

00:01

When I was six years old, growing up in Medellín, Colombia, I made one of the most impactful decisions of my life. I asked my mother to change my school, to the school where she was teaching. To my surprise, she said yes. So I switched from a rich, private Catholic school to a public school where 99 percent of the students live in a condition of extreme poverty. The only meal some of my friends ate a day was the one that was given in school. My friends and I lived close to each other, but worlds apart. I lived in a neighborhood with a museum, a library, parks, and they lived in a neighborhood with the lack of the most basic necessities, such as potable water or electricity. More importantly, they lived in a place surrounded by danger, from guns to landslides.

01:02

Their suffering was not unique. Up in the mountains, in Medellín informal settlements, thousands of families were having the same problems [as] my friends and their families, fearing that the police or the rains would take their homes away. I learned so much from my friends, but what continued to surprise me the most is their resilience and optimism in the face of adversity.

01:32

Growing up with people that I care [about] is what had led me to the story of informal settlements. I teach now at the University of Colorado, Boulder, in the program of environmental design. I study informal settlements because even if they are invisible to most of us, they represent one of humanity's biggest challenges. And yet they provide great insight in how cities develop and innovate.

02:02

There are three crucial things that I have learned about informal settlements that I want to share with you today. The first one is that informal settlements are a widespread form of city making. The second one is that by making visible populations in informal settlements, we can save their lives. The third one is that we pay more attention to the creativity of people who live in these places, we could be aware of innovations that can save the planet.

02:41

Informal settlements can be broadly described as self-built neighborhoods outside of city regulations in conditions of extreme poverty. Nowadays, more than a billion people live in informal settlements all around the world. By the year 2050, one in three people on the planet will live in one of these places without potable water, adequate sanitation and in condition of

extreme poverty. This makes informal settlements, what some call the slums, the most common form of urbanization of the planet.

03:26

The paradox of informal settlements is that they are vast and common. However, the people and the places in which they live are the most invisible. There is much that we don't know about these places and that ignorance creates barriers to develop tools to help them. A first step to make visible these populations is to record the conditions in which they live. However, many countries where the informal settlements are do not have the resources to map these populations. And the countries who have the resources sometimes have legal restrictions that impede the state organizations to support the work on informal settlements. These unknowns create vacuums to understand informality and support the dissemination of misconceptions about the real challenges and opportunities of informality.

04:26

As I started to learn more about the informal settlements, I realized the scarcity of data available. Most of our understanding about informality comes from separate and unreliable sources. There is not a single database that contains all the informal settlements in the world. To try to aid in such a puzzle, I created alongside hundreds of collaborators the Atlas of Informality. The Atlas is a creative attempt to visualize these invisible populations in an effort to understand the unique process of informal city making. A crucial question that we wanted to resolve here was how these places evolve over time. This was important not only to understand the past, but more importantly, the future of informal settlements and the future of all world cities.

05:29

We at Environmental Design Program created a protocol with open-access software, remote sensing tools and direct mapping to identify and map the change of informal settlements over the last 15 years all over the world. The key was to develop a tool that was simple to use and that allows us to reach most of the planet. A tool that allows to compare these places at the same level. We have now mapped more than 400 informal settlements all over the world, and we have realized how each one of them is changing and expanding as a result of the arriving populations.

06:13

We discovered things expected. Regions are expanding at different rates. Informal settlements in Latin America and Africa are expanding more rapidly than those in Asia. More importantly, we discovered that the entire sample continues expanding at a rate of 9.85 percent. But what [does] this obscure number mean? It means that every year 2,300 square kilometers of informal

settlements are created out of the expansion of existing ones. This expansion means that every year, at the informal settlement, a slum, a city larger than some of the largest cities on the planet, such as Moscow, Houston or Tokyo, is created out of the expansion of existing settlements. As these places continue to grow in darkness, we are blinded to what happens in the cities emerging every day.

07:21

This is why I have dedicated my life to the co-production with communities that live in informal settlements. Not only to try to improve their conditions of living, but to learn from them about the unique process of informal city making. Working with families and community members over the last 10 years, I have learned that to solve the informal settlements most challenging problems new cutting-edge strategies are needed. And that the source of that innovation resides already within the knowledge of these communities. I have learned that for each problem there is a community-based solution spearheaded by the people living there.

08:06

For example, we learn fascinating things from communities like Carpinelo or Manantiales de Paz in Colombia, who organized themselves to build infrastructure improvements. They call these “combites”. These infrastructure improvements go from the creation of water systems to stairways, to roads. At the family level, we find incredible financing mechanisms. Like they're renting of rooms to pay for home expansions or the creation of micro businesses tailored to the surrounding populations.

08:40

One of my goals now is the emulation of those strategies at larger scales. Creative informal solutions follow a disruptive process that breaks away with traditional ways in which we think about cities. Planners, city officials and architects tend to operate in cities in similar ways as those set up at the beginning of the 20th century. What forced them and us to think about the informal settlements as a pathology, as a disease, as something that needs to be eradicated. This old-fashioned way of looking at slums forces the use of obsolete strategies. As a result, slum eradication programs have left millions homeless and have only displayed the problem to other places. In unbelievable contrast, the resources of informal dwellers for these populations to find unconventional ways to solve the same problems. Their solutions are less environmentally impactful and rely less on the need of big infrastructure improvements. These solutions could be as physical as the creation of pedestrian-friendly compact neighborhoods, or as strategic as the setup of community-based banking systems. These solutions could work both for informal settlements with less resources and to cities in the search of more sustainable development.

10:23

Making these places visible is not only essential to help impoverished communities, it's also vital for the rest of us. These populations living in scarcity are forced to innovate and create these disruptive urban products. Informal communities have always thrived, finding new opportunities out of necessity, from unofficial moto-taxis, private vehicles that serve the public, a response for the need for affordable transportation systems, or like the renting of rooms to pay for home expansions, what makes homes in informal settlements a self-sustainable urban model. Think about how radical this idea is. That instead of getting a loan to pay for your home, your home is the business that pays for the place that you live in.

11:21

Of course, I don't want to romanticize these solutions, as they are the result of innovation out of dramatic suffering. But what I want to say is that there is much that we could learn from them. In fact, I think there are some that are already learning. I argue that today, some of the most disruptive urban products, such as the ride apps, similar to the moto-taxis, or the home-sharing economy, similar to the self-financing urban model in informal settlements, started decades ago in the confines of informal settlements. If we pay more attention to visibilizing these invisible populations, we will not only have the opportunity to support the effort of billions, but we could learn from them how we can change the planet.

12:24

Now, thinking back about my schoolmates, the communities which I collaborate with and the billions living in informal settlements, there are three things that we all need to do. The first one is that we need to make these communities more visible. They are part of our cities, they deserve to be respected and accounted. Second is that we need to pay more attention to the creativity and innovation that happen in these places. The next billion-dollar business, the next urban sustainable solution has already been invented in one of the thousands informal settlements around the world. And finally, we need to apply what we learned there. For the future one third of the planet and for our cities that need to be safe.

13:16

Thank you.