# Part III: Humanity

## Chapter 16: Ignition

The universal need to connect with others has brought the world online. That same force has been attracting us together in space since long before the internet. It’s like human physics. Gravity caused the sparse clouds of hydrogen gas that characterized the early universe to coalesce over time into stars and galaxies. Attraction between people does the same. We call the structures that emerge villages, towns, and cities. Just as a collapsing hydrogen cloud ignites at a certain density and begins to burn with nuclear fusion, when human populations condense into cities they begin to glow with new ideas, traditions, technologies, socioeconomic systems, arts, and culture.

“Ignition” is the overarching story of much of the past 10,000 years or so of human development, and because developing culture and increasing density create potent feedback loops, urbanization has greatly accelerated in recent history. While the overwhelming majority of us used to gather, hunt, and farm, living in nomadic bands or in small settled communities, we’ve now reached a milestone: about half of humanity today lives in a city.

Urbanization also gives rise to another feedback loop. We’ve seen that identity, gender, and attraction are partly built into our genetic inheritance, but are also partly cultural, environmental, and volitional. So attraction brings people together, which creates culture and subculture, which in turn alters the way we identify and our patterns of attraction.

Cultural innovation also leads to specialization, sorting, and something like speciation; cities act as cultural reactors for the rapid evolution of practices and norms. That’s why killjoys like William Acton (see Chapter 9) tend to moral panic about “sex in the city”, where anything, up to and including the “perverse”, might happen; their “immoral haunts” are invariably urban bars and clubs, not country barns hosting square dances.

The “immoral haunt” trope is timeless. We see it retreaded a century later (or, if you’d prefer, a long time ago and in a galaxy far, far away) at the Mos Eisley Cantina on the planet Tatooine in Star Wars (1977), which Jedi master Obi-Wan Kenobi characterizes as a “wretched hive of scum and villainy”. This interplanetary urban dive is also clearly the place to go for decent music (in real life, a jazz composition by John Williams featuring Afro-Caribbean instruments for added “exoticism”). In the Star Wars novelization, Obi-Wan offers more nuance in his assessment of the Cantina:[[1]](#footnote-22)

“Most of the good, independent freighter pilots frequent this place, though many can afford better. They can talk freely here. […] Watch yourself though. This place can be rough.”

Walking inside, Luke Skywalker, our wide-eyed kid from the countryside, is “astonished at the variety of beings making use of the bar”:

There were one-eyed creatures and thousand-eyed, creatures with scales, creatures with fur, and some with skin that seemed to ripple and change consistency according to their feelings of the moment.

Hovering near the bar itself was a towering insectoid that Luke glimpsed only as a threatening shadow. It contrasted with two of the tallest women Luke had ever seen. They were among the most normal-looking of the outrageous assemblage of humans that mixed freely among alien counterparts. Tentacles, claws, and hands were wrapped around drinking utensils of various sizes and shapes. Conversation was a steady babble of human and alien tongues.

Variety, sensuality, food and drink, language and dialect, trade and commerce, music and art, style and fashion— in short, *culture*. Cultural complexity emerges from the convergence and density of the city (or “spaceport”), its foment and cross-pollination. This contrasts with the timeless, monkish asceticism of the Jedi, or the bland Midwestern isolation of Luke’s uncle’s farm.

This explains why Alfred Kinsey and colleagues thought it important to compare “sex in the city” and “sex in the countryside” in their surveys. They sought to untangle the biological universals of human attraction from the queerness of urban life:[[2]](#footnote-23)

There is a wide-spread theory among psychologists and psychiatrists that the homosexual is a product of an effete and over-organized urban civilization. The failure to make heterosexual adjustments is supposed to be consequent on the complexities of life in our modern cities; or it is a product of a neuroticism which the high speed of living in the city imposes upon an increasing number of individuals. The specific data on the particular rural and urban groups […] do seem to suggest that there is something in city life which encourages the development of the homosexual. But the distinctive thing about homosexuality in the city is the development of a more or less organized group activity which is unknown in any rural area.

Large cities have taverns, night clubs, restaurants, and baths which may be frequented almost exclusively by persons interested in meeting homosexual friends, or interested in finding opportunities for discussions with others who do not object to the known homosexuality of their companions. In this city group, the development of an elaborate argot gives a sense of belonging which may defend a minority group against the rest of society; but it also intensifies a feeling which the group has that it stands apart from the rest of the population. Moreover, it is this city group which exhibits all the affectations, the mannerisms, the dress and the other displays which the rest of the population take to be distinctive of all homosexual persons, even though it is only a small fraction of the males with homosexual histories who ever display such characteristics. None of these city-bred homosexual institutions is known in rural areas, and this may well acount for a somewhat lower rate of the homosexual among farm boys.

So, a lot of mannerisms we think of as “gay” aren’t about being gay in itself, but about a specifically urban gay culture. Thus “being gay” is partly cultural— not just a matter of attraction. Some survey respondents acknowledge this cultural dimension:[[3]](#footnote-24)

Not only does my sexuality/sexual attraction fluctuate, but culture has a big influence on it. I travel around the world getting paid to have adventures. There are women and men that I meet who I only find attractive within the particular culture. Take the same person and let them assimilate into a different culture and my attraction fades. Somehow the social dynamics make a big difference for me.

Of course, the same could be said of “being straight”. The difference is that minorities, sexual or otherwise, can only concentrate their numbers to achieve “cultural ignition” in big cities. This is why gay cultures tend to be urban (whether in ancient Greece, Victorian London, or the East Village in New York), even though our best guess is that homosexual attraction crops up everywhere and in every historical era.[[4]](#footnote-25)

How relevant is this to the United States, though? Many of us don’t think of the US as a particularly urban country. Its founding myth features wide-open spaces, attractive to homesteaders seeking escape from a corrupt, overcrowded Old World. That’s why the Skywalker farm evokes the American heartland, while the Mos Eisley cantina (the exterior footage was filmed in Tunisia) reads as foreign— literally, alien. Thomas Jefferson would have shared this sensibility; his United States was a land of gentleman-farmers. Of course, that vision relied on slave labor (or droids!). Also, let’s not forget that the Americas were far from uninhabited when European colonists first arrived, having hosted both nomadic and settled societies for thousands of years.[[5]](#footnote-26)

In more recent memory, the US has often been thought of as suburban, typified by a Flintstones lifestyle of low-slung residential neighborhoods with lawns, back yard barbecues, and multi-car garages. Suburban sprawl *is* real. Such development mushroomed after World War II, partly in an effort to make the country harder to annihilate with targeted nuclear strikes on cities.[^6]

The reality, though, becomes clearer when we look at data from the Census Bureau. The Census tells us how many people live in every ZIP code, and also gives us ZIP code maps. Technically, these are maps of “ZIP Code Tabulation Areas” (ZCTAs), since ZIP codes were originally defined for delivering mail, and until the year 2000 didn’t correspond to areas on the map with precisely defined borders. ZCTAs let us calculate the ground area of every ZIP code, which in turn lets us make a detailed map of population density. By coloring in the ZIP code areas from densest to sparsest, stopping when we’ve covered 62.7% of the population, we can get a sense of the country’s urban character.

This cutoff is arbitrary, but for now, let’s think of the colored-in ZIP codes as “urban”, and the others as “rural”. (White areas, mostly representing mountainous and wild terrain where there are no mail delivery routes, have— at least officially— no permanent population.) The result looks a lot like NASA’s satellite-imaged “night map”, since terrestrial light sources and cities generally coincide.

[[ANIMATE. IN PRINT, THE ZCTA IMAGE CAN BE A PARCHMENT OVERLAY ON THE NASA NIGHT MAP! ALSO 90 DEG WEST AND 115 DEG WEST SHOULD HAVE FAINT DOTTED VERTICAL LINES IN THE OVERLAY, WILL BE USED LATER]

The NASA night map is a powerful image. It renders the simile of cities as something like stars in the night sky almost literal. Civilization radiates light. If we could see this image in time lapse over the past few centuries, we’d see these cities “ignite” as populations coalesce, first very faintly with firelight, then with gaslight, then much more brightly with electrification. (Excessively so, as much of this energy expenditure nowadays is wasteful light pollution.)

As we’ll explore further in this third and final part of the book, though, the dark regions of the map are critically important too. At risk of belaboring the obvious, the city and the countryside are mutually interdependent. Cities have always relied on a much larger hinterland for food, water, and other natural resources, and on the farmers, miners, woodcutters, wagon or truck drivers, and so on who do critical work needed to keep the city alive, yet don’t live there themselves.

On the other hand, Thomas Jefferson’s vision of a bucolic countryside that could get by just fine without the city is a fantasy. His beautiful library at Monticello, full of books and gadgets procured in New York, London, and Paris, suggests he was, at least in private, well aware of this.[[6]](#footnote-27) Books, oil paintings, and fine china aside, we couldn’t farm at today’s scale using anything like the backbreaking techniques of 19th century homesteaders (or slave plantations) anymore, or keep livestock in the traditional ways of the Maasai in East Africa. Such techniques have been characterized by the word “subsistence” because they allow agriculturalists or pastoralists to feed themselves, but they don’t produce the excess needed to *additionally* feed an urban population orders of magnitude larger.

Of course that’d be fine if there were no cities to feed. However, most would agree that the very high infant mortality and low life expectancy of 18th century peasants is a legacy we’re glad to have left behind. Life in the countryside today depends deeply on the technology, goods, expertise, services, and culture that come from the city.

It’s exactly these technologies and services that have not only allowed cities to grow bigger, but that have caused the countryside to become far more sparsely populated than it used to be. Today’s gigantic farms, for instance, rely on intensive mechanization, hence a lot less human labor, than in the past. This explains why so much of the population lives in such a small fraction of the country’s land area today.

Keeping this in mind, it may come as less of a surprise that the US, with its advanced economy and relatively recent colonial reformatting, is *especially* urbanized relative to the rest of the world. In fact, there’s a strong argument to be made that this is the very reason the US has been the world’s leading economy over the past century or so— not some uniquely American character trait, but rather, the country’s urban density and overall scale. Achieving such scale and density was in turn a product of the particular timing and manner of American colonization by a people who had just invented the key enabling technologies for urbanization.

The trends over time tell this story clearly. In 1800, around 10% of Europeans lived in cities, and in the United States, about half as many. Farming efficiency only needed to be marginally above subsistence level to support these small urban populations. Then, the technologies of the Industrial Revolution, first invented in the UK and Europe, began to take root in the US, relatively unimpeded by existing traditions and fueled by plentiful space and natural resources. Machinery and agricultural engineering greatly scaled up farming efficiency. This drove urbanization so quickly that by 1860, the US and Europe had both risen to 20% urban, with the US surpassing and remaining on a steeper slope than the rest of the world over the next century— until, in effect, the countryside was starting to run out of people who *could* fuel this great migration into cities. By 1920, half of Americans lived in cities; in the 1960s, two out of three; and by the 2000s, four out of five.

West of the Mississippi, we can see the way later settlement, which could take advantage of more advanced technologies from the start, resulted in especially sparse rural populations, with the vast majority of people settling into a handful of dense urban pockets. East of the Mississippi, earlier settlement resulted in a more typically European pattern, full of small and mid-sized towns, but even there (with the exception of a dense corridor from Washington, DC to New York) most of the land is quite sparsely populated— and becoming more so every year.

A graph showing the relationship between cumulative population and cumulative land area gives a more complete sense of today’s population distribution. The horizontal dotted red line is 62.7% of the US population, or just shy of 200 million people. The vertical red line shows how much land those ZIP codes occupy— just 3.23% of the total area of the US. The 100 million people living in the densest ZIP codes occupy only 0.63% of the total area! This also illustrates an effect that, while obvious, is worth calling out: that the growth of cities, driven as it is by migration from the countryside, both implies and creates vast, sparsely inhabited hinterlands.

On the survey, I asked respondents for their ZIP code, so that it would be possible to break down their answers not only by age, but also by population density. In addition, the surveys included the seemingly redundant questions, “Do you live in the city?”, “Do you live in the suburbs?”, and “Do you live in the countryside?”. This offers us a chance to compare a real physical quantity— population density based on ZIP code, which varies continuously— with the subjective labels people use in describing themselves, as city, suburb, or countryside dwellers.

The horizontal axis shows ZIP code density, measured in square meters per person. Because this quantity varies over such a wide range (from only about 10 square meters per person in dense cities, where people might be living literally on top of each other in high-rise apartment buildings) to more than 100,000 square meters per person (think Montana), we need to use a logarithmic axis, meaning the evenly spaced tick marks are 100, 1,000, 10,000 rather than 100, 200, 300. The vertical axis shows, at each density, what percentage of people answer “yes” to the questions “Do you live in the city?”, “Do you live in the suburbs?”, and “Do you live in the countryside?”.

This gives us an objective answer to the subjective question of what those terms actually mean to people. It also reveals, unsurprisingly, that this objective answer doesn’t have any sharp thresholds. We could choose to define thresholds where the curves cross (so, cities are places with less than about 1,000 square meters per person, suburbs have between about 1,000 and about 10,000, and countryside has more than 10,000), but those are really just the places where disagreement between people is at its highest!

The curves don’t add up precisely to 100%, since, as with every other identity question, a minority of people answer ambiguously. It’s just like handedness and sexual orientation. People who answer “no” to all, or “yes” to more than one of the three probably have a story as to why that makes sense for them, as with a woman from San Clemente, California, who wrote, “I’m not certain if I live in a suburb or a city. I believe I’m on the edge of both.”

Once again, we have excluded middles. And once again, we might wonder whether there might be some kind of objective right answer, perhaps based on an official city map. But even in this seemingly simple case, ground truth is elusive. Many maps of cities have boundaries drawn on them in one place or another, and some of those boundaries are material, determining who your state representative is, or whether you have to pay a city tax. To people living on those borders, they can feel quite arbitrary. And in fact, they change all the time, as cities grow (and, occasionally, shrink). When borders are redrawn, the language often used by those doing the redrawing tends to acknowledge that the new border better reflects “reality”.

City boundaries are thus socially constructed. This doesn’t imply that there *are* no such boundaries, or that they’re an illusion, or that they don’t correlate with any underlying physical property— obviously they do, as we can see from the NASA night map. What we mean is that they’re a necessarily imperfect, somewhat fuzzy, and ever-shifting social consensus arising from both direct observation and continual tugs in different directions. At some point in time, an official map might be drawn based on some person or committee’s opinion or political interest. If the map actually matters (say, due to a different tax rate or zoning code), then that map will shape how future development occurs. Development affects local population density. Local density affects people’s mental models as to where the city ends. Those models in turn affect what subsequent officials think, and amendments they make to future maps. People also affect each other’s mental models all the time, through their everyday use of language and sometimes through arguments about definition, either with regard to specific instances (your house isn’t *really* in the city!) or general principles (if you live in a high rise apartment it *must* be considered part of the city!).

I live in a city that could be classified as the suburbs, but city officials are trying to get away from that term so I consider where I live Urban.[[7]](#footnote-28)

So, the push and pull of opinions will affect physical reality, and reality will affect opinions. Those feedback loops can work to bring people into greater agreement, but they can also— even simultaneously— create different camps, sharpen disagreements, and foster tribalism.

By this point in the book, these will all sound like very familiar themes. As with all of the other labels we’ve explored, it’s accurate to say that “city” and “countryside” are social constructs, but that doesn’t mean they’re not real or don’t matter. Our reality is deeply social, and our beliefs shape our present and our future reality. Or, perhaps more accurately, “realities”, since outside the realm of pure math, reality can’t be fully pinned down or seen from an entirely objective point of view. It’s fuzzy and plural. And “measuring” it affects it, a bit like quantum physics.

We can do a fun experiment with the data to show how the definitions of words like “city” and “countryside” vary socially. Recall that the coasts of the continental US are particularly dense. If we segregate the ZIP codes by longitude, we can explore how “city” is defined differently for people on the coasts, as opposed to the interior. Let’s arbitrarily define the “Central USA” as ZIP codes that lie between 90°W and 115°W, and “Coastal USA” as ZIP codes lying outside this band. (Those lines of longitude are marked on the map.)

On the coasts, the density of people has to be a good deal higher, on average, for people to consider themselves to be living in a city! If we slide one curve over to match the other, we find that the difference amounts to more than a threefold change in density. That is, on the coasts, the land area per person has to be one third of what it would have to be in the central US before an “average” person would consider themselves to be a city dweller. The same pattern holds for suburbs, and for the countryside, though for suburbs it’s a bit less dramatic.

If even the definitions of “city” and “countryside” aren’t consistent between the coasts and the interior, it’s easy to imagine that will be true of terms like “queer” too.

“Queer” simply means “different,” I have always been different, I’ve always loved being different, I mesh well with my fellow, harmless, polite, outcasts of the world, proudly. Also, San Francisco.[[8]](#footnote-29)

In the following graphs we’ll break responses down into those of “city people”, whom we define as those who both say that they live in the city and are in ZIP codes corresponding to the densest 62.7% of the American population, and “country people”, who both say they live in the country and are in ZIP codes corresponding to the sparsest 37.3%. This is necessarily arbitrary and noisy around the edges, and excludes some respondents, but it does a reasonable job of qualitatively illustrating some of the differences between urban and rural populations.

First: there are fewer queer people in the countryside than in the city. This gap is insignificant for young people, among whom over 15% consider themselves queer regardless of where they live; but by age 65, nearly threefold more city-dwellers identify as queer: one in twenty in the city, and one in fifty in the country.

This is partly explained by the fact that there are more heteronormatively attracted people in the countryside (as we’ve defined it before— women sexually and romantically attracted exclusively to men, and vice versa).

Once again, young people are similar, but there’s a divergence with age. There’s more to the story, though. The *definition* of queerness also varies between these populations in interesting ways. We can see how, in the countryside, a large majority of older gay and lesbian people— perhaps 90%— consider themselves queer, while this is true of less than half of urban 70 year old gay and lesbian people. This gap illustrates the way older people in the countryside tend to use terms like “queer” in a way that’s more consistent with its historical connotation— which, remember, was not simply “different”, but specifically gay or lesbian. Hence, both self-reported attraction *and* the use of identity language are more traditional in the countryside, especially among older people.

It would be exhausting to reproduce all of the plots in Part II in their city/countryside versions, so we’ll confine ourselves to a few highlights to illustrate these general patterns:

1. The countryside is generally more conservative.
2. Young people in the city and countryside are fairly similar, while older people differ more.
3. Hence older people in the countryside tend to be *extra*-conservative.

Non-monogamy and polyamory are far more common in the city, once again showing more modest differences for young people but an increasing divergence with age.

Non-monogamy looks similar for city and countryside dwellers in their 20s, but in the city, it increases with age, while in the countryside, it decreases a bit with age, until by age 65 the city rate is double the countryside rate. The overall increasing pattern we noted in Chapter 5— which probably stems from people in long-term relationships eventually seeking additional relationships— is driven by the urban population, where these opportunities are probably more plentiful.

Similar patterns are in evidence when we look at the lesbian, gay, and bi populations. As with the other trends, this is probably owes to several effects: first, young people live online more, which does a lot to erase the geographic distinctions between city and countryside; but also, young people are likelier to still live where they were born. As we get older, we often move, especially in the US. This results in a geographic sorting of the population, an effect we’ll return to. Finally, insofar as people have some degree of flexibility with respect to their gender or sexuality (or any other aspect of their behavior and identity), they’ll be biased based on their environment. Social contagion is just as likely to suppress a latent minority orientation or identity in the countryside as to amplify it in the city.

It’s hard to overstate the divergent results of these effects on people’s mental models of what is “normal”. We see 10% of young people identifying as “Homosexual, gay or lesbian”, but among older people in the countryside, the number drops below 2%; for the earliest data from 2018, it’s closer to 1%. A property shared by one in ten people feels very different, psychologically, from one you believe to hold for only one in a hundred.

Unlike the usual trend toward greater frequency of minorities among the young, we saw an unusual, U-shaped pattern for non-binary identity in Chapter 10. Exploring its origin led us into an investigation of intersexuality and the recent reversal in intersex medical protocols. Breaking the non-binary curve down by urban vs. rural populations adds some color to this story.

As we’d expect, there are more non-binary people in the city than in the countryside— at *almost* all ages. Among the older cohort in the countryside, however, we see an even sharper upward turn than in the city; although the error bars are large, it looks like more 70+ year olds in the countryside identify as non-binary than city-dwellers, perhaps over 8%! Recall that the likely reason for this rise is the large number of intersex people who used to be arbitrarily assigned male at birth. Looking at intersex statistics may then help clarify what’s going on.

Although, once again, the error bars are large, what we see here is consistent with the broader idea that changes in culture and practices begin in the city, and propagate over time to the countryside. The first thing to notice is that knowledge of one’s own intersexuality is much more prevalent in the city than in the countryside, over all ages and regardless of sex assigned at birth. We can assume that the actual rate of intersexuality isn’t different, but the rate of diagnosis probably is. As the physician and sexologist David Oliver Cauldwell wrote back in 1948,[[9]](#footnote-30)

The hermaphrodite is not always easy to recognize. The positive hermaphrodite condition of a large number of individuals has not been determined until after the death of the individual. Diagnoses have been made, however, through deliberate biopsy, and through accidental discovery upon the initiation of surgical procedures for other reasons.

What was true in 1948 remains true today, especially among populations with less access to medical care or to intersex and trans communities— which is to say, outside the city. Even if they recognize an intersex birth, many more doctors in the countryside might still be following John Money’s advice to keep that person (and perhaps even their parents) in the dark. The shift toward assigning more intersex babies female at birth also seems to have taken place sooner and more decisively in the city.

If we assume that the city numbers are more accurate, this should also cause us to revise our estimate of the “real” rate of intersexuality (with the caveat that “reality” here is hard to define) upward yet again, to at least 4% of those assigned female at birth! All of those unacknowledged intersex people— as well as trans and gender-nonconforming people— are likely contributors to the outsized increase in non-binariness in among older people in the countryside, as with a 35 year old from Walla Walla, Washington, who wrote, “I’ve wondered if I’m intersex or closet trans.” Even to be able to formulate that question, and potentially have a conversation about it with a doctor, implies an awareness of these traits that older people, especially in the countryside, are less likely to possess.

One admittedly blunt way to summarize these patterns is that older people, especially in the countryside, are in a very real sense living in the past. Or, as cyberpunk author William Gibson memorably put it, “The future is already here— it’s just not very evenly distributed.”[[10]](#footnote-31)

1. George Lucas (ghostwritten by Alan Dean Foster). *Star Wars: From the Adventures of Luke Skywalker*. New York: Ballantine Books, 1976. As a great travel enthusiast with a cosmopolitan outlook, it’s tempting to interpret Foster’s different tone as reflecting his own sensibility. [↑](#footnote-ref-22)
2. Kinsey, *Sexual behavior in the human male*, p. 455 [↑](#footnote-ref-23)
3. A 38 year old man from Pearisburg, VA. [↑](#footnote-ref-24)
4. See Brakefield, Tiffany A., Sara C. Mednick, Helen W. Wilson, Jan-Emmanuel De Neve, Nicholas A. Christakis, and James H. Fowler. “Same-sex sexual attraction does not spread in adolescent social networks.” Archives of sexual behavior 43, no. 2 (2014): 335-344. “[P]eer influence has little or no effect on the tendency toward heterosexual or homosexual attraction in teens, and […] sexual orientation is not transmitted via social networks”. [↑](#footnote-ref-25)
5. In the 13th century, Cahokia, a settlement of the now lost Mississippian culture, may have had a population larger than that of contemporary London. [↑](#footnote-ref-26)
6. Survivalist bunkers in the back country full of high-tech gadgets, canned food, and weapons illustrate this with even more vivid irony. [↑](#footnote-ref-27)
7. A 19 year old man from Arlington, Texas. [↑](#footnote-ref-28)
8. A 33 year old man from San Francisco, California. [↑](#footnote-ref-29)
9. D.O. Cauldwell, Bisexuality in Patterns of Human Behavior, E. Haldeman-Julius Ed., 1948, p. 6. [↑](#footnote-ref-30)
10. <https://quoteinvestigator.com/2012/01/24/future-has-arrived/> [↑](#footnote-ref-31)