

Rethinking cities, from the ground up

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New work in anthropology, archaeology and psychology shows just how similar we are to ancient hunter-gatherers, and what this means for a more radical understanding of 21st century cities.

Cities begin in the mind — or so thought Elias Canetti.¹ Ancient hunter-gatherers must have pondered the existence of collectives much larger than the ones they actually lived in. Proof, he felt, was on the walls of caves, where they faithfully depicted species that moved together in uncountable masses. No doubt they also considered the unbounded society of the dead, outnumbering the living by orders of magnitude. Canetti speculated that cities began in the mind as ‘invisible crowds,’ when people could only picture their own societies escalating to rival those other collectives. Current advances in anthropology, archaeology, and the study of human cognition allow us to see that the Bulgarian-Austrian-British author was onto something.

From studies of modern hunter-gatherers, we get the idea that our capacity for social cohesion evolved in the context of small mobile foraging bands, comprising between 25 and 50 close kin. When foragers came together in larger groups — to share food, knowledge, or labour, or to inter-marry — these small bands were supposedly the building blocks. If we evolved to interact in such tightly bounded groups, then living in really big societies — cities, nations, and so on — goes against the evolutionary grain, and must require all sorts of ‘scaffolding’ to make it work: the invention of bureaucracy, central government, specialised agencies of enforcement, and so on.² This standard model of ‘traditional human society’ is actually a little more complicated. We also know now that it is wrong, and it is important to see why, because this begins to show what might be truly universal about cohesion in human societies.

The evolutionary story conventionally starts with discrete forager groups, ‘nested’ within a hierarchy. What does this actually mean? The basic idea is that elementary social units replicate at a variety of scales, like fractals in nature or mathematics; but unlike mathematical fractals, which have no upper limit, the growth of social fractals is supposedly constrained by a range of inherent factors, or at least this has been traditional scholarly wisdom for a long time. The most basic unit of ‘ancient’ human society was supposed to be the pair-bonded family, with shared investment in offspring. To provide for themselves and dependents, nuclear families were obliged to form larger ‘residential groups’ of roughly 100 or 150 persons. Biological relatedness was still the optimal criterion for inclusion, so in their composition these residential groups were supposed to resemble nuclear families, or slight extensions. As these larger groups formed, or so the theory goes, the social bonds linking them weakened, and conflicts arose. The larger the group, the less stable it was. Recent hunter-gatherers are supposed to exemplify this kind of primordial social system; but here comes the ‘worm in the bud.’

¹ Canetti, Elias. 1962. *Crowds and Power*. London: Gollancz.

² e.g. Dunbar, Robin I. M. 2010. *How Many Friends Does One Person Need? Dunbar’s Number and Other Evolutionary Quirks*. Cambridge, MA: Harvard University Press.

New work on the demography of living hunter-gatherers — drawing statistical comparisons from a global sample of cases, such as the Hadza of Tanzania and Australian Martu — shows that ‘nested’ social structures are not actually present.³ The key problem lies with the composition of ‘residential groups.’ It turns out that, on close inspection, primary biological kin actually make up less than 10% of their total membership. Most participants are drawn from a much wider pool of individuals who do not share close genetic relationships, are scattered over very large territories, and may not even speak the same first languages. Potentially, they include all those who recognise each other as Hadza, or as Martu, BaYaka, !Kung San, and so on.

All this may seem counter-intuitive. It is as though modern forager societies exist simultaneously at two radically different scales: one tight-bound, and the other virtually unbounded, with little in between. But from a cognitive angle, this is precisely the point. The neurological capacity to shift between scales is what makes human social cognition most obviously distinct from that of other primates.⁴ Modern foragers are no different in this way from modern city-dwellers or ancient hunter-gatherers. We all have the capacity to feel bound to myriad others who we may never meet: to take part in a macro-society, which exists most of the time as ‘virtual reality’ — a world of possible relationships with its own rules, roles, and structures that are held in the mind, and recalled through the cognitive work of image-making and ritual. Foragers may sometimes exist in small groups, but they do not — and probably have not ever — lived in small-scale *societies*.

None of which is to say absolute population sizes do not matter for social evolution. What it means is they do not matter in the kind of ways we tend to assume. In at least one sense, Canetti was right. Mass society exists in the mind before it becomes physical reality; and crucially, it also exists in the mind *after* it becomes a physical reality. Cities are a case in point. They are tangible things, but they are never stable. People constantly move in and out of view, sometimes on a daily basis, or seasonally for holidays and festivals, to visit faraway relatives, conduct business meetings, and so on. Yet cities have a life that transcends it all. This is not because of their absolute numbers. It is because we often think and act as people who *belong* to the city — as parts of a citizen body, as Londoners or New Yorkers. As the distinguished urban sociologist Claude Fischer put it:

Most city dwellers lead sensible, circumscribed lives, rarely go downtown, hardly know areas of the city they neither live nor work in, and see (in any

³ Bird, Douglas W. et al. 2019. “Variability in the organization and size of hunter-gatherer groups: foragers do not live in small-scale societies.” *Journal of Human Evolution* 131: 96–108; see also Hill, Kim et al. 2011. “Co-residence patterns in hunter-gatherer societies show unique human social structure.” *Science* 331: 1286–1289; David Wengrow and David Graeber. 2015. “Farewell to the childhood of man: ritual, seasonality, and the origins of inequality.” (The Henry Myers Lecture). *Journal of the Royal Anthropological Institute* 21 (3): 597–619.

⁴ Bloch, Maurice. 2013. *In and Out of Each Other’s Bodies: Theory of Mind, Evolution, Truth, and the Nature of the Social*. Boulder, Co.: Paradigm.

sociologically meaningful way) only a tiny fraction of the city's population. Certainly, they may on occasion — during rush hours, football games, etc. — be in the presence of thousands of strangers, but that does not necessarily have any direct effect on their personal lives. ... urbanites live in small social worlds that touch but do not interpenetrate.⁵

All this applies in equal measure to ancient cities (as Aristotle said of Babylon, '... its capture was, two days later, still unknown to a part of the city.'). These observations were made long ago, and might seem obvious, but placing them in the light of evolutionary debates is important, because they cast doubt on some deeply held convictions about how cities originated, and what they may yet become.

Was living in cities a difficult feat for our species to accomplish, causing all kinds of new social tensions; obliging us to conjure up solutions to unprecedented problems? For some this is where 'social complexity' really begins, with the forging of institutions and technologies to make organised life possible on an urban scale. For others, it means the point where we had to surrender basic freedoms to avert chaos, delegating our futures to new classes of administrators, priests, kings, and warrior-politicians to make decisions for us and maintain order. As we have seen, evolutionary studies now point in the opposite direction: living in cities may not have been difficult or counter-intuitive at all, because cities are a certain type of unbounded group, and — from the standpoint of human cognition — living in unbounded groups is effectively what we had been doing all along.

But what about the actual evidence of early cities? Since at least the days of Gordon Childe, the celebrated archaeologist working in the first half of the 20th century, scholars have tried to identify universal features of social evolution, associated with the novel scale of urban populations. Settlements inhabited by tens of thousands of people make their first appearance in human history around 6,000 years ago. In the earliest examples on each continent, we find the seedbed of our modern cities; but as those examples multiply, and our understanding grows, the possibility of fitting them all into some neat evolutionary scheme diminishes. It is not just that some early cities lack the expected features of class divisions, wealth monopolies, and hierarchies of administration. The emerging picture suggests not just variability, but conscious experimentation in urban form, from the very point of inception. Intriguingly, much of this evidence runs counter to the idea that cities marked a 'great divide' between rich and poor, shaped by the interests of governing elites.

In fact, surprisingly few early cities show signs of authoritarian rule. There is no evidence for the existence of monarchy in the first urban centres of the Middle East or South Asia, which date back to the fourth and early third millennia BCE; and even after the inception of kingship in Mesopotamia, written sources tell us that power in cities remained in the hands of self-governing councils and popular assemblies. In other

⁵ Fischer, Claude S. 1977. "Comment on Mayhew and Levinger's 'Size and the density of interaction in human aggregates'." *American Journal of Sociology* 83 (2): 452–455.

parts of Eurasia we find persuasive evidence for collective strategies, which promoted egalitarian relations in key aspects of urban life, right from the beginning. At Mohenjo-daro, a city of perhaps 40,000 residents, founded on the banks of the Indus around 2600 BCE, material wealth was decoupled from religious and political authority, and much of the population lived in high quality housing. In Ukraine, a thousand years earlier, prehistoric settlements already existed on a similar scale, but with no associated evidence of monumental buildings, central administration, or marked differences of wealth. Instead we find circular arrangements of houses, each with its attached garden, forming neighbourhoods around assembly halls; an urban pattern of life, built and maintained from the bottom-up, which lasted in this form for over eight centuries.⁶

A similar picture of experimentation is emerging from the archaeology of the Americas. In the Valley of Mexico, despite decades of active searching, no evidence for monarchy has been found among the remains of Teotihuacan, which had its magnificent heyday around 400 CE. After an early phase of monumental construction, which raised up the Pyramids of the Sun and Moon, most of the city's resources were channelled into a prodigious programme of public housing, providing multi-family apartments for its residents. Laid out on a uniform grid, these stone-built villas — with their finely plastered floors and walls, integral drainage facilities, and central courtyards — were available to citizens regardless of wealth, status, or ethnicity. Archaeologists at first considered them to be palaces, until they realised virtually the entire population of the city (all 100,000 of them) were living in such 'palatial' conditions.⁷

A millennium later, when Europeans first came to Mesoamerica, they found an urban civilisation of striking diversity. Kingship was ubiquitous in cities, but moderated by the power of urban wards known as *calpolli*, which took turns to fulfil the obligations of municipal government, distributing the highest offices among a broad sector of the *altepetl* (or city-state). Some cities veered towards absolutism, but others experimented with collective governance. Tlaxcalan, in the Valley of Puebla, went impressively far in the latter direction. On arrival, Cortés described a commercial arcadia, where the 'order of government so far observed among the people resembles very much the republics of Venice, Genoa, and Pisa for there is no supreme overlord.' Archaeology confirms the existence here of an indigenous republic, where the most imposing structures were not palaces or pyramid-temples, but the residences of ordinary citizens, constructed

⁶ Mieroop, Marc Van De. 2013. "Democracy and the rule of law, the assembly, and the first law code," in H. Crawford (ed.), *The Sumerian World*. Abingdon; New York: Routledge, pp. 277–289; Possehl, Gregory L. 2002. *The Indus Civilization: A Contemporary Perspective*. Walnut Creek: Altamira; Wengrow, David. 2015. *Cities before the State in Early Eurasia*. (The Jack Goody Lecture). Halle: Max Planck Institute for Social Anthropology; Chapman, John, Bissierka Gaydarska and Duncan Hale. 2016. "Nebelivka: assembly houses, ditches, and social structure." In J. Müller et al. (eds.), *Trypillia Mega-Sites and European Prehistory, 4100–3400 BCE*. London and New York: Routledge, pp. 117–132.

⁷ Froese, Tom, Carlos Gershenson and Linda R. Manzanilla. 2014. "Can government be self-organized? A mathematical model of the collective social organization of ancient Teotihuacan, Central Mexico." *PLOS One* 9 (10): e109966; Robb, Matthew H. 2017. *Teotihuacan: City of Water, City of Fire*. San Francisco: Fine Arts Museums of San Francisco and University of California Press.

around district plazas to uniformly high standards, and raised up on grand earthen terraces.⁸

Contemporary archaeology shows that the ecology of early cities was also far more diverse, and less centralised than once believed. Small-scale gardening and animal keeping were often central to their economies, as were the resources of rivers and seas, and indeed the ongoing hunting and collecting of wild seasonal foods in forests or in marshes, depending on where in the world we happen to be.⁹ What we are gradually learning about history's first city-dwellers is that they did not always leave a harsh footprint on the environment, or on each other; and there is a contemporary message here too. When today's urbanites take to the streets, calling for the establishment of citizens' assemblies to tackle issues of climate change, they are not going against the grain of history or social evolution, but with its flow. They are asking us to reclaim something of the spark of political creativity that first gave life to cities, in the hope of discerning a sustainable future for the planet we all share.

⁸ Fargher, Lane, Richard E. Blanton, and Verence Y Heredia Espinoza. 2010. "Egalitarian ideology and political power in prehispanic Central Mexico: the case of Tlaxcalan." *Latin American Antiquity* 21 (3): 227–251; Fargher, Lane et al. 2011. "Tlaxcallan: the archaeology of an ancient republic in the New World." *Antiquity* 85: 172–186.

⁹ e.g. Pournelle, Jennifer. 2003. *Marshland of Cities: Deltaic Landscapes and the Evolution of Mesopotamian Civilization*. University of California: San Diego.

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