

SOCIOLOGY

Spatially Polarized Landscapes and a New Approach to Urban Inequality

Zaire Z. Dinzey-Flores

Rutgers University, US
zdinzey@rci.rutgers.edu

Displays of wealth and opulence in the face of dire need and poverty have become commonplace as the rich and the poor increasingly share city spaces around the globe. Research shows that it is the perception of inequality, more than raw measures of inequality, that has important political consequences and that is most concerning for social well-being. In this article, I propose a theoretical move from a general, statistically driven conceptualization of inequality to a spatially informed concept that recognizes how people experience inequality. Relying on findings that show that the perception of inequality is most important for life chances, I suggest that it is key to understand not only where inequality is located but how it is spatially distributed. Using the Mall of San Juan as an example of a spatially polarized landscape in Puerto Rico, and referring to other cases in Latin America, the article shows how the spatial distribution of inequality highlights the perceptual fields of citizens who may celebrate, succumb to, respond to, attune to, and/or challenge the inequalities accordingly. To shift from an accounting of inequality through the concept of segregation to recognizing the experience and perception of inequality through spatial polarization shifts the scholarly and policy frames of inequality research and policy.

Introduction

Inequality engraves itself socially and spatially. Inequality has been on the rise worldwide, and Latin America, as one of the regions with the highest indexes of inequality, has come under the scrutiny of scholars and policy makers. While inequality in the region has coexisted with regional economic crises, many Latin American cities continue to experience urban development, economic growth, and a growing infrastructure. The private sector has also grown, as facilities that cater to the top half of the social class continuum continue to be erected.

Because environments reflect and refract social conditions, inequality is traceable spatially. In Latin America, spaces of luxury and decadence (fortressed mansions, country clubs, exclusive restaurants, luxurious malls) visually contrast with symbols of poverty (shacks, informal housing, informal markets). Unequal cities result in unequal environments, and in cities with high inequality, one can move quickly between visual cues of excess to deprivation. How does the collision of seemingly disparate worlds inform the experience of cities?

This article considers what it means to refocus our examination of inequality to consider not only social segregation but spatial polarization: how the production of luxurious spaces in the face of expanding poverty affects the experiences and life chances of residents, how the masking of poverty cognitively plays with the perception of need in order to cushion the experience of deprivation and poverty. How does focusing on city residents' perceptions of inequality shift empirical research and policy approaches to addressing inequality? In luxurious city spaces and cities with new amenities—renovated city centers, multinational stores, modern architecture, smooth roads, subway systems, stadiums: seemingly public spaces that in theory can be used/accessed by all—the experience of poverty is tolerated and overlooked. However, when confronted up close, transgressing luxurious spaces can also exacerbate the experience of inequality. This happens as these luxurious spaces may become inaccessible due to cost, policing, securitization, the presence of walls, or the intentional masking of low-income communities.

This article proposes that when thinking of inequality, we must center discussions on the *experience* of inequality, as mediated by the spatial productions and representations of an unequal society. Space becomes

a medium for experiencing social class and position in the world. One can be in poverty but because of mobility never really experience a lack of access. In confronting others with more opportunities, or in coming to places that aren't accessible, a person's "lack" may come into vision. Thus, it is not just inequality but the experience of inequality as mediated by spaces that is important to consider in addressing inequality.

The article begins with a theoretical discussion of urban inequality and spatial polarization to consider the importance of perception for understanding the social dimension of inequality. I then consider the Mall of San Juan in Puerto Rico, built next to public housing, as a prototype that underscores the need to focus on spatially polarized landscapes. In these landscapes of mirrored contrasts, I argue, antagonism, quality of life, and life chances are circulated in ways that negate the social contract and continuously penalize the have-nots. I conclude with a discussion of what these spatial polarizations signify for the prospects of equality, from a perceptual perspective.

Urban Inequality and Spatial Polarization

Popular, scholarly, and political concern over inequality is growing. The global market collapse has highlighted, and in many cases exacerbated, the income gap between the rich and the poor. Cities, in particular, are prone to high levels of inequality; today they tend to be home to the very rich and very poor (UN Habitat 2008). High inequality, like urbanization, coexists with extreme poverty, inadequate housing, insufficient public services, defective infrastructure, high unemployment and underemployment, malnutrition, lack of access to health and education, and high crime and insecurity (Cohen 2004). The Latin American and Caribbean region has the highest levels of income inequality in the world (Cohen 2004) and very high levels of urbanization, with anywhere between 50 percent and 75 percent of the population residing in urban areas. And in the United States, the disproportionate accumulation of income and wealth among the top 1 to 10 percent of the population has raised intense political debate and new social movements questioning fairness, democracy, and responsibility. In the Middle East and North Africa, parallel outcries of lack of fairness and injustice evolved into the movements of the Arab Spring.

The meaning of inequality is imprecise. Historically yielding to an epistemologically rigid quantitative measurement, more recent research on inequality is expanding the focus of the study of inequality to include the attitudes and beliefs that people have about inequality (Kluegel and Smith 1981; Lübker 2004; Avetova and Galin, n.d.). Amartya Sen (1973) notes that "normative" perception measures of inequality as opposed to objective measures of inequality carry an "ethical" evaluation of inequality. Measuring inequality, he proposed, requires a comparative frame, an ordering of inequalities against each other (Sen 1973). This new focus has revealed that perceptions of inequality are what matters most (UN Habitat 2008). While perceptions of inequality are informed by people's relative status in the social hierarchy, these studies reveal that it is the perception of inequality that has important political consequences and that is most concerning for well-being (Kluegel and Smith 1981; Alesina, Di Tella, and MacCulloch 2001; Graham and Felton 2006; World Bank 2006; UN Habitat 2008). Relying on qualitative methods, attitudinal surveys, and focus group data, this research assesses what determines differing views of the degree of inequality among different status groups, and has found that perceptions of "unfairness" and lack of opportunity are less acceptable to the urban poor than quantitative raw measures of inequality, with clear negative effects on well-being (Alesina, Di Tella, and MacCulloch 2001; Graham and Felton 2006; World Bank 2006; UN Habitat 2008).

This diversification of the study of inequality reveals new insights on how people experience inequality. One effort, in part criticizing a Western bias in the inequality measure, has resulted in an emphasis not on economic development but on happiness. The country of Bhutan's "Gross National Happiness" (GNH), for example, relies on noneconomic measures like the "promotion of equitable and sustainable socio-economic development; preservation and promotion of cultural values; conservation of the natural environment; and establishment of good governance" (UN Habitat 2008). Other examples are emerging. In a recent *New York Times* article, sociologists like Andrew Cherlin, Christopher Jencks, Sara McLanahan, Tracey Shollenberger, and Bruce Western reported that looking at two-parent families versus one-parent families accounts for some of the gaps in income and resources (DeParle 2012). Beyond safety nets and poverty alleviation, marriage, these sociologists now suggest, can offset some inequality. Interestingly, findings such as these offer insights into the contours of the experience of inequality. While the new generation of studies focuses on perceptions of inequality beyond status differences and ideology (Kluegel and Smith 1981), there is limited exploration on the factors that inform perceptual differences.

One dimension of inequality is how it is distributed spatially. The geography of inequality, the shape in which it is distributed in the city, is important. Inequality thrives in cities, as even countries with low inequality contain cities with highly unequal populations and with extreme poverty, inadequate housing,

insufficient public services, defective infrastructure, high unemployment and underemployment, large informal economies, and high levels of crime and insecurity (Cohen 2004). It is not just the city, but the spatial polarization or segregation of the resources that seems to be important for inequality. A 2010 report notes that:

in urban areas, where demand from the fastest-growing economic activities and the highest-income families is concentrated, land acquires real estate value and this prevents access by or forces out less profitable activities and lower-income families. . . . This urban layout intensifies segregation and inequality. . . . Related phenomena include the reduction in the use of public services by the middle classes, the growing segmentation of non-residential social meeting places, weak links of the lower classes with the labour market and the stigmatization of poor neighborhoods. (Bárcena, Prado, and Hopenhayn 2010, 134–135)

Here, I move to understand how the spatial distribution of inequality—spatial polarization—attunes perceptions of inequality. Displays of wealth and opulence in the face of dire need and poverty have become commonplace as the rich and the poor increasingly share city spaces around the globe. Most sociologists have focused on segregation in order to understand how resources are distributed spatially. More recent research on segregation, however, is beginning to try to understand not only where people reside but how people move about the city and how much contact with others like or unlike them they have (Kriwo et al. 2009). These examinations of segregation always assume that segregation and distance are disadvantageous. So while scholars have observed that segregation exacerbates inequality (Massey and Denton 1993), there is some evidence that segregation has some protective factors, as distance may result in increased social capital of the poor (Small, 2004). Integration and proximity, scholars are now suggesting based on evidence from gentrification as well as policies that have sought to integrate the poor through housing relocation, may emphasize disparities and have negative consequences for well-being (Postmes and Branscombe 2002; Rosenbaum 1995; Ellen and Turner 1997; Katz, Kling, and Liebman 2001; Clampet-Lundquist 2004; Popkin et al. 2004; Kleit 2005; Fauth, Leventhal, and Brooks-Gunn 2008; Lees 2008; DeVerteuil 2011; Gaffikin and Morrissey 2011). This evidence suggests that proximity may, in fact, enhance boundaries and distinctions between groups (Gennep 1960; Bourdieu 1984; Zerubavel 1991).

While it is clear that space informs income inequality, its relationship to perceptions of inequality has yet to be explored. There is, however, evidence that space informs perception. Social scientists have noted that how people perceive their spatial milieu informs their behavior, particularly when it comes to ideas of neighborhood and community (Suttles 1972; Dinzey-Flores 2013b, 2005). Edward C. Tolman's experimental research with rats proposed that people create cognitive maps of their surroundings that are not merely a product of stimulus-response processes (Tolman 2005). Through his work, Kevin Lynch (1960) suggested that these maps are not individual but rather that there is consensus and agreement, making them "public images." Lynch further noted that specific spatial qualities—shape, color, arrangement—inform the "imageability," "visibility," or "legibility" of the environment and shape these public images. Recent research on cognitive mapping has evolved in experimental psychology fields of cognition, foraging, neuroscience, and memory, as well as in fields such as robotics, spatial path finding, mapping, and spatial software modeling, which combine both quantitative and qualitative methodologies in developing concepts of space (Kuipers 2000). Much less explored in spatial cognition research are the social community repercussions of cognitive mapping. Evidence from earlier sociological work, however, points to the importance of exploring this relationship further. Gerald Suttles (1972) suggested that people interpret the neighborhood environment in order to inform their territorial organization and develop notions of community. He proposed that the city has two forms that inform each other and in turn inform social life: first, the physical form, and second, "the cognitive map which residents have for describing, not only what their city is like, but what they think it ought to be like" (1972, 22). And in fact, sociological research has found evidence of a relationship between space and perception, particularly for identity. Richard Grannis's (1998) work empirically shows that there is a correlation between the street patterns of neighborhoods and communities' racial identities. Hence, there is evidence that the shape of inequality, its spatial arrangement, informs its perception. Space is important in form and meaning, and these elements are interdependent factors.

Spatial polarization has often taken the conceptual form of segregation. Sociological studies have demonstrated that segregation is negative for societies and especially detrimental for the most destitute segments of the population. Seminal sociological studies such as Massey and Denton's *American Apartheid* (1993) and Wilson's *The Truly Disadvantaged* (1987) credit segregation (of race and class) for the creation and

maintenance of an “underclass” in the United States. In these cases, the concentrated poor and the socially isolated underclass are cut off from all access to segments of the population who can provide mainstream opportunities like jobs, work, and so forth (Sampson 2012). The logic behind this perspective is that contact of the disadvantaged sectors with the more privileged brings about social and employment opportunities that open the doors to mobility and alleviate poverty. But there is evidence to complicate this seemingly straightforward relationship between segregation/isolation and opportunity. Mario Small (2004) finds that poor residents living in close proximity to an upper-middle-class residential area have little contact with the better-off residents. Furthermore, he finds that stable institutions in the poor neighborhood actually contributed to the isolation of the residents by making it unnecessary for them to go outside of the community to meet critical sustenance needs.

In inequality studies, the focus tends to be not only on raw measures of inequality but also exclusively on how to improve the lot of the most destitute. Few empirical studies give concrete information on how the privileged orchestrate exclusion or inclusion or on the circulation of material and symbolic luxury (Dinze 2012, 2013a, 2013b). I propose empirical scenarios that open theoretical windows to future work that would help further elaborate the theoretical understanding of how the spatial organization of luxury relative to deprivation shapes the experiences of and opportunities in the city.

The Mall-Caserío Scape: An Epistemological Model

On March 26, 2015, the Mall of San Juan, a 650,000-square-foot, \$145-million-dollar mall, billed to be the island’s first luxury shopping center, opened right next to a *caserío*, one of the biggest public housing developments in the island, El Residencial Manuel A. Pérez. The spaces of this site offer us an expanded view into inequality, moving beyond segregation to understand the significance of spatial polarization. Here, I offer a brief story of how this spatially polarized site came into being and show how it can theoretically illuminate the study of inequality in ways that expand our conceptualization and approaches to addressing inequality.

The luxury Mall of San Juan curiously opened amid a spiraling economic crisis and massive insurmountable debt (arguably at \$167.43 billion, according to a leading daily), that foretold an unprecedented economic collapse. Furthermore, the full economic picture of the island is dismal if we look at standard economic indicators: the unemployment rate is 14 percent, the poverty rate is 41 percent, close to 50 percent of the population is on welfare, the GNP has been contracting every year, and indebtedness is over ten times that of the average US individual (Finger 2015).

On opening day, only about one-third of the mall spaces were occupied (Kantrow 2015). Unfazed by the vacancies, with stores Saks Fifth Avenue, Nordstrom, Gucci, Louis Vuitton, and Versace as anchors, a developer expressed confidence about the new market product they were offering: “When you have a fashion-conscious customer that cares about brands, that hasn’t had the opportunity to buy them except when they travel to other destinations or buy over the Internet, we believe getting them here where they can go and shop is a powerful incentive to actually expand disposable income that’s being used and allocated to retail and better quality goods,” he said, explaining the company’s optimism about the Puerto Rican market” (Kantrow 2015).

The attempts at reform have come in taxation legislation (Tax Act 20, Tax Act 22, and Tax Act 273) aimed at attracting wealthy individuals or export businesses to relocate to Puerto Rico.¹ Indeed, without recourse to shelter under the US bankruptcy laws and alternative international programs, Puerto Rico finds itself needing to privatize/sell the island to the highest bidder. This new clientele, new investors, the attraction of the “wealthy” is what the developers of the San Juan Mall were counting on: “Even if there’s some atrophy in the economy, ‘we believe the basic thesis and that elasticity to demand is so high that we think this will be one of our top five shopping centers in our portfolio,’ he ventured, saying The Mall of San Juan will likely top the \$800 per square-foot sales figure of its best retail property” (Kantrow 2015).

Reports intimated a local and international wealthy elite for the mall, located a stone’s throw from the financial district and the international airport. *USA Today*, for example, reported:

¹ “Act 22 exempts individuals 100 percent from payment of any taxes on any passive income, including dividends and any interest received. The other laws allow qualified corporations a 4 percent income tax rate while local corporations are trapped paying rates as high as 30 percent. So while Puerto Rico has had success attracting drug companies and certain high tech industries, the whole thing is held together with bubble gum. Though the economy remains around 45 percent manufacturing based, thousands of these high paying jobs have deserted the island as tax breaks have expired” (Finger 2015).

Think of shopping in the Caribbean and you probably picture duty-free stores or colorful roadside craft stalls. But with Puerto Rico's new Mall of San Juan, shopaholics in search of a Caribbean fix have yet another place to drop some cash. Just a five-minute, \$13 taxi ride from the capital's Luis Muñoz Marín International, the 650,000 square-foot shopping shrine features 100 stores, including the Caribbean's first Nordstrom and Saks Fifth Avenue, and prestige brands such as Jimmy Choo, Versace, Bulgari and Tory Burch. Browse our slideshow for a peek at the mall in the days immediately pre- and post-opening last month. Then get ready to blow that tax refund. (Greaves-Gabbadon 2015)

Notably, the tax incentive is not left out of the advertisement. There are many questions being leveled at the mall's imagined market. Puerto Rico, some have argued, is catering to the wealthy, becoming a paradise that only the privileged can enjoy. A recent Bloomberg News article by Michelle Kaske (2015) suggested that the winners of Puerto Rico's debt crisis are law firms, hedge funds, and distressed-debt buyers; consultants who are studying, proposing alternatives, and managing restructuring options; longtime bondholders; and the monoline bond insurers. The losers are limited to "the people of PR," who face higher consumer tax, cuts in government sector employment, and reduction in public services including public education.

The mall developers clearly espouse this vision. An NBC report stated, "What's perhaps most perplexing about these projects is that they're taking place amid a shaky economy. Retail sales in Puerto Rico have posted either muted gains or losses for much of the past year (the most recent data coming from October), and the economy continues to hobble along in the face of high debt levels and budget deficits" (Gustafson 2015). Meanwhile, the developer:

confirmed the current negative economic cycle that Puerto Rico is experiencing has not been a deterrent for the mall's development. He also said Puerto Rico represents a great opportunity for retail, considering that the island offers 5 square-feet of retail supply per capita, vs. 24 square-feet stateside. . . . 'People see this as a tremendous opportunity, and we believe there's tremendous elasticity to the demand for this kind of retail. We expand the retail opportunity. Rather than dollars going outside the market into the U.S. mainland, Europe or other parts of Latin America, they're now going to stay here,' he said. (Kantrow 2015)

This selling off to private investors and focus on the wealthy is not unique to Puerto Rico. Many Latin American countries have exhibited this trend, which always, even if in disguise, favors capital, where the "growth machine," including elites, investors, and government institutions, develops luxurious spaces that are not accessible to most (Molotch 1976). Scholarship on malls shows how shopping centers, too, serve the needs of capital. Some have argued that they serve as articulating spaces of negotiated and complex "middle-class" identities and consumerist practices (Dávila 2016) and as refuges where escapist dreams are realized (Dávila Santiago 2005). While malls have "left untouched the area's high rates of income inequality," Arlene Dávila notes (2016, 4), there is continued "enthusiasm" for building them.

A full engagement with scholarship on malls is beyond the scope of this article. Instead, here I consider the San Juan Mall in relation to its next-door public housing neighbor as an example of adjacent encroaching landscapes of inequalities. In other words, the focus here is less the mall and the caserío, but rather the mall-caserío, that is, the relational erection of appended landscapes of inequality and the impact they have on everyday understanding and perception of inequality.

The caserío located next to the San Juan Mall is named Manuel A. Pérez. It is one of the largest public housing developments on the island and has undergone the typical criminalizing branding of these communities (Dinzey-Flores 2007). Puerto Rico has a long and established history with public housing. From the very beginnings of New Deal housing efforts in the United States, the island received massive investments for "slum" removal and the construction of housing for low-income communities. Today, Puerto Rico's public housing stock is second only to New York's in size, with over three hundred developments. With a population that is majority low income and has a high proportion of public benefit users, these communities have been labeled popularly, but also through policy, as "poor" and "criminal" (Dinzey-Flores 2013b). That the caserío is next to the mall is not surprising. In the 1950s, Puerto Rican policy makers intentionally placed public housing developments next to well-off communities. The rationale was that the rich would serve as aspirational role models for upwardly mobile experiences. The result can be seen forty-plus years later with the advent of gating policies and practices that segregate communities (Dinzey-Flores 2013b). This unequal

space of contrasts, the mall-caserío, is captured by Google.² Via Google maps, we are offered an “aerial view,” a “street view,” and an “interior view.” The aerial view shows the layout of the mall relative to the public housing development. The massive cement mall structure to the north contrasts with the shrubby geometry of the public housing project to the south with multifamily walk-up buildings arranged in a superblock. These forms—one free-form with curved lines, the other sharp and geometric—evoke divergent lifestyles.

Despite slight fluctuations, levels of income inequality in Puerto Rico have been persistently high, as measured by traditional measures (Weisskoff 1970; Sotomayor 1996; Toro 2008). Spatial segregation studies have also revealed that people in Puerto Rico live in worlds segregated by class and race (Dinzey-Flores 2013b). To study income inequality and the mall-caserío case only as examples of contrasting sites—of privilege and disadvantage—reveals the stitches of the production of inequality, where neoliberal approaches to growth and development unduly reward the elite and economically burden the working poor. To study adjacent contrasting landscapes—mall and caserío, not mall-caserío—within the frameworks of spatial segregation privileges raw, “objective” inequality as the unique site where inequality can be “seen.” It also focuses on well-trodden approaches to inequality—integration and poverty programs. Furthermore, exclusively studying levels of inequality and segregation overlooks the relational aspects of inequality and, more importantly for this article's focus on the consequences of inequality, the interrelated cognitive and social payoffs and penalties of inequality. Thus, focusing on the stitching of inequality fails to highlight important consequences of inequality, which are mediated by experiences and not the mere existence of inequality.

Spatial Polarization: Toward a Reapproximation of Inequality

To focus spatial polarization beyond spatial segregation is to orient future investigation precisely in ways that recognize the impact of perception for life chances. In the spatial polarization framework, the questions become the following: In the face of the economic crises, how does the very physical structure and location of the Mall of San Juan next to a caserío reveal or mask national and individual economic crises and inequality in the everyday? What does it mean for Puerto Rico and other places throughout Latin America and the world to put luxury right next to the face of poverty? What does it mean, for people's experience of place—both for those who are privileged and those that are disadvantaged—to push forward with luxury environments in the face of inequality, national economic crises, and significant socioeconomic hardship? And, considering the importance of inequality perceptions to quality of life, how is the spatial distribution of inequity experienced? What are the effects of this proximity for the perception, experience, and consequences of inequality? What menu of policy approaches is revealed when the questions around inequality shift from segregation to spatial polarization?

Considering a concept of spatial polarization in our scholarly thinking about inequality necessarily expands the field of policy interventions to address inequality. A focus on spatial polarization implies also an epistemological shift for understanding inequality. This shift might be characterized as more intimate or more engaged, not to suggest a more valid approach but one that magnifies the textures of inequality harbored in experience. This intimate view might move the researcher methodologically in terms of scale, source of data, and methods. For example, a study might move from national to local frames, from quantitative to qualitative methods, or from deductive to inductive ethnographic approaches. I rehearse some of these epistemological shifts ahead, as I consider three ways in which moving from an understanding of inequality toward considering spatial polarization would shift our scholarly and policy approaches to inequality.

Social Erasures

From an aerial view, the mall-caserío in Puerto Rico tells us a story of spatial segregation. But zooming in from the aerial view of Google maps to a street view showcases the social erasures it produces: the invisibilizing perceptual effects of this landscape. Google, for example, offers a street view of the mall but none of the caserío. Instead, Google Maps invites us into the mall in a series of user-produced photos that represent modern, luxurious lifestyles.

² Google maps, The Mall of San Juan Blvd, San Juan, 00924, Puerto Rico, <https://www.google.com/maps/place/The+Mall+of+San+Juan/@18.4106722,-66.0275176,688m/data=!3m1!1e3!4m5!3m4!1s0x8c03663f01e94589:0x24869ba821951389!8m2!3d18.412181!4d-66.025471> (accessed January 20, 2017).

The focus on the luxuriousness of a mall with its international luxury clientele that overlooks a symbol of all the criminality and poverty in Puerto Rico is not surprising. Public housing remains, to use Dianne Harris's (2013) phrase, "hidden in plain sight," a view to be overlooked in favor of the luxurious spaces that mask not only economic crises but all the symbols of unsavory social and economic status and conditions. With the placement of the Mall of San Juan next to public housing, the extreme spatial contrasts that capture the steep social inequalities in the island are on display. Ironically, the proximity veils the inequities by offering opportunities for the privileged to seclude themselves through gates, fences, and fortresses and exit the social civic path with their co-citizens (Blakely and Snyder 1999; Caldeira 2001; Low 2003; Dinzey-Flores 2013b). In this way, the mall may offer at once an "escape hatch" from the masses and from reminders of the realities of social and economic crises (Dávila-Santiago 2005), while enforcing inequality (Dinzey-Flores 2013b).

This is some of what happened during the celebration of the opening of the mall, its luxurious spaces lifted from their surroundings, tacitly implying the proper users. As Manuel A. Pérez narratively faded into oblivion, luxurious spaces were archived, highlighted, and celebrated. They are valued as much in the press as in the developers' narratives of the "fashion-conscious customer that cares about brands, that hasn't had the opportunity to buy them except when they travel to other destinations" (Kantrow 2015), the customers they are hoping to satisfy. In contrast, public housing spaces and their residents remain invisible, inapproachable, impenetrable, gated indeed (see Dinzey-Flores 2013b).

The walling off of poor communities has been standard practice for mega-events such as the Olympics, the World Cup, and other international sporting events. Much of the benefit derived from these events is restricted to a capitalist class. Resentments and resistance to these inequalities have also been logged worldwide and in Latin America (Alegi 2008; Conde and Jazeel 2013). As these exhibitions of multiplied wealth and luxury grow, the experience and housing of poor communities becomes even more invisible, erased from memory with walls, gates, stigmatization, dislocation, policing, and media smears. The invisibility and assumed naturalness of the built landscape, Harris (2013) suggests, lends itself to manipulation and exclusion. Inequality and a failing economy thus are masked by beauty and luxury, in the same way that public housing communities are overlooked and glossed over by shiny new structures that fail to reflect their realities at home.

How do public housing residents become invisibilized in this process? What are the consequences of this erasure for their life chances? Furthermore, how do notions of upstanding citizens—neoliberally construed as fashionable consumers—translate to national imaginaries that highlight certain experiences, landscapes, and ways of life? How are privileged "luxury customers" exalted and at the same time provided with social escapes in ways that, through cognitive mechanisms, inflate the benefits to them of social inequality?

Magnified Differences

A second possibility offered by the shapes and contours of spatial polarization is that when groups that are very unequal live in close proximity, the perception of inequality may be emphasized. This magnification may lead to greater social distance and separation, a result of the dialectical relationship between space and cognition captured in ecological approaches to social experience (Suttles 1972; Grannis 1998; Dinzey-Flores 2013b). It is important to note that these perceptual effects are additional and independent effects of inequality, beyond the bare fact of material measurements. This indicates measuring how cognitive understandings of inequality—for example, how well-off I am relative to others—may inform my sense of well-being.

The mall-caserío, I propose, is an example of the ways in which luxury environments can cognitively shape the view of inequality and need. When it opened, many Puerto Ricans with varying socioeconomic resources flooded the mall. They were there not necessarily to buy but to see. The mall itself became a tourist destination for an "average" local resident, as it became a shopping destination to the elite. People plastered their social media pages with pictures at the mall, as displayed in a Google picture in which people pose in front of a veranda for pictures. These environments of luxury are to be seen and displayed, aspired to and envied but only enjoyed by a few.

What are the consequences of these displays across all sectors of society? What kinds of aspirations are formulated and embodied? What are the practices and trends undertaken in pursuit of these aspirations? What are the economic, financial, and social consequences of these practices for a range of social measures, and how do they inform general and "objective" measures of inequality?

Social Antagonisms

Unequal groups that are well integrated may experience increased levels of social antagonism, resentment, low-level crimes, and feelings of exclusion. From a research perspective, this possibility encourages us to expand the range of outcomes that we analyze when considering inequality. When riches, as well as poverty, are on display and visible, hostility and inequality may be readily experienced by both those who are well-off and those who are more disadvantaged. The class confrontation may occur in different ways.

Throughout Latin America, there are numerous ways in which public and private spaces are formally and informally classed and raced (Vargas 2006, 2013; Dinzey-Flores 2013b). Malls in Brazil, for example, have been noted as sites where race and “color” is assigned meaning and blackness, specifically, is read as being criminal and from the favelas (Ribeiro Nascimento 2015). In late 2013, these patterns of racial exclusion were challenged in Brazil, as *rolezinhos* (coordinated walk-ins by peripheral Brazilian youth into luxurious malls) were organized to target “Brazilian apartheid” in dozens of malls in Rio de Janeiro. The coordinated movement of “flashmobs”—“gatherings of predominantly poor, black youths who party in malls usually occupied by mostly wealthy, white consumers”—were meant to “denounce inequality and open opportunities for the poor to come to places like this” (Watts 2014). These protests highlight how disadvantaged black youth feel and experience inaccessible luxury (Caldeira 2014; Viana 2014). As Viana notes on the meaning of the *rolezinhos*:

Another element of the June demonstrations also helps explain the emergence of the phenomenon of *rolezinhos*: the admission that Brazilian society exists on the basis of class division, which is manifested through the discontent, the perception of enormous inequalities and social problems. The class division seen in its phenomenal form is a breakthrough. . . . The *rolezinhos* are young people from underprivileged classes occupying the spaces of the privileged classes. In this sense, it is an expression of class struggles. (Viana 2014, 6; author’s translation)³

Thus, seemingly public but actually private spaces remind those excluded from the city of their own deprivation. They are left to see how wealth is promoted by celebrated government subsidies in the form of corporate tax breaks, while the most destitute are vilified for their use welfare public benefits (Hayden 2006).

How does spatially proximate inequality inform political participation, sense of political efficacy, resistance, and social movements? How does inequality create imaginations of closeness and distance between groups and foster institutional allies, philanthropy, and sense of responsibility?

Conclusion: Toward a Theory of Spatial Polarization and Perceptive Inequality

In the Tower of David in Venezuela, spatial polarization led to the overlaying of luxury on the working poor. In the process, important questions were raised. The Tower of David skyscraper, designed to be the symbol of capitalist success, was abandoned after the sudden death of its main financier and the 1990s’ banking crisis and became a symbol of the castrated banking industry. In 2007, it was occupied by squatters and subsequently derogatorily labeled a “vertical slum,” with all the ensuing negative racial and class connotations (Anderson 2013). The image of inequality represented by an unfinished symbol of capital being occupied by the poor generated great debate in Venezuela. Eventually, the squatters were moved away, some to new housing complexes far from the city. But civilians, scholars, and politicians alike engaged in a debate about to whom the city belongs and the rights and citizenships of the poor to access and live in the city that is made for the wealthy (Gómez 2014).

As I have outlined above, a range of consequences result from centering spatial polarization as an approach that recognizes the relationship between inequality and perception. All outcomes highlight that inequality is detrimental to the social contract not only through its material expressions but also through its symbolic view. I have offered an account of how spatial distribution of urban inequality, and landscapes that join

³ “Um outro elemento das manifestações de junho também ajuda a entender a emergência do fenômeno dos rolezinhos: a confissão que a sociedade brasileira existe sob a base da divisão de classes, o que se manifesta através do descontentamento, da percepção das enormes desigualdades e dos problemas sociais. A divisão de classes vista em sua forma aparente, fenomenal, o que é um avanço do desenvolvimento da consciência que tende a se aprofundar e reforçar com os outros aspectos já aludidos (espontaneidade e ação coletiva). Os rolezinhos são a ocupação de um espaço por parte de jovens das classes desprivilegiadas de espaços que são das classes privilegiadas. Nesse sentido, é expressão das lutas de classes. Mas aqui cessa a semelhança” (Viana 2014, 6).

luxury and disadvantage, come together to shape social dynamics. I suggest that, given how important perception of inequality is to life chances, we have to consider this spatial organization and its consequences.

Increasingly, scholars have looked at the mental and physical health effects of racism and discrimination. They have found that, even with a move to “symbolic” forms of discrimination (Sears 1988), the bodies and minds of racial minorities and low-income people suffer negative effects (Clark et al. 1999; Landrine and Klonoff 1996; Utsey and Payne 2000; Díaz et al. 2001). The effects of discrimination are even more marked when those subjects actually perceive the discrimination (Pascoe and Smart Richman 2009). These findings highlight the importance of thinking about inequality beyond its material measurements and manifestations. They force us to think about how our constructed worlds and the inequalities contained in them are read, felt, and acted on. It also centralizes space, urban planning, and architects as important in mediating the effects of inequality on people. Most important, this article seeks to highlight that inequality affects people in different ways, and to the degree that the urban built environment colludes in this process it should be considered by scholars.

It is perhaps a tall order to think of buffering the effects of inequality in the realm of perception and cognition, but attentiveness to how people are reminded of their disadvantaged place in society through built environmental cues might attenuate the multiplying effects of inequality. Policy scholars have noted the importance of dealing in new approaches to inequality that foreground what economist William Darity Jr. calls the multiple “structures of stratification” that tend to fall out of the realm of traditional economic approaches (Parramore 2016). Recognizing that other structures—race and space, for example—centrally shape inequality in direct and indirect ways calls for new approaches. Legislating perception seems prohibitive, but design technicians (urban planners and architects) deal in both material and functional currencies and symbolic and aesthetic ones.

The mall-caserío signals a firm disregard of inequality, the economic context, and the people living its realities. Splashes of luxury do not buffer the economic difficulties that the island’s publics continue to endure. If anything, the mall may remind those who can’t participate of their failure to be all that capitalism has promised. And yet, the reminders, the symbolic manifestations of inequality in experience, may constitute the very sparks that unsettle urban inequality itself.

Author Information

ZAIRE Z. DINZEY-FLORES is an associate professor of sociology and Latino and Hispanic Caribbean studies at Rutgers University. Her research focuses on understanding how the urban built environment mediates community life and social inequality. Her book *Locked In, Locked Out: Gated Communities in a Puerto Rican City* (University of Pennsylvania Press, 2013), winner of the 2014 Robert E. Park Award for best book in urban and community sociology, investigates race and class inequality as negotiated through community gates in private and public housing. Her new project examines race and class as enacted in the production of urban residential spaces in the Americas.

References

- Alegi, Peter. 2008. “A Nation To Be Reckoned With’: The Politics of World Cup Stadium Construction in Cape Town and Durban, South Africa.” *African Studies* 67(3): 397–422. DOI: <https://doi.org/10.1080/00020180802505038>
- Alesina, Alberto, Rafael Di Tella, and Robert MacCulloch. 2001. *Inequality and Happiness: Are Europeans and Americans Different?* NBER Working Paper No. 8198. Cambridge, MA: National Bureau of Economic Research.
- Anderson, Jon Lee. 2013. “Slumlord: What Has Hugo Chávez Wrought in Venezuela?” *New Yorker*, January 28.
- Avetova, Elena, and Igor Galin. n.d. “Perception of Social Inequality in Central and Eastern European Countries: Evidence from Qualitative Data.” *Eurequal*. http://eurequal.politics.ox.ac.uk/papers/Perception%20of%20SI_qualitative%20evidence.asp (accessed July 13, 2012).
- Bárcena, Alicia, Antonio Prado, and Martín Hopenhayn. 2010. *Time for Equality: Closing Gaps, Opening Trails*. Santiago, Chile: United Nations.
- Blakely, Edward G., and Mary G. Snyder. 1999. *Fortress America: Gated Communities in the United States*. Washington DC: Brookings Institution Press.
- Bourdieu, Pierre. 1984. *Distinction: A Social Critique of the Judgement of Taste*. Translated by Richard Nice. Cambridge, MA: Harvard University Press.
- Caldeira, Theresa P.R. 2001. *City of Walls: Crime, Segregation, and Citizenship in São Paulo*. Berkeley: University of California Press.

- Caldeira, Theresa P. R. 2014. "Qual a novidade dos rolezinhos? Espaço público, desigualdade e mudança em São Paulo." *Novos Estudos-CEBRAP* 98: 13–20. DOI: <https://doi.org/10.1590/S0101-33002014000100002>
- Clampet-Lundquist, Susan. 2004. "HOPE VI Relocation: Moving to New Neighborhoods and Building New Ties." *Housing Policy Debate* 15(2): 415–447. DOI: <https://doi.org/10.1080/10511482.2004.9521507>
- Clark, R., N. B. Anderson, V. R. Clark, and D. R. Williams. 1999. "Racism as a Stressor for African Americans: A Biopsychosocial Model." *American Psychologist* 54(10): 805. DOI: <https://doi.org/10.1037/0003-066X.54.10.805>
- Cohen, Barney. 2004. "Urban Growth in Developing Countries: A Review of Current Trends and a Caution Regarding Existing Forecasts." *World Development* 32(1): 23–51. DOI: <https://doi.org/10.1016/j.worlddev.2003.04.008>
- Conde, Maite, and Tariq Jazeel. 2013. "Kicking Off in Brazil: Manifesting Democracy." *Journal of Latin American Cultural Studies* 22(4): 437–450. DOI: <https://doi.org/10.1080/13569325.2013.840278>
- Dávila, Arlene. 2016. *El Mall: The Spatial and Class Politics of Shopping Malls in Latin America*. Berkeley: University of California Press. DOI: <https://doi.org/10.1525/california/9780520286849.001.0001>
- Dávila Santiago, Rubén. 2005. *El Mall: Del mundo al paraíso*. San Juan: Ediciones Callejón.
- DeParle, Jason. 2012. "Two Classes, Divided by 'I Do.'" *New York Times*, July 14.
- DeVerteuil, Geoffrey. 2011. "Evidence of Gentrification-Induced Displacement among Social Services in London and Los Angeles." *Urban Studies* 48: 1563–1580. DOI: <https://doi.org/10.1177/0042098010379277>
- Díaz, R. M., G. Ayala, E. Bein, J. Henne, and B. V. Marin. 2001. "The Impact of Homophobia, Poverty, and Racism on the Mental Health of Gay and Bisexual Latino Men: Findings from 3 US Cities." *American Journal of Public Health* 91(6): 927. DOI: <https://doi.org/10.2105/AJPH.91.6.927>
- Dinze-Flores, Zaire Zenit. 2005. "Fighting Crime, Constructing Segregation: Crime, Housing Policy, and the Social Brands of Puerto Rican Neighborhoods." PhD dissertation, University of Michigan.
- Dinze-Flores, Zaire Zenit. 2007. "Temporary Housing, Permanent Communities: Public Housing Policy and Design in Puerto Rico." *Journal of Urban History* 33(3): 467–492. DOI: <https://doi.org/10.1177/0096144206297149>
- Dinze-Flores, Zaire Zenit. 2012. "Where Rights Begin and End: Community and Democracy behind Puerto Rico's Gated Communities." *Singapore Journal of Tropical Geography* 33: 198–211. DOI: <https://doi.org/10.1111/j.1467-9493.2012.00458.x>
- Dinze-Flores, Zaire Zenit. 2013a. "Islands of Prestige, Gated Ghettos, and Nonurban Lifestyles in Puerto Rico." *Latin American Perspectives* 40(2): 95–104. DOI: <https://doi.org/10.1177/0094582X12469601>
- Dinze-Flores, Zaire Zenit. 2013b. *Locked In, Locked Out: Gated Communities in a Puerto Rican City*. Philadelphia: University of Pennsylvania Press.
- Ellen, Ingrid G., and Margery A. Turner. 1997. "Does Neighborhood Matter? Assessing Recent Evidence." *Housing Policy Debate* 8(4): 833–866. DOI: <https://doi.org/10.1080/10511482.1997.9521280>
- Fauth, Rebecca C., Tama Leventhal, and Jeanne Brooks-Gunn. 2008. "Seven Years Later: Effects of a Neighborhood Mobility Program on Poor Black and Latino Adults' Well-Being." *Journal of Health and Social Behavior* 49(2): 119–130. DOI: <https://doi.org/10.1177/002214650804900201>
- Finger, Richard. 2015. "Puerto Rico: Paradise Lost." *Huffington Post*, March 2. http://www.huffingtonpost.com/richard-finger/puerto-rico-paradise-lost_b_6769950.html.
- Gaffikin, Frank, and Mike Morrissey. 2011. "Community Cohesion and Social Inclusion: Unraveling a Complex Relationship." *Urban Studies* 48: 1089–1118. DOI: <https://doi.org/10.1177/0042098010374509>
- Gennep, Arnold van. 1960. *The Rites of Passage*. London: Routledge.
- Gómez, Manuel A. 2014. "Tower of David: Social Order in a Vertical Community." *FIU Law Review* 10(1).
- Graham, C., and A. Felton. 2006. "Inequality and Happiness: Insights from Latin America." *Journal of Economic Inequality* 4(1): 1569–1721. DOI: <https://doi.org/10.1007/s10888-005-9009-1>
- Grannis, Richard. 1998. "The Importance of Trivial Streets: Residential Segregation." *American Journal of Sociology* 103(6): 1530–1564. DOI: <https://doi.org/10.1086/231400>
- Greaves-Gabbadon, Sarah. 2015. "In San Juan, the Newest Spot to Shop 'Til You Drop." *USA Today Travel*, April 17. <http://experience.usatoday.com/caribbean/story/best-of-caribbean/2015/04/17/mall-of-san-juan-puerto-rico-caribbean-shopping/25706751/>.
- Gustafson, Krystina. 2015. "Shopping Centers Are Popping Up in This New Hot Spot." *CNBC*, February 5. <http://www.cnn.com/2015/02/05/shopping-centers-are-popping-up-in-this-new-hot-spot.html>.
- Harris, Dianne S. 2013. *Little White Houses: How the Postwar Home Constructed Race in America*. Minneapolis: University of Minnesota Press. DOI: <https://doi.org/10.5749/minnesota/9780816653324.001.0001>

- Hayden, Dolores. 2006. "Building the American Way: Public Subsidy, Private Space." In *The Politics of Public Space*, edited by Neil Smith and Setha Low, 35–48. New York: Routledge.
- Kantrow, Michelle. 2015. "The Mall of San Juan Opens Today with 1/3 of Tenants." *News Is My Business*, March 26. <http://newsismybusiness.com/opens-today-tenants/>.
- Kaske, Michelle. 2015. "Here Are the Winners and Losers of Puerto Rico's Debt Crisis." *Bloomberg Business*, May 19. <http://www.bloomberg.com/news/articles/2015-05-19/here-are-the-winners-and-losers-of-puerto-rico-s-debt-crisis>.
- Katz, Lawrence F., Jeffrey R. Kling, and Jeffrey B. Liebman. 2001. "Moving to Opportunity in Boston: Early Results of a Randomized Mobility Experiment." *Quarterly Journal of Economics* 114(2): 607–654. DOI: <https://doi.org/10.1162/00335530151144113>
- Kleit, Rachel G. 2005. "HOPE VI New Communities: Neighborhood Relationships in Mixed-Income Housing." *Environment and Planning A* 37(8): 1413–1441. DOI: <https://doi.org/10.1068/a3796>
- Kluegel, James R., and Eliot R. Smith. 1981. *Beliefs About Inequality: Americans' Views of What Is and What Ought to Be*. Piscataway: Aldine Transaction.
- Krivo, Lauren J., et al. 2009. "Social Isolation of Disadvantage and Advantage: The Reproduction of Inequality in Urban Space." *Paper presented at the Dynamics of Space-time Use Measurement, Patterns, and Consequences conference*. Ohio State University Columbus, OH.
- Kuipers, Benjamin. 2000. "The Spatial Semantic Hierarchy." *Artificial Intelligence* 119(1–2): 191–233. DOI: [https://doi.org/10.1016/S0004-3702\(00\)00017-5](https://doi.org/10.1016/S0004-3702(00)00017-5)
- Landrine, H., and E. A. Klonoff. 1996. "The Schedule of Racist Events: A Measure of Racial Discrimination and a Study of Its Negative Physical and Mental Health Consequences." *Journal of Black Psychology* 22(2): 144–168. DOI: <https://doi.org/10.1177/00957984960222002>
- Lees, Loretta. 2008. "Gentrification and Social Mixing: Towards an Inclusive Urban Renaissance?" *Urban Studies* 45(12): 2449–2470. DOI: <https://doi.org/10.1177/0042098008097099>
- Low, Setha. 2003. *Behind the Gate: Life, Security, and the Pursuit of Happiness in Fortress America*. New York: Routledge.
- Lübker, Malte. 2004. "Globalization and Perceptions of Social Inequality." *International Labour Review* 143(1–2): 91–128. DOI: <https://doi.org/10.1111/j.1564-913X.2004.tb00547.x>
- Lynch, Kevin. 1960. *The Image of the City*. Cambridge, MA: MIT Press.
- Massey, Douglas S., and Nancy Denton. 1993. *American Apartheid: Segregation and the Making of the Underclass*. Cambridge, MA: Harvard University Press.
- Molotch, H. 1976. "The City as a Growth Machine: Toward a Political Economy of Place." *American Journal of Sociology* 82(2): 309–332. DOI: <https://doi.org/10.1086/226311>
- Parramore, Lynn. 2016. "Here's What Economists Don't Understand about Race." *Institute for New Economic Thinking*, October 18. <https://www.ineteconomics.org/perspectives/blog/heres-what-economists-dont-understand-about-race?p=perspectives%2Fblog%2Fheres-what-economists-dont-understand-about-race>.
- Pascoe, E. A., and L. Smart Richman. 2009. "Perceived Discrimination and Health: A Meta-analytic Review." *Psychological Bulletin* 135(4): 531. DOI: <https://doi.org/10.1037/a0016059>
- Popkin, Susan J., et al. 2004. "The HOPE VI Program: What About the Residents?" *Housing Policy Debate* 15(2): 385–414. DOI: <https://doi.org/10.1080/10511482.2004.9521506>
- Postmes, Tom, and Nyla R. Branscombe. 2002. "Influence of Long-Term Racial Environmental Composition on Subjective Well-Being in African Americans." *Journal of Personality and Social Psychology* 83(3): 735–751. DOI: <https://doi.org/10.1037/0022-3514.83.3.735>
- Ribeiro Nascimento, Marco César, et al. 2015. "Com que cor eu vou pro shopping que você me convidou?" *RAC: Revista de Administração Contemporânea, Edição Especial COR* 19(3): 245–268. DOI: <https://doi.org/10.1590/1982-7849rac20151510>
- Rosenbaum, James E. 1995. "Changing the Geography of Opportunity by Expanding Residential Choice: Lessons from the Gautreaux Program." *Housing Policy Debate* 6(1): 231–269. DOI: <https://doi.org/10.1080/10511482.1995.9521186>
- Sampson, Robert. 2012. *Great American City: Chicago and the Enduring Neighborhood Effect*. Chicago: University of Chicago Press. DOI: <https://doi.org/10.7208/chicago/9780226733883.001.0001>
- Sears, David O. 1988. "Symbolic Racism." In *Eliminating Racism*, edited by Phyllis A. Katz and Dalmas A. Taylor, 53–84. New York: Springer. DOI: https://doi.org/10.1007/978-1-4899-0818-6_4
- Sen, Amartya. 1973. *On Economic Inequality*. New York: Norton. DOI: <https://doi.org/10.1093/0198281935.001.0001>

- Small, Mario Luis. 2004. *Villa Victoria: The Transformation of Social Capital in a Boston Barrio*. Chicago: University of Chicago Press. DOI: <https://doi.org/10.7208/chicago/9780226762937.001.0001>
- Sotomayor, O. J. 1996. "Poverty and Income Inequality in Puerto Rico, 1969–89: Trends and Sources." *Review of Income and Wealth* 42(1): 49–61. DOI: <https://doi.org/10.1111/j.1475-4991.1996.tb00145.x>
- Suttles, Gerald. 1972. *The Social Construction of Communities*. Chicago: University of Chicago Press.
- Tolman, Edward C. 2005. "Cognitive Maps in Rats and Men." In *Image and Environment: Cognitive Mapping and Spatial Behavior*, edited by Roger M. Downs and David Stea, 27–50. New Brunswick, NJ: Transaction.
- Toro, Harold. 2008. "Inequality in Puerto Rico." *ReVista: Harvard Review of Latin America* 7(3): 37–41.
- UN Habitat. 2008. *State of the World's Cities 2008/2009: Harmonious Cities*. London: Earthscan.
- Utsey, Shawn O., and Yasser Payne. 2000. "Psychological Impacts of Racism in a Clinical versus Normal Sample of African American Men." *Journal of African American Men* 5(3): 57–72. DOI: <https://doi.org/10.1007/s12111-000-1004-9>
- Vargas, João da Costa. 2006. "When a Favela Dared to Become a Gated Condominium: The Politics of Race and Urban Space in Rio de Janeiro." *Latin American Perspectives* 33(4): 49–81. DOI: <https://doi.org/10.1177/0094582X06289892>
- Vargas, João da Costa. 2013. "Taking Back the Land: Police Operations and Sport Megaevents in Rio de Janeiro." *Souls* 15(4): 275–303. DOI: <https://doi.org/10.1080/10999949.2013.884445>
- Viana, Nildo. 2014. "O significado dos rolezinhos." *Revista Posição* 1(1): 4–8.
- Watts, Jonathan. 2014. "Brazilian Flashmob Forces Upmarket Shopping Mall to Close." *The Guardian*, January 19. <http://www.theguardian.com/world/2014/jan/20/brazilian-flashmob-shopping-mall-closes-rolezinho>.
- Weisskoff, Richard. 1970. "Income Distribution and Economic Growth in Puerto Rico, Argentina, and Mexico." *Review of Income and Wealth* 16(4): 303–332. DOI: <https://doi.org/10.1111/j.1475-4991.1970.tb00759.x>
- Wilson, William J. 1987. *The Truly Disadvantaged: The Inner City, the Underclass and Public Policy*. Chicago: University of Chicago Press.
- World Bank. 2006. *World Development Report 2006: Equity and Development*. New York: Oxford University Press.
- Zerubavel, Eviatar. 1991. *The Fine Line: Making Distinctions in Everyday Life*. New York: Free Press.

How to cite this article: Dinzey-Flores, Z. Z. Spatially Polarized Landscapes and a New Approach to Urban Inequality. *Latin American Research Review*. 2017; 52(2), pp. 241-252. DOI: <https://doi.org/10.25222/larr.89>

Submitted: 01 March 2016

Accepted: 08 November 2016

Published: 16 August 2017

Copyright: © 2017 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See <http://creativecommons.org/licenses/by/4.0/>.