We said, they said: the politics of conceptual frameworks in disasters and climate change in Colombia and Latin America

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Abstract

Purpose – Few people living in informal settlements in the Global South spontaneously claim that they are "resilient" or "adapting" to disaster risk or climate change. Surely, they often overcome multiple challenges, including natural hazards exacerbated by climate change. Yet their actions are increasingly examined through the framework of resilience, a notion developed in the North, and increasingly adopted in the South. To what extent eliminate' do these initiatives correspond to the concepts that scholars and authorities place under the resilience framework?

Design/methodology/approach – Three longitudinal case studies in Yumbo, Salgar and San Andrés (Colombia) serve to investigate narratives of disaster risks and responses to them. Methods include narrative analysis from policy and project documents, presentations, five workshops, six focus groups and 24 interviews.

Findings – The discourse adopted by most international scholars and local authorities differs greatly from that used by citizens to explain risk and masks the politics involved in disaster reduction and the search for

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social justice. Besides, narratives of social change, aspirations and social status are increasingly masked in disaster risk explanations. Tensions are also concealed, including those regarding the winners and losers of interventions and the responsibilities for disaster risk reduction.

Originality/value – Our findings confirm previous results that have shown that the resilience framework contributes to "depoliticize" the analysis of risk and serves to mask and dilute the responsibility of political and economic elites in disaster risk creation. But they also show that resilience fails to explain the type of socioeconomic change that is required to reduce vulnerabilities in Latin America.

Keywords Narrative, Adaptation, Resilience, Climate change, Informality

Paper type Research paper

Introduction – "Mariana has the right attitude"

Academics interested in reducing the impacts of climate change increasingly conduct research on resilience, capacity building and adaptation. The authors of this article recently followed this international trend, and set up a project to investigate informal mechanisms of "adaptation" to climate change and variability in Colombia, Cuba and Chile. The project received handsome funding, with which we have been able to conduct detailed empirical research in five small cities. But two years into the project, we realized something important: almost nobody we had talked to in our fieldwork had ever used the terms or concepts we had adopted for our investigation. Community leaders in focus groups did not naturally talked about "resilience." Disaster affected people almost never used the terms "adaptive capacity" or "adaptation." When ordinary citizens used the Spanish equivalents of these terms, it was only in strained responses to researchers' questions or comments. We then suspected that when respondents used these terms, they were mirroring our own sentences or trying to understand what we meant by them. When, for instance, one of our interviewees wanted to describe a neighbor she would say, "Mariana has the right attitude to overcome any challenge," or something similar. In our initial research notes, we often interpreted this as a form of resilience. But while we were documenting longer narratives, loose translations soon piled up. The overall message was being distorted. We were, for instance, assuming that certain responses corresponded to "adaptation capacities" simply because we saw them *a priori* that way, and not necessarily because interviewees and project participants implied the attributes that scholars often attach to adaptation. Were project participants adopting researchers' vocabularies in an attempt to communicate their own needs and advance their own interests? Were we being patronizing with locale residents by imposing a new language? Or even worse, were we enacting a new form of intellectual colonialism imposed by the North on the Global South?

We did not expect, of course, residents to use scientific jargon. But we expected that our academic concepts were useful to explain the empirical evidence on the ground. There were three possibilities. First, that the concepts that ordinary Colombians and we (academics) use are fundamentally similar ways of describing the same phenomena. In that case, we could match and translate terms, using scholarship to bridge vernacular and theoretical concepts. Second, that the concepts used by ordinary citizens are of a different resolution – either more specific/grounded or more generalized than the language researchers were using. These two scenarios, however, imply that there is a form of parallelism between vernacular and academic narratives. In the first case, it is a matter of finding equivalents, much like a translator between two languages. In the second case, it is a matter of elaborating local meanings to make them more understandable and useful for a scientific audience. But this is not what we found. This form of parallelism does not exist. We found instead an incommensurability between vernacular and techno-academic narratives. This paper explains why and how.

The first part of the article positions this study within current debates on the politics of conceptual frameworks in disaster studies. This literature review – including criticism of the

resilience framework and its on-going adoption in policy – constitutes the background against which the empirical data is analyzed. The second section explains both the methods that were originally deployed in the study, and those that were adopted to adjust the empirical approach. Here, we introduce the narratives found and compare them with previous studies on disaster politics. We finally summarize the conclusions of the study and highlight the practical and theoretical implications of the gaps identified. We eventually conclude that ways of understanding climate change cannot be separated from those used to examine the struggles for social justice.

Foreign conceptual frameworks

Several authors have claimed that relations of domination are reproduced in the production of knowledge and that forms of colonialism have long influenced scholarship (Altbach, 2004). This scholarship documents how inequalities are normalized in relation to exclusionary visions of modernity, sustainability, development and other taken for granted categories of development studies – see, for instance, Escobar (1995). Such critiques understand the production of knowledge and the elaboration of political economies as fully entangled (Mitchell, 2002). Domination may also play out in academia through the evaluation systems of research, which often ignore or belittle the effective use of knowledge in the South, and favors research results that are inaccurate or arbitrary when applied to problems in poor countries (Lebel and McLean, 2018). In response, some scholars argue for academic decolonization and consider that more South-South educational interchange is required to improve science (Selvaratnam, 1988). Gallard, who has explored colonialism and knowledge dominance in the disasters field, argues that northern academics:

> Should encourage local [southern] researchers who know best local contexts to study local disasters. Their "own" disasters. This is critical in the non-Western world that suffers most but where local voices are most often unheard or filtered through Western epistemologies or even suppressed by state power. (p. 8) (Gallard, 2019).

Critics, however, argue that knowledge does not have owners, and that discriminating the origin of scholars does little service to the current production of much needed knowledge on climate change and disaster risk reduction (Alexander, 2019; Lizarralde, 2019). But even if the origin of scholars is a contentious issue in studies of colonialism, it is largely accepted that international frameworks have had a crucial role in shaping disaster studies in the Global South.

This study focuses on implications of miscommunication in disasters and climate change action. It builds on previous studies based on post-Foucauldian critical discourse analysis – see for example Bertholet *et al.* (2016). Our main focus is not knowledge colonialism *per se*. But we recognize that the politics of conceptual frameworks operate within the broader context of asymmetry in power relationships. The study is therefore influenced by a tradition of scholarship in three areas.

First, studies that have denounced knowledge colonialism in Latin America (Polo and Piñeiro, 2019) and have looked for alternative (non-Northern) narratives to the improvement of living conditions in poor countries (Blanco-Wells and Günther, 2019; Escobar, 1995; Roy, 2005; Visvanathan, 1991).

Second, studies that have examined the narratives deployed to justify disaster response (Bornstein *et al.*, 2013) and to explain (or deny) climate change effects in the Global South – see, for instance, Jooste *et al.* (2018).

Third, ethnographers' notion of "transculturation," and Pratt's idea of "autoethnographic expression." In colonialism studies, the former explains how "subordinated or marginal groups select and invent from materials transmitted to them by a dominant or metropolitan culture" (p. 6) (Pratt, 2007). The latter refers to "instances in which colonized subjects

undertake to represent themselves in ways that *engage with* the colonizer's own terms" (p. 7). In *Imperial Eyes*, Pratt finds that colonized people adopt the languages and ideas of the colonizer, adapting vernacular ideas to fit the ideals of foreigners or rulers. This implies both "partial collaboration with and appropriation of the idioms of the conqueror" in a dialectic manner (p. 7). "While subjugated peoples cannot readily control what emanates from the dominant culture," she writes, "they do determine to varying extents what they absorb into their own, and what they use it for" (p. 6).

Here we use Pratt's notions of dialectic relationships to help us explain the rapid adoption of foreign frameworks to explain climate change responses in Latin America. We recognize that more studies are still required to explore mismatches between techno-academic and vernacular discourses related to risk and climate change in informal settlements the region. We focus on the adoption of narratives of resilience to climate change and disaster risk reduction in Colombia.

From vulnerability to resilience and maladaptation

Scholars know that explanations of risk and disasters have a significant impact on policy and interventions. Since the creation of the Pressure and Release (PAR) model, social scientists have seen disasters as the result of accumulated vulnerabilities that meet a natural hazard (Blaikie *et al.*, 1994). Vulnerability leads to unsafe conditions, but results from historic injustices and root causes such as marginalisation, exploitation, racism, colonialism, neglect and segregation. When natural hazards (even those exacerbated by climate change) meet unsafe conditions, disasters occur (Kelman *et al.*, 2016; Kelman *et al.*, 2017). But it is the idea of resilience, and its metaphoric imagery of "bouncing back" or "bouncing forward," that have most recently captured the imagination of politicians, engineers, architects, planners, designers, and other decision-makers worldwide. Today, it is one of the most important frameworks in disaster risk policy and the fight against climate change.

The resilience framework has sparked much controversy in social sciences (Lizarralde, 2016). Several studies have criticized it on the grounds that it proposes concepts and ideas that are too vague, ill-defined and difficult to grasp in empirical way (Alexander, 2013; Chmutina *et al.*, 2016; Klein *et al.*, 2003; Lizarralde *et al.*, 2015a). Scholars have also found inherent difficulties in aligning the principles of sustainability and resilience (Lizarralde *et al.*, 2015a). Other critics have challenged the very premises of the "bounce-back" principle that underlines resilience, arguing that the return of a system to a pre-disaster condition is sometimes illogical, especially when this state was or is undesirable (Pizzo, 2015). Other authors have pointed to the lack of tools and methods to assess resilience and adaptive capacities (Davoudi, 2012; Klein *et al.*, 2003; Stumpp, 2013; Tobin, 1999). Many have concluded that resilience works as a general principle that often fails to be operationalized "on the ground" (Levine, 2014).

But the most prominent criticism of the resilience-adaptation framework comes from two fronts. The first one argues that resilience is often used as a tool to support the neoliberal tradition of disengagement of the state (Evans and Reid, 2014a; White and O'Hare, 2014). Resilience feeds and benefits from, neoliberal policies, perpetuating oppression and dominance by political and economic elites (Joseph, 2013). In many cases, it perpetuates oppression towards indigenous communities (Evans and Reid, 2014b) and other social groups. It also contributes to various forms of neoliberal change, including those focused on rapid liberalization of markets, integration in international trade, decentralisation (Guarneros-Meza and Geddes, 2010), transfer of responsibilities to markets and individuals, reduction of public institutions, control by corporations (Klein, 2007) and other forms of politically supported savage capitalism (Gledhill, 2004; Perreault and Martin, 2005). "Adaptation, security, risk management and resiliency," writes Michael Watts (2015), "are the contemporary hegemonic forms in which particular forms of life constitute the basis of neoliberal rule and governance" (p. 41).

The second one argues that the resilience-adaptation framework often makes invisible the political dimension of disaster risk creation and climate change response. According to MacKinnon and Derickson (2013) "Convergence of thinking around the notion of resilience is resulting in the evacuation of the political" (p. 266). Similarly, Klepp and Chavez-Rodriguez (2018) conclude that "most of the discussions concerning "adaptation" are effectively framed in an apolitical manner" (p. 3). "The social and economic impacts of climate change focused mitigation projects have not yet been fully assessed," argued Wisner *et al.* (2007) who include Gustavo Wilches-Chaux, one of the most influential Colombian authors in DRR.

There are so many problems with the manipulation of resilience for the advancement of economic agendas, and the entwined "de-politization" of adaptation, that scholars have coined a term for it: maladaptation. Maladaptation, says Juhola *et al.* (2016, p. 139), is the "result of an intentional adaptation policy or measure directly increasing vulnerability for the targeted and/or external actor(s), and/or eroding preconditions for sustainable development by indirectly increasing society's vulnerability." Related terms include adaptation opportunism. Owusu-Daaku (2018, p. 935) describes this form of maladaptation as "a situation in which projects undertaken in the name of climate change adaptation (CCA) are overrun by interests other than the stated or intended objectives of the CCA project." In climate change interventions, cases of maladaptation where social injustices are reproduced and resilience measures hijacked by elites to legitimize development initiatives, have been reported in Asia (Yarina, 2018), and in Colombia, and other places (Anguelovski *et al.*, 2016).

From "natural disasters" to "social change" and "resilience" in Latin America

Before the 1990s, common narratives in Latin America saw disasters merely as natural phenomena, extreme events that had to be controlled with technical solutions or punishments from heaven. But in 1992, a group of Latin American and international scholars joined forces to correct this orientation. They created a network called *La Red* (the network) to promote a political and socio-economic understanding of disasters (Lavell, 2004). *La Red* argued for the need to examine disasters under general principles of social sciences and through the vulnerability lens and the emerging PAR model. Academics such as Wilches–Chaux (1989, 1993, 2005), Wisner (2001), Lavell (1996) and Oliver-Smith (1996) explored the politics of risk and the role of economic and institutional systems in disaster-risk creation in Latin America. Many of these approaches benefitted from a Marxist perspective that viewed socio-economic inequalities as a root cause of vulnerability (Cardona, 2002). Others linked vulnerability to lack of development (Cardona, 1993, 1996). Informal housing and settlements were considered physical manifestations of rooted forms of vulnerability (Lizarralde, 2008; López-Valencia and López-Bernal, 2017). "Disasters," argued Cardona (2002), "must be understood as unsolved problems in development" (p. 15). Similarly, Colombian author Lopez Bernal argued that "socio-natural disasters are deeply linked to poverty [. . .] and are the consequence of unsustainable forms of development" (p. 28) (López-Bernal, 2010).

Several academics have continued this tradition, claiming that issues of social and environmental justice should not be isolated from the understanding of risk in Colombia (Baptiste, 2017) and Latin America (Fernández *et al.*, 2020). But it has been difficult to contain the trend of international scholars and urban consultants focused on the resilience/adaptation frameworks. This became evident in a recent study that examined how different explanations of flood risk were adopted in Tabaso, Mexico. The authors found that before 2000, narratives focused on flood control with technical solutions. Then, in 2003, stakeholders and media focused on how solutions should be outsourced to the private sector and how markets could lead to development. A few years later, narratives focused on urban planning, relocation, adaptation and resilience. Here, there was a push to make local residents capable of living with water risk. Responsibility for flood management was transferred to residents, while the

prevailing narrative helped to legitimize "evictions of informal residents from settlements near the city centre" (p. 22) (Bertholet *et al.*, 2016).

Another example is how explanations of disasters have rapidly evolved in the Andean region. A 2009 report by the Andean Committee for Disaster Prevention and Response on how to communicate risk in the region made no mention of the terms resilience and adaptation (Obregón *et al.*, 2009). The 67-page document instead focused on "prevention" (93 mentions), "rehabilitation" (17 mentions), "reconstruction" (15 mentions), "vulnerability" (13 mentions) and "protection" (6 references). The main objective was to situate disaster response in terms of "social change." But only eight years later, a report on how to create awareness and educate people about climate change impacts in Colombia was built on a different framework (IDEAM *et al.*, 2017). This second report, supported by the United Nations Development Program, used the terms "resilience"/"resilient" 17 times, "capacity" 164 times, and "adaptive"/"adaptation" 291 times. This document attests to a dramatic shift: the purpose now was to create adaptive capacities to deal with risk and climate change without a single mention of "social change."

Methods – from case studies to comparing narratives

This project involved two sets of methods: those that we deployed to answer the original research question and those we used to reveal the narratives found in the empirical work. The former was devised to answer the following questions: How are vulnerable residents in informal settlements in Yumbo, Salgar and San Andrés (Colombia) adapting to climate change effects? How do bottom-up interventions contribute to disaster-risk reduction? We thus conducted three detailed longitudinal cases (Eisenhardt, 1989; Proverbs and Gameson, 2008). For each case, data were collected over a period of three years. Primary data sources included interviews with residents, decision-makers and officers, detailed observations, project visits, on-site drawings and photographic reports. We also analyzed data from secondary sources including policy documents, contractual documents, press clips, vulnerability maps, and project and strategy reports. The three case studies included a series of activities detailed in Table 1.

While applying these methods, we noticed that our research questions required some form of translation to explain them to ordinary citizens. We also realized that we had never heard a resident use the terms or concepts that we used in our questions. The study then took a different direction.

We focused on the analysis of narratives that came directly from the local people (we call them here "vernacular," as opposed to the "techno-academic" narrative). Much like Moezzi *et al.* (2017), we use narratives as data objects to gather, analyze and critique. Paschen and Ison

Table 1. Activities conducted for the three case studies

	Visits	Workshops	Interviews	Focus groups	Projects documented	In depth analysis	Presentations by community leaders
Yumbo	2015, 2016, 2017, 2018	2015, 2016, 2017, 2018	6	4	4	11 h of interview	3
Salgar	2017, 2018, 2019	2018	10	1	5	9 h of interview	2
San Andrés	2016, 2017, 2018	–	8	1	4	7 h of interview	1

(2014, p. 1083) argue that "narrative research offers an innovative, holistic approach to a better understanding of socio-ecological systems and the improved, participatory design of local adaptation policies." We see narrative as the primary communication tool that people use (or are incited to use) to get access to resources or conduct interventions aimed at disaster-risk reduction (Fortmann, 1995; Roe, 1991). We contend that people pick up narratives that are useful to them or the claims that they wish to advance, and leave aside those that are not (Bornstein, 2008). Keeping this in mind, we revised fieldwork notes, re-analyzed transcripts and re-heard or re-visualized recorded meetings and focus groups. We then identified categories used in these narratives, paying particular attention to the ones directly linked to risk.

Data was analyzed following a systemic approach. GIS-based and qualitative synthesis of the factors of vulnerability were developed. We then relied on four levels of triangulation as identified by Love *et al.* (2002): (1) data triangulation or the comparison of sources of information, (2) interdisciplinary triangulation, where we compared perspectives coming from architecture, construction, geography, engineering and urban planning, (3) methodological triangulation, where multiple methods of data collection and analysis were used, and (4) investigator triangulation, by having different researchers independently analysing data on the same phenomenon and later validating the results. Finally, we identified patterns within each case study.

We paid particular attention to the importance that respondents attach to corruption, violence, crime and lack of health care. But we eventually focused the study on four variables that emerged as the most representative of the message that residents were trying to convey: (1) vulnerability; (2) resilience; (3) adaptation; and (4) informality and aspirations. We then identified the narratives used by authorities in policy documents and regulations, and compared them with the ones adopted by scholars.

The methods included working with local leaders in low-income communities and engaging in long discussions with them in order to validate results found in empirical fieldwork. We also conducted participant observation, spending several weeks in direct contact with residents, understanding their daily activities and social interactions. In the last step, we confronted both the techno-academic discourse and the vernacular narratives, highlighting differences between the categories previously identified.

Results – you said, I said

Disaster Risk Reduction plans adopted in Latin America before 2010 almost never used the terms resilience or adaptation. But in recent years, an increasing number of policy documents in Cuba, Colombia and other countries in Latin America have adopted the discourse of adaptation and resilience. Figure 1 shows the progression in the use of the terms "resilience/nt,"

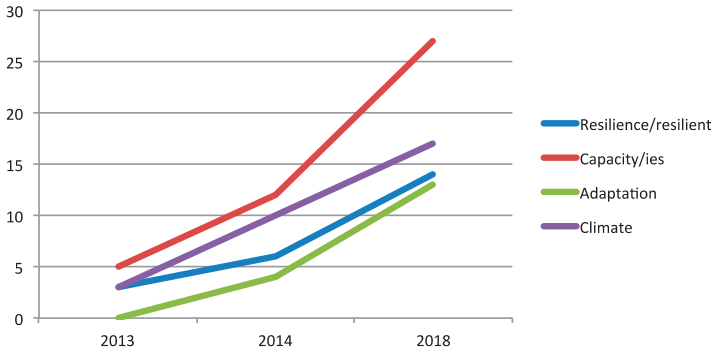

Figure 1.
The progression of the use of terms in the strategic plans drafted in three different years by the Colombian Unit for Disaster Risk Management (number of mentions)

"capacity/ies," "adaptation" and "climate" in the strategic plans of the Colombian Unit for Disaster Risk Management drafted in 2013, 2014 and 2018.

Resilience is now a key objective of the Government's National Plan for Risk and Disaster Management (2015–2025). The document claims that the reduction of vulnerabilities in the face of climate change is based on the development of resilience and adaptation. "Disaster risk management must enhance community resilience through information and participation of all its members," says the plan (p. 38). This trend in public policy has been accompanied by the influence of international urban consultants. Cali and Medellín, are now part of the 100 Resilient Cities of the Rockefeller Foundation. In 2015, UNISDR and the local organisation *Corporiesgos* signed an agreement to transform the Colombian region of "El Valle" into a resilient territory. In 2018, the United Nations Development Program declared Colombia a "resilient territory." Local newspapers in Cali, such as "El País," now publish articles about resilience, in which journalist make extraordinary efforts to explain the term in plain Spanish (El País, 2016).

In this sense, Colombian policy is following a trend that appears in scientific literature in Latin America in general. Figure 2 shows the progression of terms in Google Scholar over the past five decades. The left figure shows the progression of "Disaster resilience in Latin America" and its equivalent in Spanish "Resiliencia a los desastres en Latinoamérica." The right one shows the number of references to "Social Change in Latin America" and "Cambio Social en Latinoamérica." The figures show that whereas contributions on "social change" peaked in the 2000s in both languages, the resilience narrative was gaining importance in academic literature. Keeping these trends in mind, we now explore the results of the empirical work.

First case

Yumbo is an industrial town of roughly 100,000 inhabitants, near the city of Cali. It is a hub of medium-, and high-skilled labor, functioning as a transition zone between remote and marginalized communities on the Pacific coast and Cali. Over the last two decades, it has rapidly urbanized, notably due to the arrival of thousands of Colombians displaced by the 50-year-long war between the government, paramilitary groups and leftist guerrillas. The town has been severely affected by corruption, violence and crime fuelled, in large part, by local drug cartels. Many of these rural to urban migrants are from either indigenous or African-Colombian communities. Newly arrived, they lack ties to the area and other residents. Many of them settle in slums in the outskirts of Yumbo.

Most of its slums are in flood-prone areas. Informal dwellers face extreme heat, frequent floods and landslides, exacerbated by the Niña and Niño phenomena. They also suffer from the effects of pollution caused by more than 2,000 heavy-industry plants, including the highly contaminating production of cement, beer, paper and tires. Average temperatures in Yumbo

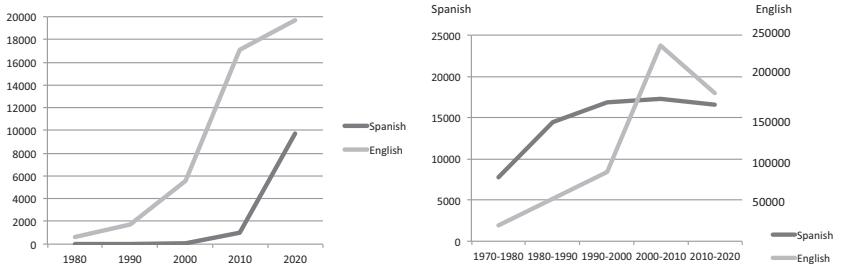

Figure 2.
Progression of terms in Google Scholar. Left: Cumulative number of entries containing the terms "Disaster resilience in Latin America." Right: Entries per period of time concerning "Social Change in Latin America"

are up to 5°C higher than in wealthy neighborhoods in Cali. In 2011, houses and businesses were destroyed by floods and water surges.

Second case

Salgar is a town of 20,000 inhabitants, located in the Andean mountains. It is, surrounded by agriculture lands devoted to coffee production. In 2015, torrential floods, caused by heavy rains, killed about 100 people and destroyed the majority of houses in the municipality. Since then, a comprehensive reconstruction and vulnerability reduction plan has been put in place.

The reconstruction process was largely influenced by political pressure and polarization. Two opposing political leaders (now ex-presidents) and parties led reconstruction initiatives in Salgar. Governance structures were – and still are – highly politicized. Despite this polarization (or maybe because of it) as many as 308 housing units were built in Salgar and a comprehensive economic, psychological and administrative recovery plan was implemented. Many affected residents who previously had rural modes of living were moved to four storey-high buildings in peri-urban residential developments. Rural residents in the region have a strong attachment to the land and traditions. For them, the reconstruction process has come with significant changes in the way of life.

Third case

The Colombian island of San Andrés is located in the Caribbean Sea. It is home to 67,000 permanent inhabitants occupying a territory of 26 square kilometres. Tropical storms and hurricanes affect the region almost every year. Due to its remote location, closer to Nicaragua than the Colombian coast, its relationship with the mainland has been a matter of debate; international courts have recognized Nicaraguan claims of sovereignty over the ocean that surrounds the island.

Islanders have strong traditions and a local language that differ from Colombians living on the mainland. They make clear distinctions between themselves and newcomers (they call themselves *nativos*, or natives, and refer to other Colombians as *continentales* or *pañas*). Economic opportunities on the island are very limited. Water is scarce and so are jobs. It is estimated that 80% of islanders directly or indirectly depend on tourism for their livelihoods. Over the past 30 years, the population of the island has increased 75% and the number of tourists reached one million in 2017. Most islanders transform their houses into hostels and rent rooms to tourists. In 2005, and in response to the demographic pressure, the government built a new water and sewage system in San Andrés.

A disconnect between risk causes

Citizens in the three case studies almost never refer to increases in risk due to atmospheric or meteorological conditions. Most of them, instead, tend to talk about recurrent challenges they face daily. Most residents are concerned with lack of employment opportunities, access to health care and water, and lack of trees. They generally see the quality of their living conditions reduced by violence, crime, transportation, corruption and unemployment. If the subject of environmental risks is brought up, residents do engage in discussions about floods or droughts. Yet, when it comes to discussing possible ways of improving living conditions, or when they sense that funding might be available, they refer to immediate needs such as improving lighting in public spaces (to reduce crime), transportation (to reduce the hassle of using public buses) and landscaping (to avoid dust and pollution).

In Yumbo, residents are concerned with the environment, but associate climate change with "something that happens in and affects other countries." They note increases in wildfires and floods and remember past conditions as better than present ones. For instance, one resident remembered how, when she was younger, there were "woods where [they] used to play and have fun." However, the loss of such areas is attributed to immediate and visible human

activities – such as recent mining activities that "deteriorated these green zones, leaving areas of extraction that have grown with time" – rather than wider dynamics linked to climate change.

Residents associate vulnerability with unmet socio-economic needs in their daily lives (López-Valencia and López-Bernal, 2015). A frequent cause of vulnerability, for instance, is lack of paved roads. According to one of the respondents, unpaved roads are a significant source of air pollution and put people at risk, recounting that "taking a neighbour to the hospital became very difficult" and they had to find "someone who owns a car and take [the injured neighbour] to their house so he could be driven to the hospital."

Authorities do not perceive mining, resource extraction or unpaved roads as major risks. Whereas floods, and run off water are often characterized as climate change risks, road paving and mining regulations are factors associated with economic development in local policy and plans. Besides, different departments in the municipality are in charge of environmental problems and infrastructure. This has led to a significant paradox in Yumbo. Most roads in low-income neighborhoods such as Las Américas and Pedregal are now being paved with asphalt or concrete. Since these neighborhoods were built in sloped areas, water now runs down at higher speed, affecting more dramatically the residents that are in the lower parts of the settlement. In this sense, vulnerabilities resulting from urban conditions have been exacerbated by the effects of infrastructure solutions that failed to take contextual specificities into account.

In Salgar, dozens of residents were victims of the armed conflict and displaced by violence. Not surprisingly, they are concerned with corruption, crime and conflicts that can result in violence between, and within, social groups. Many of them have modified their windows and doors by installing bars to prevent break-ins. When needed, they resort to the police to solve social conflict. They deplore that authorities are more interested in setting rules for social behaviour (for example, bylaws that regulate what homeowners can do to front façades or in public areas) than in listening to their needs and expectations.

Many residents in Salgar miss the rural ways of life they had before the disaster. They see urban regulations as invasive. They deplore that post-disaster public housing projects require compliance with collective norms. Another concern is additional housing costs. They resent paying condo fees and expensive public utilities, bills that now come on a regular basis and that they did not pay in their previous homes. Some residents would like to take advantage of economic opportunities linked to urban life, such as setting up a home-based business, but cannot because current bylaws prohibit them from modifying an apartment unit received after the disaster.

In San Andrés, authorities perceive lack of potable water as a major restriction on economic development. Scholars and authorities perceive water scarcity as a major risk linked to climate change. Evacuation simulations organized by the San Andrés Government are now called "A search for resilience" and focus on Hurricane response. For most residents, the most significant problems are different; they say they know how to deal with hurricanes and to collect and manage water. They contend that it is newcomers, not native islanders, who lack this local know-how. For them, the real problem is not the weather or the lack of potable water *per se*. Rather, the problem is that corrupt authorities have permitted "excessive" immigration of mainland Colombians to the island. It is for this reason, they say, that potable water is no longer sufficient to meet (growing) demand. Some residents further argue that the government-run water and sewage systems have polluted the wells that natives historically used. Corruption and this form of development are, for them, the main causes of vulnerability.

Resilience: a capacity or an attitude?

Most academics see resilience as the result of adaptive capacities (Pelling, 2003; Stumpp, 2013). "Resilience rests on both the resources themselves and the dynamic attributes of those

resources (robustness, redundancy, rapidity)," writes Norris *et al.* (2008) (p. 135). The authors use the term "adaptive capacities" to capture this combination. Projects, resources and education must lead to the reinforcement of these capacities.

Most residents living in poor neighborhoods in Colombia have never heard the terms "adaptive capacity" and "resilience." A few of them recognize resilience as used by policy makers to refer to expected urban conditions to face "uncertain problems," such as climate change and its effects. While Colombians often refer to ways to overcome a tragic event or the difficulties created by a hostile environment, they rarely describe these as a certain *capacity*. Instead, they often link it to an *attitude*. Women who overcome tragedy or misfortunes, for instance, do it because they have the "right attitude" or an "appropriate attitude," often linked to a positive viewpoint rather than an emphasis on negative situations. This attitude is, for many, ascribed to up-bringing, education and values taught at a very young age. Some describe those who do not have this positive attitude as "fatalistic" or "weak."

The links between attitude and "resilience," understood differently in vernacular and expert perspectives, became clear in local narratives. A woman in Salgar said, "in the disaster my [home-based] store was destroyed, but my house was fine. I wanted to stay there and even started to rebuild the store." She was proud to have the right attitude to do so. For her, real strength was to rebuild the store and remain where she was, even if the area was disaster-prone. But, for the authorities, "resilience" meant relocation. She explained that "there was too much pressure and I had to give up and leave," eventually moving to a public housing project in peri-urban Salgar.

In some cases, risks are explained in mystic terms (Veldman *et al.*, 2014). Misadventures, for instance, are perceived to "happen for a reason," are "challenges that God presents to us," or are "outcomes of destiny." In this sense, local residents explained, an "appropriate" attitude is required to face misfortunes. Those who overcome such difficulties are stronger and have developed the proper traits of character to deal with negative effects. These traits are needed to fix problems, realize aspirations and improve social status. Again, attitude and character, rather than "capacity," are depicted as key in local discourse.

In Yumbo, the main aspirations of residents include having paved roads, restricting resource extraction (mining activities) and finishing their homes. In Salgar, residents' main aspirations include being able to start a business, garden, modify the housing units received after the disaster and exploit economic opportunities. Women, for instance, dream of having a piece of land where they can grow plants and vegetables. In San Andrés, the main aspirations of residents include being able to run hostels and Bed & Breakfasts. However, they are afraid that too many of these hostels have been opened recently by immigrants. They resent what they perceive to be "unfair" competition.

In Colombia, many public service and utility charges, tax rates, social benefits and subsidies are set according to a scale linked to the *estrato*, of one's neighborhood of residence. This scale is determined by municipal authorities and has six possible levels or *estratos*: 1 for the poorest neighborhoods and the 6 for the wealthiest ones. Unsurprisingly, residents in the lowest *estratos* frequently compare living conditions with those in higher levels. Even though they rarely want their *estrato* to be raised (which implies paying more taxes and service fees), neighborhood improvement is seen as raising one's social status. Residents thus aspire to better housing and neighborhood amenities such as paved roads and public space. Surely, achieving these aims rests on some capacities, such as knowledge of construction and financial literacy. Connections with people in power and public relations skills also help. But for local residents, most importantly, it requires a particular character*:* the strength to navigate the political system, the willingness to take risks in businesses and the faith that "things will get better."

Developing adaptation capacities or seizing opportunities?

Adaptation is increasingly seen by scholars as the unavoidable means to achieve a healthy co-existence between humans and nature (Watts, 2015). It has a positive connotation and is a prerequisite of resilience (Alberti *et al.*, 2003; Bicknell *et al.*, 2009; Satterthwaite, 2007). Our interviewees, however, almost never used the term "adaptation" to refer to possible improvements in their living conditions. They, instead, typically focus on the urgency (but also difficulty) of seizing opportunities at the individual or household level. These opportunities, and their exploitation, can lead to improved housing conditions, additional income, and access to credit and assets.

People's aspirations often relate more to social status than climate change adaptation. This does not mean that risks related to floods and meteorological events are not important. But, according to our interviewees, the most significant risks they face are linked to poverty and precarious housing conditions rather than increased exposure to climate-related factors. Local residents identify lack of urban infrastructure and socio-economic problems, which have recurrent impacts of daily life, as their most pressing needs. Climate change effects, in contrast, are seen as uncertain, sporadic events that do not entail attention with the same urgency.

In Yumbo, for instance, residents want to seize opportunities to open a business that can be run from home, pave the road where their house is located, and upgrade their homes. In Salgar, residents want to grow gardens and be able to combine a rural lifestyle with the benefits of living in public housing. In San Andrés, natives want to seize economic opportunities in tourism. These opportunities are critical for survival. They fear that growing immigration can dilute the benefits of tourism and reduce access to water and other local resources. Other opportunities in the three cases include convincing a local politician to pay attention to their neighborhood, obtaining sponsorship from a local company, or receiving a favor from a wealthy friend or acquaintance.

Opportunities that can be seized by residents do not necessarily imply long-term improvement. Home-based businesses, for instance, are viewed as a short to medium-term opportunity, and not necessarily as a long-term solution to family income. Residents talk about long-term goals: the possibility of sending their kids to better schools or universities; building a house that children can inherit, facilitating conditions to have company during old age; sending children abroad; and reunifying the household with family members elsewhere. But they often focus on seizing short-term opportunities, even when the long-term benefits are unclear. In this sense, many of them seem to operate more in a "survival" mode than in a journey to develop adaptive capacities. Many residents, for instance, want the neighborhood to improve, but not necessarily their *estrato* to be raised. This creates a tension between their aspirations for better living conditions and housing affordability.

Informal settlements or places under construction?

Scholars have long debated the pertinence of a formal-informal dichotomy to explain urban, economic and labor conditions in developing countries in general (Mayne, 2017) and Latin American nations in particular (Rakowski, 1994). Most of them now refuse the formal-informal distinction, favoring instead the recognition of a continuum between two conditions that only exist in their abstract form: total formality and total informality (Bornstein, 1992; Lizarralde, 2014). Nonetheless, most of them – even in the South – still recognize that there is a form of "subaltern urbanism" (Roy, 2011); bottom-up urban agency (Lizarralde and Davidson, 2006), and "unplanned" and "unplannable" urban form (Roy, 2005) in poor countries. These notions help describe slums or neighborhoods that are initiated through self-help construction, as well as economic activities conducted from home and through micro-

enterprises that do not comply with official standards and norms (Kasarda and Crenshaw, 1991; Werna, 2001).

Of course, none of the residents we met refer to their house, neighborhood or economic activity as informal. Quite often, they refer to their *estrato* as a way to denote physical and socio-economic conditions. Their house is "under construction," their neighborhood "in a process of consolidation," and their home-based income "a resourceful solution." The idea that these products and activities are separated from formal practices does not make sense to them.

Differences with wealthier sectors are explained by residents in Yumbo in terms of the quality of roads and transportation, as well as the lack of vegetation in public space. In Salgar, they are explained in terms of freedom to modify their homes and have access to land that can be used for gardening and social and recreational activities. Finally, these differences are explained by residents in San Andrés in terms of freedom to exploit resources by "natives." Native islanders believe that they have legitimate rights to exploit local resources that immigrants do not. For them, most social differences are determined by birthplace, not formality or informality.

Residents perceive differences as ones of privilege. Distinctions between their homes and those located in a wealthy neighborhood and between, say, their home-bases shops and a fancy shop in a higher *estrato* zone has more to do with status than with the origin or process to obtain it. Residents of lower *estratos* aspire to fancier houses, neighborhoods or jobs, but not necessarily those in the wealthiest neighborhoods. Equally notable, they do not see their neighborhoods or economic activities as operating in parallel to a formal economic or urban system.

Discussion – a tale of conflicting narratives

Previous studies have explored the relevance and impact of narratives to understand environmental problems (Gudynas, 2003), under-development (Escobar, 1995), disasters (Gould *et al.*, 2016), development planning (Bornstein, 2008), responses to climate change (López-Valencia and López-Bernal, 2015) and risk in Latin America (Bertholet *et al.*, 2016). Few studies, nonetheless, have explored the impact of resilience in informal settlements in the region. And yet, over the past ten years, the resilience metaphor has captured the imagination of academics and policy makers in the region. It has been adopted as the principal framework in disaster-risk policy in Latin America. The jargon of adaptation and resilience is now used by local politicians, NGOs, funding agencies and technocrats. In this sense, resilience has become a recent example of both auto-ethnograhic expression and transculturation.

Plans for disaster risk reduction and mitigation existed in many Latin American countries before the introduction of resilience frameworks. Many of these plans, including the Cuban model of disaster risk reduction, were (and still are) highly effective (Lizarralde *et al.*, 2015b; Valladares, 2013). But scholars in Latin America have quickly adopted the terms used by their counterparts in the North. In Pratt's terms (2007), local academics and decision-makers have involved in "partial collaboration with and appropriation of the idioms" (p. 7) of the more powerful international stakeholders (in this case foreign scholars, urban consultants and international agencies). In an example of transculturation and auto-ethnographic expression, they are creating representations that adopt the terms and ideas that come from abroad, within unequal power relations. One of the reasons is that, as educational systems are being reinforced, increasing numbers of scholars in the region do not want to "miss the boat." They want to publish in international platforms, get global recognition, and apply to funding in the North. Resilience has become, for many of them, unavoidable.

In other contexts, scholars have found significant problems with the theoretical and practical premises of resilience. Levine (2014), argues that "when we try to turn resilience into

a scientific definition, trouble inevitably starts" (p. 23). Our study finds that Levine is right in his assessment of the difficulties to operationalize resilience. Yet he misses the point. In reality, when we try to turn resilience into *a common language explanation of phenomena* trouble inevitably starts. In this sense, our study confirms a pattern previously found by Yarina (2018) in several cities in Asia; for her, "the Climate Adaptation Strategy is filled with ideas that may make sense in a Western context but fail to translate smoothly to local conditions" (no p.).

Adaptive capacities, panarchy and other academic terms linked to resilience, have no real meaning in vernacular Spanish. The Spanish form *resiliencia* is not only difficult to pronounce, but carries no meaning in common conversation. Not surprisingly these concepts are almost never used by residents in the three cases we studied. Is this cleavage simply a matter of abstraction or technical pertinence? We believe it is not. Finally, there are multiple terms that are not used in casual conversation but carry great importance in scientific work, including medical terms (the rarity of medical terms in casual conversation does not make them less valuable to science). Our study confirms that neither abstraction nor limited pertinence apply. In the case of resilience in Colombia, the vernacular narratives are not simply rudimentary versions of the resilience theory. They are simply *different* narratives.

Several authors have previously criticized the resilience framework (Alexander, 2013; Chmutina *et al.*, 2016; Davoudi, 2012; Joseph, 2013; Klein *et al.*, 2003; Manyena, 2006). They have focused on its lack of clarity, its difficulties in implementation, its wide adoption in different contexts or its manipulation by political and economic elites. According to White and O'Hare, resilience "leaves unaddressed wider sociocultural concerns and instead emerges as a narrow, regressive, techno-rational frame centred on reactive measures at the building scale" (p. 934) (White and O'Hare, 2014). Here we find another problem with resilience: its scholarship is significantly disconnected from vernacular narratives. Similarly, criticism of the formal-informal dichotomy is by no means new (Aguilar, 2009; Chen, 2005; Doherty and Silva, 2011; Hansen, 2001; Rakowski, 1994; Werna, 2001). The difference here is that we are not challenging the dichotomy. We reveal, instead, that the formal/informal distinction is absent in vernacular narratives in Colombia.

What are the dangers of adopting the resilience framework in disaster-risk policy in Colombia? First, it may introduce in local communities problems or concerns that do not actually exist. Second, it can distort messages that are voiced by local communities and citizens. Third, it can help produce solutions that do not actually address the needs and expectations of local residents. Fourth, this tendency perpetuates a body of knowledge that fails to capture the reality that is trying to explain. And finally, it increases the gap between academic work and the problems people face. In the meanwhile, aspects that are required for social change (such as people's expectations and aspirations to improve social status) get masked.

Indeed, the resilience framework obscures two important tensions:

(1) *The politics of risk reduction:* Most techno-academic approaches to resilience assume that adaptation happens without producing winners and losers. Most studies of resilience have therefore failed to examine, let alone reveal, the inequalities that exist or emerge between and within social groups. Our study demonstrates that these tensions cannot be ignored. In San Andrés, residents who benefit from individual wells, for instance, resent public water and sewage systems that they perceive as polluting. Similarly, residents in Yumbo and Salgar find it difficult to negotiate conflict with neighbors, particularly when their individual economic benefits impede potential benefits for others. They perceive that policies that concern "the collective" are partisan, and create a gap between individual benefits and those of others. Environmental challenges are often seen as "collective problems," not individual

ones. This has a significant impact in the vernacular explanation of risks, because residents tend to give priority to individual or family problems such as daily social and economic concerns, rather than to climate-change effects. Significant tensions emerge between the needs and expectations of well-established residents and those of newcomers. Native islanders in San Andrés, for instance, resent new immigrants coming from mainland; their presence is seen as a threat that drains on limited water resources. Well-established residents in Yumbo, similarly, resent that large mining and manufacturing companies exploit local resources, eroding the environment that resident enjoyed in the past. In local understandings of exposure and responses to risks, politics are central.

(2) *The responsibility for risk reduction:* The resilience framework is based on the premise that individuals and social groups have (or must develop) strengths that allow them to cope with risk. However, local residents in our case studies were careful not to be labelled as "responsible" for solving the problems they face. Instead, they often mentioned how they have been affected by corrupt politicians, businesspeople, and landlords who have advanced their own agendas at the expense of residents. Such narratives suggest an effort to condemn perceived injustices and make claims as to "restitution." Residents in all three areas, Yumbo, Salgar and San Andrés, convey the message that local and national governments "owe" them solutions, benefits that more privileged citizens have received and they have not. In this sense, they feel that the government is responsible for correcting unequal distribution of benefits. They are "waiting for the government's response." If anything, citizens' explanations seem to be more aligned with a narrative of rooted vulnerability based on unequal distribution of rights and opportunities, and of citizens deprived of government entitlements, than with a narrative of resilience, whether at an individual, household, or neighborhood level.

This study faces several limitations. It was conducted by an interdisciplinary group of academics working in low-income neighborhoods in three cities in Colombia. Our conclusions might find applicability in other Latin American countries. But more studies are required to validate whether the resilience framework has had a similar influence in other places. Additional work is also needed to examine the meaning of certain terms in other Spanish-speaking nations. Finally, additional studies are required on discourse analysis of resilience policy in the region.

Conclusions – the disconnect between narratives

A gap between academic discourse and local problems may seem unproblematic at first glance. But academic discourse is increasingly determining urban agendas and policy in disaster risk reduction in the Global South. Our study shows that authorities in Colombia, for instance, are increasingly adopting the jargon and concepts developed by academics and urban consultants in the North. It is necessary to change or adjust these frameworks so that policy reflects the real needs and expectations of citizens. Better dialogues between authorities and citizens can exist if vernacular narratives are taken into account and if policy is made in response to them.

Low-income Latin Americans want effective responses from local governments to basic needs such as drinking water, jobs and health insurance. They often minimize the importance of risks derived from natural phenomena and climate change, which are seen to have a lower probability and frequency of occurrence than other, more pressing, problems. The resilience framework also makes it difficult to reveal the politics of, and responsibilities for, risk reduction.

The resilience framework has become a recent example of both transculturation and auto-ethnographic expression, notably among local scholars and decision-makers in Latin America. There is now a disconnect between vernacular and techno-academic narratives. These narratives are not actually equivalent and, thus, they are not simply interchangeable. This disconnect makes it difficult to respond to the real needs and expectations of ordinary citizens. It contributes to a distortion of agendas. It masks significant realities and people's struggle for social justice. New concepts and frameworks are likely needed to halt disaster risk creation in the region. But they must be built "bottom-up," instead of "from scholarship to communities." This study reveals the potential of exploring new research avenues: the study of "aspirational development," instead of informality, the analysis of "opportunity seizing," instead of adaptation, as well as a better understanding of "attitudes" in the face of risk, instead of "capacities." New frameworks must reveal historic segregation, colonialism, marginalization and other deep-rooted causes of the disasters that are now being exacerbated by global warming. Climate change action in the region can hardly be implemented without a comprehensive understanding of local struggles for social justice.

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