nestor, a keen cyclist and entrepreneur, writes:

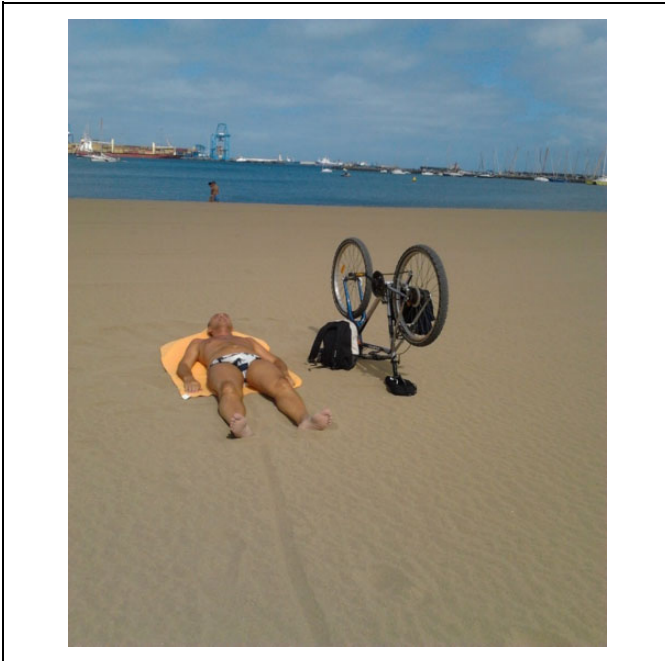
Undecided about buying my third (!) bike, I see that . . . “ByBike” starts on the 23rd of March. It’s 9:35 A.M. on March 23rd and there is not one bike to be found in the station *gabinete*. I phone ByBike to see what is happening, and they tell me that the heavy rain has caused water damage, and since the station is not controlled remotely, it is inactive and they have not yet installed the bikes. However, they also say the handyman is on his way. They apologize, I am annoyed and give up leaving it for the next day. (Nestor)

However, the next day was just as frustrating for Nestor, because he tried to pick up a bike from another station, but his access card did not work. In his desperate attempt to cycle, he even walked to a third station:

When I finally arrive, I feel hopeful and excited and—oh wow—the column recognizes my card. With a pull, I take the bicycle out. My card works! I get on the saddle and (*pause*) the bike doesn’t move. When I examine the bike, I find that its chain is loose. I try to repair it myself, but the promotional covers on the wheels prohibit any access to the chain ring and I don’t have the appropriate tools with me to dismantle the bike. After putting the bike back into its rack, I try to take out a new one. But this time my card is not recognized by any other column. At this point, I say, “to hell with it” and take the bus because I am already late for work. (Nestor)

Besides the material shortcomings that Nestor reports, his hellish experience delivers two important insights. First, cycling is a means to an end. Nestor cycles to go to work. The practice of work dominates his ways of moving and thus makes time an important resource for which cycling competes. Our interpretation shows what Schatzki (2012) calls “higher-level” practices. Because work dominates Nestor’s ways of moving (i.e., he must be on time at a certain destination), the scarcity of time as resource reduces the viability of practices that cannot accommodate such a sense of urgency. Second, if cycling cannot deliver a prompt journey and/or arrival, what are the consequences for its meaning? Leisure and free time probably require less time pressure, and if Nestor did not have to go to work and instead had the time and tools to repair the bike, he might have been pedaling happily after all. Alas, such restricted conditions for cycling tether its meaning to the leisure context. In turn, these conditions prevent cycling from becoming what it should be: a mobility practice. While Shove, Pantzar, and Watson (2012) have shown how meanings evolve over time through a new connection between material and competence elements, our account shows that such connections are highly conflicted and can be impossible with resources that are lacking or rudimentary. Thus, we do not cohere with these scholars’ argument that elements are merely “out there.” On the contrary, our data show that material resources struggle to exist because of either competing practices or their simple lack or unhelpful distribution. Nestor’s account illustrates further how the





**Figure 7.** Parking Habits

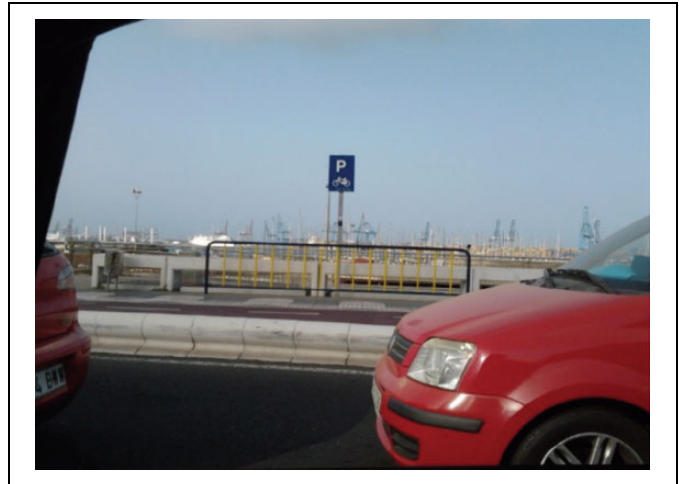
combination of both, the hierarchy of practices and the deficiencies of the material element embody the limitations of a consumer's agency. Despite his keen determination to ride a bike, his skills and attempts, he is unable to follow through.

### *Competing Practices and Their Impact: The Struggle for Resources and Subpractices*

One of the most striking things the first author noted on entering the field was the common occurrence of bicycle theft in Las Palmas. It seems that bicycle theft not only is a common occurrence but also has a significantly negative impact both on the subpractices of urban cycling (e.g., parking, storing, and buying bicycles) and on the supply of bicycles in the city (i.e., the bicycle market). Both cyclists and retailers complained in interviews about theft and the damage inflicted to locked bikes by opportunistic thieves. As a direct consequence, bike riders are therefore forced to purchase and use poor-quality bicycles for urban transportation. Naira, a student and experienced cyclist, tells us,

I have a rubbish bike and I wouldn't even consider buying a better one; I can leave it outside my house. . . . I've already had a bike stolen here in Las Palmas. So I got this rubbish bike and I thought, "Why would I improve it?" If it's old, they won't steal it, right? (Naira)

Stealing exacerbates the already difficult situation of parking bikes and explains why the few bicycle racks in the city are barely used (see Figures 7 and 8). While Magaudda (2011) and Arsel and Bean (2013) have shown how the materiality and meanings of a practice can synergistically contribute to the advent of a new practice, we note the opposite effect. Here,



**Figure 8.** Empty Bicycle Rack

we see a competing practice (stealing) hindering the advent of another practice (cycling) by limiting its possibilities to build a nexus (Schatzki 2012) of actions. By taking an important material resource (the bike) away, parking as one necessary action for cycling is not available as "base" (Schatzki 2012, p. 16). If, as Schatzki has explained, subpractices must, together, constitute "higher-level" practices (Schatzki 2012, p. 16), urban cycling is not able to do so because parking, as a necessary subpractice, is restricted. Because stealing is such a common practice, cyclists do not tend to invest money in an item that might be stolen very quickly. Bicycle retailers suffer in this situation, and interviews with bicycle shops' sales managers, owners, and employees revealed that they couldn't survive from sales generated exclusively from urban cycling.

Although theft is clearly an issue on the island, politicians routinely denied the existence of the problem. In an interview, one official from the Council for Traffic and Transport observed, "Our statistics don't contain many reports of theft; there isn't much bicycle theft here." However, both observations and participants' accounts told a very different story. Participant interviews and observations on social media clearly demonstrate mistrust in police willingness to address the problem of theft. This in turn leads to a lack of reporting of the crime and to a lack of political awareness of the situation. Nestor wrote about his stolen bike on Facebook:

Yes Diego, it's the second [stolen bike]. This time I didn't bother reporting it. I did it the last time and it was just a waste of time, just giving the police officer the opportunity to remind you once again how stupid you are. I'll pass this time—that's for certain. © (Nestor)

His quote demonstrates that cyclists would rather suffer silently than report the incident and therefore accept that bicycle theft is treated as a "low police priority" (Sidebottom, Thorpe, and Johnson 2009). Notice the different levels of impact. Whereas stealing affects urban cycling directly, policing operates in a much subtler way—by omission. Returning to Schatzki's (2012) action hierarchies, policing surely is an important

practice in the bundle of urban moving; however, it is less supportive of cycling than expected, especially considering the town hall's sustainability objective (Ayuntamiento de Las Palmas de Gran Canaria 2011). If policing, as an important "connective tissue" (Shove, Pantzar, and Watson 2012, p. 2), lacks a supportive relationship with urban cycling, this might be one reason for the practice's failure to thrive.

## Competence

Urban cycling, in contrast to leisure and sport cycling, requires certain competences, skills, and knowledge about how to behave in traffic. A certain practical understanding is necessary to ride a bicycle alongside other vehicles. According to Schatzki (2002, p. 79), practical understanding is defined as "certain abilities that pertain to the actions composing a practice . . . execut[ing] the actions that practical intelligibility singles out." By adopting this view of practical understanding, this section elaborates on the lack of practical intelligibility among urban cyclists. We find that, as a result of the lack of traffic education and entrenched mobility norms, teleoaffective structures are restrained from emerging and the requisite organization of materiality is too unstable to allow cycling to flourish.

### Lack of Practical Intelligibility and Traffic Education

Discussion with cyclists revealed that, in general, they had not received any cycling education regarding traffic regulations or handling their bikes in traffic. Physical pedaling, in contrast, was something the majority of bike riders learned from their parents, but only in areas without traffic. The Council for Traffic and Transport confirmed that the city does not mandate traffic education for cyclists. The traffic education offered to schools by the town hall and subcontractors is a voluntary workshop that takes place on the weekends, if at all. Given the nonmandatory nature of this workshop, schools often do not take up this opportunity, as Esperanza, a teacher in primary school and newbie to cycling, explains:

These are voluntary workshops and we can go and participate if we want to. It isn't a workshop over a series of days; it's just one day. The problem with it being voluntary is that the schooling agenda is already packed, so we [teachers] don't have the time slots to integrate it. (Esperanza)

Her account illustrates the difficulties of finding time to educate children on urban cycling road safety. Again, time, as an important competitive resource, emerges (Watson 2013) and illustrates how professional expectations are set (Shove 2003). If time is a resource that cycling, as a voluntary school subject, competes for and loses to another subject, then the link to school as a potential cycling ally cannot be established. If the previous section illustrated how urban cycling lacks a spatial position, here we illustrate that it also lacks a temporal position and demonstrates Schatzki's (2002) notion of the temporal-spatial spheres in which practices unfold. Bike riders confirm

that cycling education was absent until some of them took the exams for their driver's license. The majority of them do not feel the need to update their knowledge of cycling, which is often described as simple "common sense." Others admit to not possessing an adequate understanding of cycling regulations. They follow cars, merely improvise, or, worse, imitate the car. Aday, a bicycle retailer and assertive cyclist, reveals,

Even if you are walking as a pedestrian on the street, if you see a [crosswalk], you know where you have to cross. Even if nobody has shown you or told you or you haven't gone to any school . . . if you see the traffic lights are red, I think it is . . . logical . . . to stop. It is imitation. You ride, you arrive at the stop, you watch out—is there a car coming? No? Well, you go on. You have to obey the same rules that any other vehicle obeys to. Because you are a vehicle. (Aday)

From this account, we might ask—is pure common sense enough to know how to behave in traffic? Ideally, if everybody obeyed the traffic rules, which could then be followed through imitation, it might. Observations, however, show that right and wrong are blurred on the street. Indeed, what is done in the streets is an embodied performance, which hybridizes written rules. Julio, for example, explained that "a stop sign automatically downgrades to a give way sign." This anarchy regarding traffic norms, in which everybody "*hace lo que le de la gana*" [does what one wants], blinds cyclists who are not aware of what "should" be done and therefore unaware of infractions. Schatzki (1996, p. 106) advises that for a participant to acquire competence, she needs to be exposed to the practice. He states, "It is only because it is 'out there' in something to which she becomes party that it is also 'in her.'" Agostin, an accountant and cycling activist, in contrast, does not have "it" (i.e., the correct norms) within him. Indeed, despite riding his bicycle for years, he admitted in one interview that before joining the activist group, he assumed that his space to cycle was on the footpath and was shocked to learn that he had been committing infractions for a long time without being corrected by any authority. Similarly, Echedey, a dedicated nurse and cyclist, accounts for his riding:

Well actually, I don't know which rules apply for cycling, I mean, I know the general traffic norms, yes. When I am next to a car, I follow them like a car. Now really, there are times when I need to go around something and then I take advantage of the pedestrian ROW [right of way] and I ride on. But this is not following the rules. And when I ride and see a pedestrian crossing, I stop. (Echedey)

Very few participants admit to investing time and effort in updating their knowledge of urban cycling regulations. Doramas, student and cycling activist, is an exemplar of this mode of autodidact learning:

I went online and searched for traffic regulations. . . . I assumed that the regulations I had to know and follow were the same as those for cars. . . . So, I assume when cycling on the roads that I just follow



**Figure 9.** Parent and Child Crossing at a Red Light

suit with car drivers. So, if there is a stop sign, I'll brake; if there is a red traffic light, I'll stop; when I turn, I need to signal. (Doramas)

Local norms, however, are not easily accessible, and there is no official, publicly available documentation. The absence of written documentation confirms the overall laissez-faire attitude of the municipality toward cycling and the permissive attitude of the police toward cycling infringements. During the first author's cycling trips, she frequently observed occasions in which cyclists ignored stop signs and red traffic lights in front of the police without facing any consequences. Adults with children crossing at red lights (see Figure 9), cars speeding, and pedestrians crossing, putting themselves at risk, are just some examples of people demonstrating the lack of norms. The very few cyclists observed trying to move in the urban setting did not adhere to traffic rules such as stopping at stop signs or red traffic lights or even staying on the road. The first author observed cyclists switching from lane to footpath and vice versa and, on some occasions, cycling in the wrong direction.

This section has revealed that there is a lack of educational channels transmitting competences necessary for urban cycling. Our data show that urban cyclists are unaware of their own norms and therefore do not know how to behave in traffic. Urban cycling is trapped in its unimportant and unrecognized position because the prevalent way of learning about traffic behavior is by getting one's driver's license, which maintains the official and authorized rules of driving. Therefore, urban cycling struggles to build and own a position in traffic, especially because urban cyclists imitate cars instead of learning their own right of way and borrow regulations and norms from existing practices (e.g., driving, walking). Urban cycling in Las Palmas lacks the historical use that could carry and teach practical understanding. Bulkeley, Broto, and Maassen et al. (2014) have argued for an alignment of three levels for a change in sociotechnical systems and a sustainable transition. We show that urban cycling is far from being aligned at the element

level. If Shove, Pantzar, and Watson (2012) have shown that elements are existent and available, we show that elements are not always "out there" (Shove, Pantzar, and Watson 2012, p. 123), waiting to be linked together. Instead, our research emphasizes the protean and uncertain nature of practice development. The domination of one practice—in this instance, driving—can easily suppress the development of a competing practice.

## Meaning

In this section, we begin by examining meaning as another important element of practices. Schatzki (2002, p. 80) argues that "teleoaffective structures are hierarchically ordered ends, projects, tasks, . . . emotions and even moods" and are necessary aspects for a practice to become meaningful. As a transcendental and symbolic aspect of practices, meaning shines through material and competences and is thus an omnipresent feature. The meaning of urban cycling is a contested subject of political debate: What did urban cycling mean in the past? What does it mean in the present? What is it for and how should it be done? The following subsections show how the development of meaning is wedged between past and present.

### *Between Past and Present: No Longer a Toy but Not Yet a Vehicle*

Cyclists confirm what has been illustrated through the analysis of material arrangements and competences: that learning how to ride a bike was "never meant to be anything else than relaxing on a Sunday afternoon," as Emma, a brand manager and experienced cyclist, remembers:

[The bike was seen as] a toy for children. Every child wants a bicycle, but you wouldn't allow them to cycle in the city, not a chance. My father drove or traveled by bus. He never cycled in the city. Of my family, I am the only one who cycles in the city. (Emma)

It is unsurprising, therefore, that the street was widely perceived as belonging to cars, whereas urban cycling was viewed as legitimate only at monthly events called *domingo en bici* [Sunday on bikes], organized by the town hall. At these events, a street within a particular district is closed off from traffic and people can cycle up and down the street behind barriers (i.e., separated from traffic). The extraordinary nature of these events, aimed at introducing cycling as a practice of urban moving, potentially create the opposite effect because they are experienced as a carnivalesque subversion of rules and conventions. The overall effect of this temporary subversion indeed reinforces the very pervasive nature of car driving as the normative mode of urban moving, as Carlos, a physiotherapist and urban cyclist, explains:

What's the point in doing this, really? I am very annoyed by this *gilipollez* [nuisance]. Really, they just bother cars big time by cutting off access, and the celebration is over after a couple of

hours. We had fun for a while and then what? We go back to being screamed at—that’s the reality of everyday pedaling. Not really helpful in establishing cycling as equal, is it? (Carlos)

The street, as participants reported, belonged to cars, because driving is the dominant mode of transport in the city. Jaime, an occasional urban cyclist, and Paulo, a not-yet urban cyclist, explain:

The islander culture is dominated by driving, even if it’s from here to the next corner. . . . Here, we use the car for everything. (Jaime)

Like all Spaniards, and especially the Canarians, I have been, since I’ve been little . . . driven—and . . . drive—by car for everything. (Paulo)

However, driving is perceived not only as the normative mode of moving but also as a way of acquiring social status. Fabio, a retired third ager and cycling beginner, remembers:

When the local kids turn 18, they immediately think of buying a car. . . . We have passed this car culture on to our children. . . . When I was 18, I took my driving test; this was the big dream we had when we were little. (Fabio)

Possessing a driving license and being able to drive a car is part of a rite of passage (Turner 1964) marking the end of childhood and the start of adult life. People who fail to traverse this passage are not considered “proper” adults. Alejandro, a committed car driver, commented on one occasion that the bicycle is not for *gente normal* [normal people] but for the *matadillos* [dropouts]. Matadillos are indeed people who have failed to acquire social status and embark on a successful adult life, marking them as outsiders. Urban cycling was indeed rare to see and was associated with tourists, as Gazmira, a regular urban cyclist, observes:

Five or six years ago, there was not one [cyclist] on the street, not one. . . . The people that rode bikes on the streets at that time were foreigners, but I tell you, this was an exception. (Gazmira)

However, according to Roberto, a lawyer, cycling activist, and committed urban cyclist, things in Las Palmas seem to be changing, albeit slowly:

Little, really, I mean urban cycling, you see more bicycle users recently because ten years ago you went out with the bike on the street and could count cyclists on one hand. Very few. Now it augmented a little. Today it can be that if I stop at a traffic light, that we are three. And that is like a huge deal. . . . But come on, I see little change. You know, regarding the car usage in the city, it doesn’t compare. (Roberto)

Whereas the previous quotes illustrate the absence of cycling in the city’s past, Roberto’s quote highlights information about the present. This aspect of time deserves further consideration. Our quotes map out a perpetuation of car driving from the past into the present. While it is widely accepted that most practices



Figure 10. Screenshot from Campaigning Video “Nueva Canarias”

perpetuate the past (Schatzki 2013), which is in line with Warde’s (2014) interpretation of practices following Bourdieu’s concept of *habitus*, the interviewees’ quotes also tell a story about the absence of urban cycling in the city’s past, a phenomenon that practitioners have generally characterized as strange and—if anything—recent. If, as Schatzki (2011, p. 6) postulates, “the past does not determine the present . . . each present activity . . . is a new start,” then even the most rudimentary and marginalized activities related to urban cycling could constitute a change in the city. We extend Schatzki’s quote and argue that even if there is no history of a practice (urban cycling), the history of other practices (e.g., car driving, race cycling, leisure cycling) determine the current state of urban cycling and restrict change. In other words, urban cycling struggles to write its own history because other historically anchored and well-established practices occupy resources that entail meaning. For example, consider the material resources that tether cycling to leisure and sport, or the lack of territory and unhelpful bike lanes as a result of indecisive policing and driving.

Another notable finding from the data revolves around the meanings of urban cycling in political campaigns. Here, some cycling narratives hinged on the benefits of sustainability and increased tourism but never on the use of a bicycle for commuting. The governing party, “Partido Popular,” argued for “*menos humos, mas bicicletas*” [more bicycles, less smog], whereas the rival parties PSOE’ and NC proclaimed “*menos bicis, mas trabajo*” [less bicycles, more work]. This second campaign is probably a critique of the Partido Popular’s focus on cycling (i.e., the party should focus less on cycling and more on economic policies pertaining to employment and the economy). In this second narrative, cycling is undoubtedly equated with a lack of progress, development, and modernity (see Figures 10–12).

Urban cycling then seems to be harnessed within campaigning practices to win votes as opposed to achieving the overall objective of making urban life more sustainable.

All these accounts reveal the importance of understanding the ends, purposes, and emotions (Schatzki’s [1996] teleoaffective structures) of urban practices. For example, the execution of policy programs underlies the teleoaffective chains of



Figure 11. Screenshot from Campaigning Video “PSOE”



Figure 12. Screenshot from Campaigning Video “Partido Popular”

campaigning practices—winning the election by pleasing different communities. Similarly, at the individual level, the teleo-affective structures of urban moving inject and construct identity because they dictate that being a real *isleño* [islander] means preferring cars and excluding bicycles for urban transportation. They illustrate how existing meanings associated with car driving and sportive cycling have formed a constituent part of participants’ teleo-affective structures since childhood. Teleo-affective structures of these practices shape the practical intelligibility of such practices or “what makes sense to people to do” (Schatzki 2002, p. 81). Consequently, existing practices both teach participants how to move in urban surroundings and organize the subsequent consumption of cars and bicycles for different occasions. As Schatzki (2002, p. 81) frames it, “Activity is governed by practical intelligibility, which is itself determined by mental conditions, many of which are formed during the

process of learning and being trained and instructed to carry on the practices involved.” That urban cycling does not possess a common conception of its own is most obvious when considering practitioners’ knowledge acquisition. We have highlighted how the “meaning” of urban cycling is far from established. Our data have shown how meaning is trapped within materialized chains between two dominant views about what cycling symbolized in the past and an imposed view about what cycling should symbolize in the future, which causes struggles in the present.

## Discussion

Our discussion is organized around the two key questions posed at the start of this article: (1) Why might sustainable practices (such as urban cycling) fail to thrive? and (2) What are the implications of a practice-based approach for the design of policy surrounding sustainable consumption?

### Why Might Sustainable Practices (Such as Urban Cycling) Fail to Thrive?

First, in line with other practice studies (Woermann and Rokkas 2015), our findings show that the relationships between elements *within* a practice are vital to the way that practice proceeds. Shove, Pantzar, and Watson (2012) find that, in the case of car driving, elements in a practice mutually influence and reinforce each other (see also Magaudda 2011). Similarly, we found that, in the case of an emerging practice, elements can equally hinder and restrict each other. That is, an internal conflict of one element creates conflicts between other elements. If one element is hindered, the other elements cannot be established because the necessary relationship cannot be formed. For example, we have demonstrated a reciprocal relationship between a lack of material features and a lack of meaning for urban cycling. Numerous bicycle parking facilities are located at leisure sites, whereas facilities in the city center are nonexistent. As scholars in industrial design highlight, the way objects (and, in our case, infrastructure) are planned is often done with a simplistic perspective of product–user interaction, without considering the practice(s) and bundle(s) of practices in which such objects will be included (Kuijer, De Jong, and Van Eijk 2013). This is clearly the case of the infrastructure planned in Las Palmas. The product–user interaction shows that urban cycling is restrained in its evolution by the material element of bicycle parking. Although we are not centrally concerned with the way consumers organize their own experiences (and, thus, their agency), our article does shed light on the central role of the material (and its alignment with other elements; see also Woermann and Rokka (2015) in dictating the way in which meaning and experience might unfold. This empirically supports Schatzki’s (2001, p. 82) argument that “teleological chains [are] tied to specific . . . practices,” because practices’ ends, purposes, and emotions are only grasped through performing them. This is in contrast to the dominant belief that symbolic meanings are tied to and constructed by the consumer, as

phenomenological accounts in mainstream consumer research have suggested (Askegaard and Linnet 2011).

Second, our study looks beyond elements or ‘assemblages’ (Canniford and Shankar 2013, p. 1051) by allowing the appearance of more than one practice. We reveal the relations between practices and provide an in-depth account of how such relationships condition the alignment of elements. As the hierarchies of practices have elucidated the possibilities—and limitations—of consumption, we extend studies such as Canniford and Shankar (2013), which demonstrate how surfers’ experiences of nature are constituted by assemblages and alignments of discourses, technologies, and material geographies. In illustrating a competitive and hostile relationship between a plethora of practices, our findings portray a more complex understanding of how elements and their alignments (Bulkeley, Broto, and Maassen 2014) are not isolated but influenced by these practice relations and conflicts. In contrast to Shove, Pantzar, and Watson (2012), for example, we show that the development of a practice is far from peaceful; rather, it involves important negotiations among related practices within a bundle. Our data show how elements of urban cycling are colonized and regulated by competing practices and are thus severely hindered from establishing links to one another (e.g., material by theft and driving, meaning by driving and governing). Our study therefore empirically illustrates “under which . . . conditions all these elements cohere, what tensions they harbor, what sort of practice . . . results from their combination” (Nicolini and Monteiro 2017, p. 118) and argues that it is the dynamics within a practice bundle that reveal why some practices thrive and others do not. However, our data also reveal what is not in a practice bundle or is struggling to be embedded in a bundle. Consider, for instance, that urban cycling needs schooling and policing as allies for its element competence, but their absence and omission of a nourishing relationship keeps competence in a weak and undeveloped stage. Acknowledging that consumption cannot happen if the practice under study cannot thrive due to lack of resources through competing practices generates a more nuanced understanding of why people do not consume sustainably, even when they want to. We therefore advance a theoretical understanding of the attitude–behavior gap (Black 2010) by analyzing a bundle rather than a single practice. Although such a conflict-focused view of practice dynamics seems most fruitful to understand why sustainable practices are not successful, the politics of practices and the power relations between them has been largely absent from the discussion to date.

### *What Are the Implications of a Practice-Based Approach for the Design of Policy Surrounding Sustainable Consumption?*

Wilhite et al. (2000) argue that if social scientists want to have an impact on policy making, which is dominated by scholars from technical disciplines, they need to show that people do not

simply consume “energy” but, rather, consume energy services. Services provided by freezers, washing machines, ovens, and indeed cars fulfill cultural expectations of how people’s daily lives should be conducted:

Devices convert energy into services; people are interested in services, not energy. So what is needed is a social science of energy service consumption, something much broader than a science of energy behavior. (White 2000, p. 115)

As eloquently illustrated by Shove (2003, p. 198) a broader approach consists of “thinking systematically about how expectations are formed as well as about what they are.” In our case, systematically examining urban cycling implies understanding how it is interlinked with other practices, such as working, going to school, using public transport, and generally living and moving around in an urban area. Showing how such practices are hierarchically linked into bundles reveals which practice indeed is dominant and, in turn, how expectations of this practice come to dominate the organization of urban moving. For example, we gleaned from our data that security and comfort have emerged as expectations that neither private nor public cycling services are able to accommodate, and thus, urban cycling became marginalized, while other unsustainable practices, such as car driving, dominate.

Applying this systematic thinking to policy making requires a key shift in policy planning, taking practices and their bundles as the units of analysis. As a result, policy makers would ideally recognize that consumers are “locked” (Newell et al. 2015, p. 537) into unsustainable patterns and that the principal activity of policy is to unlock such patterns, changing practice arrangements. Drawing on our findings, we echo Shove, Pantzar, and Watson’s (2012, p. 2) argument that “policy initiatives to promote more sustainable ways of life could and should be rooted in an understanding of the elements . . . and of the connective tissue that holds them together.” Whereas Shove, Pantzar, and Watson refer to an existent connective tissue, the connective tissue, in our case, is nonexistent. However, revealing a lack of such connective tissue shows conflicts of non-consumption, which policy makers should resolve by making such connection possible. By studying some of these conflicts between practices and their elements, we can attempt an interpretation of the conditions that hinder urban cycling from thriving. For example, the clash between stealing and parking has a range of consequences that affect cycling, which clash with the expectations of security and comfort that dominate urban moving and fuel the unintentional demarketing of bicycles, which eventually negatively affects the cycling market.

These findings point to the possibility that markets are influenced by practice constellations and their relationships rather than by consumers and merchants alone. As Stewart (2015, p. 2) puts it, “there is something more systemic at work” that leads to the failure of the bicycle market in the city. Because clashes between practices have wider impact on market behavior, it is unlikely that they will be resolved by merely “[providing] consumers . . . with more or different information”

(Stewart 2015, p. 2). The absence of bike racks, bike lanes, and access to public places and public transport, as well as the practice of stealing, are outside of consumers' and businesses' purview and require urban planning and policing practices to be aligned with urban cycling. In responding to Stewart's (2015, p. 2) call that "sound policy making requires information about this complexity [because] much policy research begins with rather simplistic assumptions," the present study indeed foregrounds a complex vision as to why people do not use the bicycle for urban transportation—or, in other words, fail to resist car consumption.

Furthermore, our findings reveal a discrepancy between what "ought to be" in policy and "what is." The elephant in the room is this: there are "governance traps" (Newell et al. 2015) in which policy makers are conflicted between viewing sustainability as the ultimate goal to which incentives should be aligned to encourage sustainable ways of life or using sustainability as a marketing claim for the sake of increased votes. Since policy is itself a practice, the ends, aims, and purposes of campaigning practices is to win elections. Thus, policy incentives themselves are used to achieve this end, and an increase in urban cycling is not considered as an ultimate objective.

Consequently, we argue that practice-based research offers an important tool for "policy analysis" (Stewart 2014, p. 2). Rather than just describing policies and the phenomenon under study (problem), practice-based research clusters regulations, social movements, and groups of interest (e.g., activists and lobbyists relevant for policy) (processes); policy incentives (procedures); and outcomes or "standards" (protocols) and critically explores their relationships to each other. In doing so, it reveals hierarchical positions, conflicts, and harmonies between practices that determine not only the marginality or dominance of consumption but also the effectiveness of policy incentives. Thus, with special attention to time, space, and activity, practice-based research embraces the notion that "policies evolve over time and the process by which that evolution occurs is important to understand those policies" (Stewart 2014, p. 2). Indeed, as our empirical account shows, practice-based research provides a richer understanding of policies because it reveals conflicts between policy practices, lobbying, campaigning and urban cycling. Therefore, at "the intersection of public policy and marketing" (Stewart 2014, p. 1) we believe that practice-based research is an important new way of approaching sustainable consumption to "make the full link to policy" (Stewart 2014, p. 2).

While we insist that there is no "quick fix" to deeply embedded unsustainable practice constellations, we offer a couple of "entry" remedies. First, we echo that niche experiments are means through which marginalized sustainable practices and sociotechnical transitions might take place (Bulkeley et al. 2014; Quitzau, Hoffmann, and Elle 2012). Although our example is a story of policy intervention gone wrong, niche experiments potentially offer a platform for negotiation of expectations, transitions of sociotechnical systems, and, thus, we believe, a platform for a realignment of practices. However, experiments might become a place of conflicts between actors

with different interests; local niche planning as illustrated by Quitzau, Hoffmann, and Elle (2012, p. 1050). Their account has shown that "the planning process is positioned as a vehicle of change, in accordance with transformative ideas of spatial planning." As such, policy makers should use niche experiments to make sustainable transitions, shaping existing practices with the support of using technological innovation. Our data show, however, that verbal policy statements are not enough. Political lip service results in indecisive half-hearted interventions and "obdurate materialities" (Phipps and Ozanne 2017) of unsustainable practices. If political will is necessary to defend the feasibility of such experiments, the challenge is to convert competitive and depriving relationships between practices into supportive and nourishing relationships. This requires the opposite of merely accommodating different interests (i.e., "staying the prosustainability course").

Second, existing attempts to disrupt (e.g., *domingo en bici* [Sunday on bikes]) have only served to emphasize car driving as the norm and highlight the "exceptional" nature of bicycles on the streets. We suggest that policy incentives should deliberately target a series of elements in tandem to forge new connections with urban cycling. Bikes and public transport might even be shaped (both materially and discursively) as the most "convenient" way to move to access central points. This might best be paired with stronger restrictions on car access to the city center, more pedestrian zones, and a committed defense of bicycle lanes. An intervention for "meaning" would be to introduce sustainability much more concretely into the discourse of the city to highlight the importance of cycling to the overall improvement of carbon footprints and pollution and to use sustainable endorsement (i.e., bicycle brands) for cultural events and concerts instead of car brands. As an intervention for competence, we suggest that urban cycling needs to be included in schooling practices. It is thus not enough to target urban cycling as single practice; as we have discussed, it is necessary to alter the constellation of the practice bundle by which urban cycling is surrounded.

## Conclusion

Much of the existing debate on anticonsumption is framed in terms of the green attitude–behavior gap, and our practice-based approach offers some insight into what may exist within this gap—that is, the habitual, routinized, and, more importantly, the systemic—nature of everyday life. Consequently, it is through engagement in practices that participants make sense of moving in urban surroundings. This is a significant contribution, one that is corrective to some existing studies of nonparticipation in cycling, which have viewed it as being located within individual identity and steered by personal preference and free choice. If, as our practice approach shows, identity is located rather within existing urban practices, then individual agency and choice are much more constrained than hitherto theorized. This view places importance not on individual identity but on existing habit and routine and characterizes them as being inscribed within practice (in all of its material

complexities). It foregrounds absence as much as presence, asking why certain practices and their elements are not (yet) dominant in our social world. Indeed, this analysis of absence “may be of equal importance to understanding consumer lifestyles and consumer culture overall” (Chatzidakis and Lee 2012, p. 198), because it shows that some sustainable practices do not occur because of practice constellations instead of unclear individual consumer barriers, which current consumer centered ontologies often emphasize. Our focus on bundles of practices and the relations of practices within these bundles enables us to explore the politics of practices. Our contribution here is to emphasize that for a practice to survive and grow, it requires nourishing relationships with supporting practices. This creates a situation of critical mass, in which enough practices come together to support one another and create strong synergies; only then can a practice thrive. Practices that have strong synergistic relations in place are very difficult to contest. With these practice bundles in mind, our discussion offers a useful twist to the hitherto deliberate aspects of anticonsumption by discovering the (im)possibilities of anticonsumption—that is, the impossibility to act on a “reason against” (Lee, Fernandez, and Hyman 2009, p. 145). Discovering such impossibilities might be a useful way forward to understand why, despite the strongest sustainable preferences, people find themselves participating in unsustainable ways of life. However, after having made the case for an understanding of practice arrangements, we believe that individual behavior is no longer the most pressing issue.

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