

## Pattern in History

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I AM A HISTORIAN OF later medieval Mediterranean Europe with a research focus on the practice of law and justice. In response to the invitation to think about the status of knowledge in my field, I have been thinking, far less ambitiously, about what, if anything, I feel I know. The question invites humility, for as we contemplate the solemn majesty of knowledge, nothing is more certain than the depths of our own ignorance. But I am heartened by the results of the mental census I have been taking of the things that I know. I know that men and women in later medieval Europe married, paid taxes, and died. I know that notaries and scribes wrote things down. Less trivially, I know that some men in Marseille, one of the cities I study, were named “Guilhem” and some women were named “Alazais.” I know that people handled money and were used to it, used calendrical dates to categorize events, and thought about their place within the city in terms of residential quarters. I know that women acted as heads of household when circumstances required it, even to the point of managing family finances. To doubt such things, all of them referenced constantly in the records, would be to imagine that a mis-

chievous Clio, forging records galore, has been trading gleefully on our credulity.

Given that all this seems rather obvious, it is more interesting to think about what I don't know. To take a concrete example, a tax record from the municipal archive of the city of Marseille includes a single line entry, dated the 21st of November in the year 1360, indicating that Alazais Vasalha, identified in other sources as the widow of Guilhem, living in the *sixain* or quarter known as Sant Jaume, paid a tax of two livres and eight sous.<sup>1</sup> I don't believe I know for sure that any of this is true. In approaching sources like this, historians adopt an attitude of doubt, for we can never exclude the possibility that the person who wielded the pen was either mistaken or lying.<sup>2</sup> Here, the notary, confused in his notes, may have entered the wrong date or the wrong name. Or maybe the husband Guilhem had disappeared in a slave raid on the high seas some years earlier and, although declared dead, was serving as an infidel soldier for a potentate on the Barbary Coast. We cannot even be sure that his widow or wife Alazais paid any tax at all. For all we know, the notary was Alazais's cousin and made a fictitious entry as a favor to her.

These doubts may seem excessive, but none of them is fanciful. I once read a case from the city of Lucca in which a creditor named Graciano appeared in court to impound the goods of one of his debtors in arrears, a man named Simo. Several days and several pages later, the astonished notary of the court discovered that the debtor Simo, for reasons best known to himself, *had impersonated his own creditor* in order to impound his own goods. Like the notary, I was shaken by this experience. How many mischievous Simos are out there, trading gleefully on our credulity?

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This brief reckoning of knowledge and doubt leads to a rather peculiar conclusion. It turns out that everything that could have been seen, felt, or heard, everything that could have been attested in a written document, is subject to doubt. What I feel I know are facts that have no tangible or documentary existence, such as institutions, processes, networks, systems, customs, norms, social facts, and even probabilities. For the sake of convenience, I shall lump these disparate things together under the label “patterns,” and treat them as *aggregates* of events or objects. I can never know that any Graciano named in a document was the real Graciano, since a mischievous Simo may be lurking out there. Yet I believe that there was a legal process in late medieval Europe whereby creditors could have the goods of their debtors distrained.

What is strange is that the things that I know are not present in the record in the form in which I know them. Debt collection, to follow on this example, was a very complex process characterized by norms and shot through with individual strategies. The process is not encompassed by the rudimentary descriptions found in statutory law, and it cannot be extrapolated from any single act of debt collection. Similarly, no single document reveals the contemporary pattern whereby 5.93 percent of the baby girls born to Christian parents in mid-fourteenth-century Marseille were named “Alazais.” I know that this is very nearly true, because I calculated the figure just now, using my extensive data set. Knowledge like this does not exist in documents. It lurks somewhere, waiting to be discovered, in the spaces *between* documents. To look for pattern in history, in a faintly similar way, is to pull the hidden into the open.

None of what I know now was present to my mind when I entered the life of research back in 1990. Such things were known or knowable to all the scholars who have come before me, but you only feel you know something when you work it out yourself. The working-out process is inductive. A small and doubtful fact adds itself to

another of the same kind, and to another and another, until their cumulative weight resolves into the form or pattern that is the intangible essence of knowledge. Only when I had found several instances of the improbable word *toga* in fifteenth-century Massiliote sources did I come to accept that people really were borrowing an ancient Roman word to describe . . . what, a tunic? a cloak? That I don't know, though I expect that clothing historians do.

The flip side to this story is that I once found the Latin expression *augnum urseum terre* in a postmortem inventory and transcribed the phrase into my notes, not knowing what it meant. What was this: an earthenware thingamajig that was—I don't know, bearlike? With the passage of time, I came to doubt the existence of the object I had conjured into existence—and with good reason, for the first two words stubbornly refused to appear in any subsequent document, let alone any dictionary. Eventually, I took a closer look, and consulted a wise friend—and it turned out that a faint line of ink that I had unconsciously taken for an errant stroke of the notary's pen resolved itself as the final minim of the letter *m*. *Augnum* turned at once into the adjective *magnum*, and as the second word in turn became a noun, the wise eye of my friend saw that the notary had inaccurately rendered the sibilant as an *s*. It should have been *urceus*, a perfectly ordinary Latin word for a ewer or a jug. To this day, the digital image of *augnum/magnum*, like a Necker's cube, keeps flipping from one spelling to the next in my eye.

I was led to accept the reality of *toga* and the nonreality of *augnum* through the process of inductive reasoning. Within certain philosophical circles, the style of inductive reasoning so dear to historians has a bad rap. As Bertrand Russell once pointed out, an inductively inclined chicken, fed every day over a period of weeks, will become convinced that the arrival of food is as inevitable as the rising of the sun—only to have the sad truth of its parlous condition revealed when the farmer arrives to wring its neck.<sup>3</sup> But let's be honest: Rus-

sell screwed up. I accept that the patterns that emerge from the sources approach the axis of truth asymptotically. They will never touch it. At no point does the historian expect to leave the realm of induction and enter the realm of truth.

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Like chickens, historians find patterns in the world. When I find them, however, I don't just pat myself on the back for a job well done. The patterns become tools, because once I become convinced of their existence I can use them to deduce the probable existence of things that I cannot actually see—doubtless a trick that would cause Russell to turn in his grave. Here's a trivial example: if I see the letters "Alaz[ . . .]" ending in a wormhole that is roughly three letters long, and if the context is such that I am expecting to see a personal name, it is nearly without hesitation that I supply the missing letters "-ais" in my notes. Papyrologists and cuneiform specialists, who boldly go where I dare not, have deduced the existence of countless words in this manner, as part of what Francesca Rochberg describes in her essay as the ongoing effort to piece together the abundant shreds of Mesopotamian civilization.<sup>4</sup> The systems theorist Gregory Bateson, the silent amanuensis of this article, offers a subtle but characteristically brilliant description of what is going on here:

To guess, in essence, is to face a cut or slash in the sequence of items and to predict across that slash what items might be on the other side. . . . A pattern, in fact, is definable as an aggregate of events or objects which will permit in some degree such guesses when the entire aggregate is not available for inspection.<sup>5</sup>

Here, the slash to which Bateson refers lies between the letter z and the wormhole. In effect, I am making a prediction: should I chance to stumble across another copy of the same document, I predict that I will find “Alazais” fully spelled out—unless some truly mischievous bookworm has been at work in both documents.

Remarkably, I don’t have to do any work to arrive at this conclusion. The “Alazais” intuition arrives automatically, generated by the system 1 style of processing described by dual-process theory.<sup>6</sup> This is the mind’s version of the embodied skill described by Zhuangzi in his parable of the wheelwright, retold in this volume by Zhang Longxi. In a career spanning seventy years, the wheelwright gradually accumulates a knack for making the perfect wheel.<sup>7</sup> I can never declare the truth of my own intuition, of course, in the same way that the wheel never is quite perfect. Even so, in the case of the missing parts of “Alaz[. . .],” the asymptote is very, very close to the axis of truth. I can say this because my feel for this particularly obscure game is well-developed—indeed, rather tragically overdeveloped, given all the useful things I probably ought to have been learning over the years. The easy and intuitive nature of the process is rather worrying. It means that I know things without being aware that I know them.

What applies in the trivial case of spelling applies as well to patterns that are far more interesting and significant. As my colleague Gabriel Pizzorno has pointed out to me, the power of pattern as an analytical device is well-known to sociological and systems theory, where it forms part of a style of reasoning known as “predictive modeling.” Being a historian, of course, I didn’t bother reading the manuals of sociological method before I went to the archive. Stubbornly, and inductively, I worked it out for myself. This means that although I understand predictive modeling less well than any sociologist, I understand it more intuitively.

Predictive modeling is an important component of the styles of reasoning I use to arrive at the knowledge of things. Let me give an ex-

ample. Several years ago, in the early stages of a project concerning systems of debt collection in later medieval Europe, I found myself wondering exactly how and why debtors gave their consent to have their things seized by agents of the court.<sup>8</sup> The system worked like this. When a creditor such as the real Graciano decided that it was time to demand the repayment of Simo's overdue debt, he or she came to the court to initiate proceedings against the debtor. A sergeant was sent to the debtor's house, where he seized goods roughly equivalent in value to the size of the debt and used them to reimburse the creditor. Simple enough. But put yourself in the debtor's shoes. A sergeant knocks on the door and politely asks for your permission to plunder the house. How do you know that the sergeant really is a sergeant and not some bandit who is impersonating a sergeant?

As I contemplated the scene in my imagination, I found myself formulating two hunches. First, I had a hunch that the sergeants must have worn uniforms or insignia. Second, I had an even stronger hunch that some very clever bandits, inspired by the example of rogues like Simo, would have found ways of getting around this. I went looking in other records for evidence that might support either one of these hunches. The confirmation of the first eventually popped up in the city's statutes—sergeants were required to wear insignia. The second hunch was at least partly confirmed in criminal court records, where I found several prosecutions of sergeants who had gone rogue, forging licenses in order to plunder several unfortunate wretches in the countryside. In a sense, the rogue sergeants were impersonating themselves.

The process of debt collection that I had reconstructed allowed me to predict the existence of something that was not actually present in the evidence that I had initially used to piece together the elements of the process itself. How weird is that? Somehow, I had managed to transform things of which I was nescient, that is to say, things that I was not even aware *could* be known, into things of which

I was merely ignorant.<sup>9</sup> As it happens, the archival materials from later medieval Europe are rich enough that I can confidently expect to remedy much of the ignorance I constantly generate for myself out of nescience. But in other time periods, where evidence is thinner, sometimes the only remedy for ignorance is little more than suggestive or proxy evidence. Sometimes even that evidence is so thin that one's position on the asymptote never gets anywhere near the axis of truth.

In this vein, I have been deeply impressed by the way in which Paleolithic archaeologists like my coauthor Mary Stiner and her colleagues produce knowledge. They begin with evidence that seems very insubstantial indeed. Through the act of consulting analogous evidence, they devise plausible scenarios and, in some cases, manage to render them ever more robust (they would never dare to say "proven").<sup>10</sup> The role that imagination can play in this process has considerable aesthetic appeal to me, if I can admit that I often find myself moved by the aesthetic qualities, rather than truth claims, of a given argument. From time to time, my own sources are thin enough that I, too, have to use this method. For the most part, however, historians like me who work on fourteenth-century Europe are mired in the dreary certainties of modernity. We have access to such an appalling amount of documentation that there is rarely any need to tease knowledge out of intractable sources in this beautiful and delicate way.

Whether it makes sense to refer to an aesthetics of knowledge is an open question. In recent years I have found myself thinking a great deal about why it is that economists and quantitative sociologists are prone to locate the explanations for trends and events at a macrohistorical level, whereas historians and anthropologists and the like are drawn instead to the particular. According to a theory proposed by the economist Jessica Reyes and others, to take an example, the use of lead in gasoline from the 1920s onward led to ele-



vated levels of lead in the environment.<sup>11</sup> One of the effects of exposure to lead among children is the reduction of inhibitions, leading, as they become adults, to higher rates of aggressive crimes. The introduction of unleaded gasoline in the late 1970s, by this argument, was the principal factor behind the 56 percent drop in rates of violent crime half a generation later, in the 1990s, as children who experienced lower levels of lead exposure grew into adulthood. But a historian, a sociologist, or an anthropologist seeking to explain a particular act of violence in the decades before 1990 would never have recourse to an explanation rooted in the antagonist's exposure to lead. Instead, he or she would locate the explanation in biographical or social factors. Roger Gould, for instance, explains certain acts of violence as strategies of social negotiation that take place whenever the social rank of the two parties to violence is ambiguous.<sup>12</sup> Any change in the rates of aggressive crime, accordingly, should be attributed to changing levels of social ambiguity.

What induces Reyes to explain aggression through data, and why does Gould prefer to work up from narrative? Neither of the proffered explanations is better than the other; they operate on different orders of magnitude. The answer, I suggest, lies in the fairly banal claim that the two scholars simply have different tastes. This assertion, in turn, suggests that whole disciplinary formations may be undergirded by aesthetic preferences. This should induce us to inquire into the path dependencies of disciplinary recruitment. The conditions present at the formation of a given discipline, including the aesthetic tastes of the founders, are locked in by the fact that disciplines subsequently reproduce themselves by attracting scholars of a similar cast of mind. That cast of mind includes a shared aesthetic appreciation for the potential modes of explanation. An initially contingent aesthetic, by this argument, could have become locked in as a disciplinary aesthetic, rendering subsequent disciplinary change more difficult than it ought to be. For me, this rather abstract claim

has real-world analogues. I like numbers in much the same way that I like patterns. These days, however, I teach history majors who, by and large, were drawn to history precisely because they are allergic to numbers. Such an allergy, I fear, will continue to be replicated in history's new recruits.

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Let us return to the question of what, if anything, inspired the hunches that I described earlier. Those hunches, as I mentioned, aren't "in" the sources. They come about whenever I take heed of the many patterns that have docked themselves, often unbidden, somewhere inside my mind, and apply them to the problem at hand. What are these patterns and where do they come from? However intangible they may be, do they have any kind of objective reality?

In an essay dedicated to the task of unpacking his own habits of thought, Bateson describes how his intuitive feel for analogy encouraged him to look for broad similarities in pattern, form, and process across different domains of human knowledge, such as human society on the one hand and animal morphology on the other. In the essay, he compares Western society to an earthworm. In a subsequent essay summarizing the lessons he learned in this way, he asks: "Is there an interdisciplinary science which should concern itself with such analogies? What would such a science claim as its subject matter? And why should we expect such far-flung analogies to have significance?"<sup>13</sup> His answer begins like this:

My mystical view of phenomena contributed specifically to build up this double habit of mind—it led me into wild "hunches" and, at the same time, compelled more formal thinking about those

hunches. It encouraged looseness of thought and then immediately insisted that that looseness be measured up against a rigid concreteness.<sup>14</sup>

In this particular case, he was referring to a hunch that had led him to the belief that a certain New Guinean people, the Iatmul, had a society that was not at all like an earthworm. Instead, Iatmul society was organized on the principle of radial symmetry characteristic of the morphology of a jellyfish.

Here's the payoff. However wild the hunch—and this one seems pretty wild—it invited him to ask questions that hadn't previously occurred to him:

I could now look again at the Iatmul material to determine whether the relationship between the clans was really in some sense symmetrical and to determine whether there was anything that could be compared with the lack of metamerism differentiation.<sup>15</sup>

Reading Bateson, I recognized one of my own habits of mind when it comes to turning nescience into ignorance. Early in my career, I was interested in studying the spatial grammar used in later medieval Europe to identify the location of a house or a family.<sup>16</sup> I wanted to know how the diversity of address types in the thirteenth and fourteenth centuries gave way to the relatively uniform addresses we use today. To me, the pattern seemed very similar to what Stephen Jay Gould described in his book *Wonderful Life*, where the wild diversity of Precambrian life forms was whittled down, over a period of several million years, into the comparatively stunted array of phyla we have today.<sup>17</sup>

In the broadest sense, my hunch was that the trends afoot in later medieval Marseille were driven by a process analogous to evolution by natural selection (in a very small way, I count myself among the distant intellectual descendants of Charles Darwin's extraordinarily

fertile text).<sup>18</sup> Evolution, after all, is itself a pattern that is visible only across aggregates of evidence. Now, evolution requires organisms. I had plenty of those, or at least their textual equivalents. In the analogy, they consisted of sets of words found in the documents of the time period, such as “Alazais Vasalha is a resident of the *sixain* of Sant Jaume.” But evolution also requires a habitat and a process of selection. I didn’t see these right off the bat, but the hunch led me to look for them, in much the same way that later in life, I went looking for insignia and bandits-impersonating-sergeants. Drawing from the sociolinguistic literature, I came to a conclusion that I thought was interesting: namely, that conversation itself constituted the “habitat” in which verbal descriptions of space evolved.

A style of reasoning that allows for predictive modeling—or “wild hunches,” to use Bateson’s far more interesting language—takes the historian beyond induction. Knowledge, in this view, is made by the dynamic feedback between induction and deduction. The intuitions that dock themselves in the mind point to the presence of patterns that have analogues across the spectrum of knowledge. The patterns, whatever their source, then drive the formulation of hunches. The hunches are either confirmed or dismissed, but in the process, new intuitions emerge.

So far, I have dodged the question of whether the patterns themselves have an objective reality, whatever “objective” might mean in this context. I am not enough of a philosopher to know whether a naming convention for little girls or an institution like debt collection can be said to be objectively “real.” But if reality comes in degrees, I would suggest that intangible patterns such as these are more real or at least more useful than the equally intangible intellectual abstractions we use to organize the things of this world. I doubt that the sociological category “artisan” has an existence that is independent of the social science theory that requires us to use the term

when we analyze certain human societies. Our use of the conceptual framework inherent in a term such as “artisan,” as G. E. R. Lloyd suggests, may even distort our ability to understand the past on its own terms.<sup>19</sup> By contrast, even though I cannot touch a feedback effect within a complex system, I know that it is there. What is more, I know that it is there regardless of whether I am present to observe its effects. To believe otherwise is to fall into a kind of Hegelian philosophical idealism—to imagine that the world, and its processes, cannot exist without my consciousness. One of the reasons that I like to think that patterns I have discovered have an objective reality lies in the rather mystical belief that I did not willfully think them.

If patterns of every sort have at least some degree of objective reality—whatever I mean by the word “pattern,” something else I have largely dodged in this essay—then the *pattern* of patterning, or what it means to be a pattern, is something we can study and even know. This is what Bateson had in mind when he advocated an interdisciplinary science concerned with analogies. The idea here is that metaphors and analogies should not be dismissed as “merely” metaphorical or analogical. When we reach for an analogy, we are giving expression to an intuition regarding a similarity of form that we can, in some objective sense, seek to understand—among other things, through conversations with colleagues in other fields, as Simon Goldhill recommends in his essay.<sup>20</sup> Wherever these forms and patterns are to be found, they reside beyond the disciplines themselves, and even beyond the magisteria. And that is a hopeful conclusion. It is hopeful for those of us in the humanities who feel pressure to explain the relevance of our work. I may be interested in pattern in history, but if the patterns themselves reside beyond history, then the insights I can bring to bear on their form are neither more nor less worthy than those of any other scholar in any other discipline. It means that we are all full partners in the wonderful business of knowing.

## Notes

1. Archives municipales de la Ville de Marseille EE 55 A, p. 43.
2. The doubt stance is usually attributed to the great German historian Leopold von Ranke. There are many learned studies of the impact of the Rankean method, but one of the best ways to understand the approach is to browse through one of the contemporary methodological manuals, such as Charles Victor Langlois and Charles Seignobos, *Introduction to the Study of History* (New York: Holt, 1898).
3. Bertrand Russell, *The Problems of Philosophy* (New York: Holt, 1912), 97–98.
4. Francesca Rochberg, “These Bones Live!” *KNOW* 1, no. 1 (2017): in this issue.
5. Gregory Bateson, *Steps to an Ecology of Mind* (San Francisco: Chandler, 1972), 413.
6. As pointed out in the contributions to Daniel Kahneman, Paul Slovic, and Amos Tversky, eds., *Judgment under Uncertainty: Heuristics and Biases* (Cambridge: Cambridge University Press, 1982), all forms of judgment are capable of being influenced by cognitive biases. In practice, this means that we should not be overly trusting of our intuitions. I am referring here, however, to the embodied forms of skill or knowledge arising from system 1 processing that is valorized in the early chapters of Daniel Kahneman, *Thinking, Fast and Slow* (New York: Farrar, Straus & Giroux, 2011).
7. Zhang Longxi, “East-West Comparative Studies: A Challenge and an Opportunity,” *KNOW* 1, no. 1 (2017): in this issue.
8. Daniel Lord Smail, *Legal Plunder: Households and Debt Collection in Late Medieval Europe* (Cambridge, MA: Harvard University Press, 2016).
9. For discussions of the important distinction between nescience and ignorance, see the essays in Cornel Zwierlein, ed., *The Dark Side of Knowledge: Histories of Ignorance, 1400 to 1800* (Leiden: Brill, 2016).

10. For example, Steven L. Kuhn, Mary C. Stiner, David S. Reese, and Erksin Gülec, "Ornaments of the Earliest Upper Paleolithic: New Perspectives from the Levant," *Proceedings of the National Academy of Sciences of the United States* 98, no. 13 (2001): 7641-46.
11. Jessica Wolpaw Reyes, "Environmental Policy as Social Policy? The Impact of Childhood Lead Exposure on Crime," *B.E. Journal of Economic Analysis and Policy* 7 (2007): article 51, <http://www.bepress.com/bejeap/vol7/iss1/art51>.
12. Roger V. Gould, *Collision of Wills: How Ambiguity about Social Rank Breeds Conflict* (Chicago: University of Chicago Press, 2003).
13. Bateson, *Steps to an Ecology of Mind*, 153-54.
14. *Ibid.*, 75.
15. *Ibid.*, 77. "Metameric differentiation" refers to a morphological process where one part of an organism, as it develops, creates difference in adjacent parts. It explains the process whereby the digestive tract of an earthworm, or a human for that matter, ends up with a mouth at one end and an anus at the other.
16. Daniel Lord Smail, *Imaginary Cartographies: Possession and Identity in Late Medieval Marseille* (Ithaca, NY: Cornell University Press, 2000).
17. Stephen Jay Gould, *Wonderful Life: The Burgess Shale and the Nature of History* (New York: Norton, 1989).
18. Scott Montgomery, "The Darwin Complex," *KNOW* 1, no. 1 (2017): in this issue.
19. G. E. R. Lloyd, "Where Now for the Interdisciplinary and Cross-Cultural Study of the Unity and Diversity of the Human Mind?" *KNOW* 1, no. 1 (2017): in this issue.
20. Simon Goldhill, "How Interdisciplinary Is God?" *KNOW* 1, no. 1 (2017): in this issue.