

How and Why Do Social Collectives Inhibit Insights?

by Patrick Lambe

Here is a set of behaviours which will be familiar to anyone with experience of certain types of bureaucratic organizational culture. These behaviours also have a strong impact on whether insights reached by individuals in an organization, ever get a reasonable chance of being aired, listened to, recognized, or acted upon.

- (1) Insist on doing everything through "channels." Never permit short-cuts to be taken in order to expedite decisions.
- (2) Make "speeches." Talk as frequently as possible and at great length. Illustrate your "points" by long anecdotes and accounts of personal experiences. Never hesitate to make a few appropriate "patriotic" comments.
- (3) When possible, refer all matters to committees, for "further study and consideration." Attempt to make the committees as large as possible — never less than five.
- (4) Bring up irrelevant issues as frequently as possible.
- (5) Haggle over precise wordings of communications, minutes, resolutions.
- (6) Refer back to matters decided upon at the last meeting and attempt to re-open the question of the advisability of that decision.
- (7) Advocate "caution." Be "reasonable" and urge your fellow-conferrees to be "reasonable" and avoid haste which might result in embarrassments or difficulties later on.
- (8) Be worried about the propriety of any decision — raise the question of whether such action as is contemplated lies within the jurisdiction of the group or whether it might conflict with the policy of some higher echelon.

When we conduct instant polls at workshops and conferences, almost everybody can relate at least some of these behaviours to their current workplace. Most honest people will admit that they have at some stage or other exhibited those same behaviours but had good reasons for doing so.

What is curious about this list is that it comes from a 1944 *Simple Sabotage Field Manual* produced by the Office of Strategic Services (OSS) (predecessor of the Central Intelligence Agency), intended for use in enemy occupied Europe. These were deliberate behaviours to be propagated by saboteurs and intended to slow down and

debilitate the efficiency and effectiveness of companies and organizations serving the enemy's economy (OSS, 1944).

It's curious because organizations seem naturally to produce behaviours that look like self-sabotage. It illustrates the strange fact that organizations at a macro level seem to behave in many ways contrarily to common sense. If organizational life was simply the accumulation of individual decisions and individual rationality, we would have to believe that the majority of people – or at least the most influential people – in the organizations that exhibit these behaviours are evil saboteurs determined to bring their company to the ground.

And yet the people who exhibit these behaviours often have rationalizations that appear to justify these behaviours in their specific contexts. And the hypothesis that organizations are full of cadres of evil, self-justifying saboteurs has to be a universal hypothesis, because these behaviours appear across different cultures, and throughout the history of large-scale organizational life. For this hypothesis to hold, we also have to find ways of excluding the occasions when our own behaviours match the sabotage pattern, since we are neither evil nor saboteurs, and have good reasons for acting in suspiciously saboteurish ways. The application of Occam's Razor seems to suggest that the evil saboteur hypothesis seems to involve too much effort to be sustainable.

There is an alternative hypothesis to the evil saboteur hypothesis, which is that organizations (and other kinds of social collective) produce distinct and predictable patterns of behaviour independently of individual intentions, and which have evolved to limit the power of individual actors – in fact, which are specifically designed to limit the speed with which new ideas and innovations can be incorporated into the social collective. This is what I want to explore in this paper.

These patterns of behaviour are emergent and unintended. Collectives do not sit down and decide by consensus to act in these ways. They just happen. But there does seem to be a “grammar” of collective behaviours, where specific kinds of circumstance will produce specific kinds of social response, and which therefore makes them predictable.

There are two ideas here:

- (1) social collectives produce unintended (ie never deliberately planned by individuals or groups of individuals) habits of thinking and behaving, and provide those habits to their members – and these habits have predictable, discoverable “grammars” rooted in the circumstances of the social collective and its needs; and
- (2) the natural “grammar” of social collectives in response to insight and innovation is to impose friction on the absorption of new ideas.

If we understand the grammar of how social collectives naturally respond to insight, perhaps we can understand how to work with the insight-activation mechanisms of that grammar, and avoid or mitigate the effects of the insight suppression mechanisms. Let's look at each of these ideas in turn.

(1) Social Collectives Have Discoverable, Unintended Grammars of Behaviour

Let's look at the "grammar" idea.

Geoffrey West, former President of the Santa Fe Institute at Los Alamos, is a physicist who has turned his attention to the mathematical patterns in social collectives. He and his colleagues have studied patterns of growth and activity in two types of collective: the city and the corporation. He compared these patterns with patterns of growth and activity in biology, and found some surprising similarities and differences.

In biology there are predictable patterns in how life forms scale in size – for example, metabolic rate slows down as organisms get bigger, ie they get energy efficiencies of scale, and this is at a completely predictable rate. Increasing the size of an organism by 10,000 times only requires a 1,000 times increase in energy consumption. This is consistent across all forms of biological life.

The interesting thing is that this is true of cities as well. As cities get bigger, the number of gas stations (and other measures of energy consumption) scale sub-linearly at roughly the same rate as in biological life. Sub-linearly means simply that energy consumption scales slower than size. Organisms and cities get completely predictable economies of scale. West can look at the population size of any city on the planet, and predict with reasonable accuracy the characteristics of the infrastructure: the number of gas stations, the total length of electricity cables, the length of roads.

The decisions of planning committees, urban infrastructure planning policies and designs, execution effectiveness and maintenance capabilities of powerful individuals and implementation teams seem completely irrelevant to the scale of urban infrastructure – though they are undoubtedly relevant to its physical production. Nobody decides how many gas stations to build in a city. But all cities produce predictable numbers of gas stations on principles that work above the individual cognitive level.

Cities are also different from biological organisms, but are different again in predictable ways. Biological organisms exhibit sigmoidal growth – ie they follow an "s" curve, growing quickly on a steep curve, and then slowing before they plateau. Almost all biological organisms have a fixed lifespan and then die. By contrast most cities show exponential, unlimited growth, and they are remarkably resistant to dying. You can drop a nuclear bomb on a city and it will recover (Bettencourt et al 2007).

Innovation and insight are critical mechanisms in this divergence from the expected biological constraints of life – in theory cities should be inhibited by limits on resources, like any other organism. But the pattern of human life in cities has been to exploit available resources to an imminent point of collapse, and then to innovate its way out of collapse through the introduction of technology and new ways of interacting. Ronald Wright's 2004 book *A Short History of Progress* traces such cycles of imminent (and real) collapse and innovation associated with urban life from Bronze Age Mesopotamia onwards (Wright 2004).

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Geoffrey West observes that one of the costs of continuing growth is that innovation cycles need to get faster and shorter in order to maintain the biological imperative of growth with greater economies of scale. So there is a counter-biological mechanism at play – as organisms get larger, metabolisms slow down, but as cities grow, the pace of life gets faster. This too scales predictably with size – from behavioural indicators as diverse as average wages, to crime rates and average walking speeds in the streets of the city. And the faster things get, the faster innovation has to get, to keep up.

Corporations, on the other hand, behave more like biological organisms than cities. They also have a sigmoidal pattern of growth, and as they get larger their efficiencies of scale (measured by their ability to squeeze profit out of revenue) diminish to a plateau. West claims that the limits on growth seem to kick in at a value of half a trillion dollars. And all corporations eventually die. (For the sake of the illustration, we are ignoring other forms of institutional organizations, such as churches and government organisations).

This is an important insight – that different kinds of social collective operate according to different rules. Cities can outwit the natural constraints on their growth and achieve improbable longevity, where corporations cannot. Both forms have predictable, but distinct grammars of behaviour. The distinguishing factor in cities seems to be the ability to leverage innovations through having very porous boundaries and identities.

Cities are open networks, whereas corporations are closed networks – as West phrases it, “... one of the great things about cities is that [they support] crazy people... This is in complete contrast to companies, with the exception of companies maybe at the beginning ... Indeed, if you go to General Motors or you go to American Airlines or you go to Goldman Sachs, you don't see crazy people. Crazy people are fired. Well, to speak of crazy people is taking the extreme. But maverick people are often fired.” (West, 2011; Bettencourt et al 2007).

Corporations cannot work like cities. As soon as you “stiffen” the structure, impose boundary control, and add definition to the identity of a corporation (which you need to do in order to scale activities while obtaining economies of scale), you automatically turn into a non-city organism.

Conversely, cities cannot innovate their way out of collapse by following the behavioural patterns of the corporation. In fact, economic studies of innovations in society suggests that cities use the life and death cycles of corporations to introduce a natural selection mechanism for innovations, that sustains their continuing growth (Ormerod, 2005).

Innovations like the computer mouse and the WYSIWIG interface may look like flashes of insight carried by individuals (and these are the stories we tell ourselves), but these insight often have complex ancestries in different organizations and individuals; and where they get decisively exploited is often not where the original insights and ideas were born.

The idea for the computer mouse came from Douglas Englebart in the 1960s. Xerox PARC operationalised it in the late 1970s, but it was unreliable and expensive. It took

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an upstart, profit-hungry Steve Jobs at Apple to ask design firm IDEO to design a robust, reliable mouse for under \$15. As Malcolm Gladwell put it, “If you lined up Engelbart’s mouse, Xerox’s mouse, and Apple’s mouse, you would not see the serial reproduction of an object. You would see the evolution of a concept.” Each stage of evolution required a different kind of organizational setting for it to happen (Gladwell 2011).

There is a sense in which cities need corporations to die and get born in order to bring needed innovations forth. Cities consume corporations. Innovations and the insights that spark them evolve across multiple organizations not just within single organizations.

So we have established that social collectives can exhibit predictable patterns of behaviour at macro levels. But average walking speeds and crime rates don’t get us close enough to the idea that social collectives can also impose distinct thought patterns on their members. We need to get to this level of understanding in order to see how organizations suppress or exploit insights.

The so-called “Arab Spring” of 2010-11 raises questions directly related to our concern.

What sparks an apparently spontaneous revolution, where people from all walks of life go out into the street and defy ruthless and violent regimes for lofty ideals? What makes them persist in an idea when death, injury and persecution are real and pervasive threats? Why does it happen at one specific time and not at the many other times that the regime has been tolerated, supported or complied with?

A provocative paper from a group of researchers at the New England Complex Systems Institute argues that the outbreaks of riots across North Africa and the Middle East can be correlated with the FAO Food Price Index (see Figure 1 below). When food prices rise above a certain threshold, the theory says, anti-government violence will break out somewhere. The higher the food price, the more violence there will be (Lagi et al 2011).

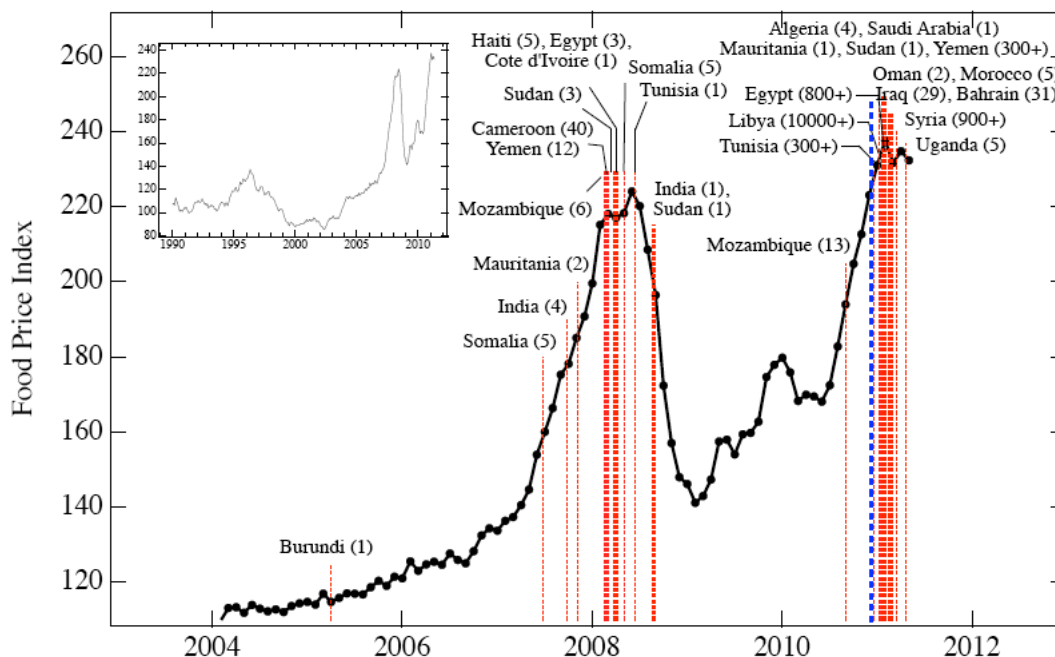


Figure 1: FAO Food Price Index fluctuations 2004-2011 with red lines showing major unrest and riots – figures in parentheses indicate the number of deaths – from Lagi et al 2011

Clearly the uprisings associated with the Arab Spring go far beyond being food riots. There were distinct contagion effects from identification with uprisings in neighbouring countries, as well as precipitating and reinforcing factors beyond food security.

But the argument that food security is a predictable precipitating factor for sudden outbreaks of intolerance towards ruling regimes is an interesting one – and we can see circumstantially that uprisings precipitated from one motive (employment security in Tunisia) were quickly co-opted for other motives (tribal rivalries, old scores, political power struggles, religious fervour, desire for democracy and self determination).

All of this is collectively produced behaviour. It has a clear focus and intent (to bring down the governing regime and replace it) and opportunities are optimized by individuals and groups, but none of it is intentionally planned as a whole. Nor could it be. It is the shaped and focused collective product of many tens of thousands of people going out into the streets of different cities with a wide variety of motives and intentions. The presence of influential leaders who articulate and rationalize the collective's action, may make it look intentional and deliberate, but the grammar and logic of this behaviour sits above what goes on in individual people's brains.

However the fact that such collective behaviours appear to have predictable elements raises the possibility that a study of collective behaviours can allow us to modify or avoid the undesirable effects of these behaviours. For example, if we want to increase the likelihood of anti-government uprisings, we should impose stresses on food security. If we want to increase the probability of calming things down, we need to bring food prices down.

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We have argued that social collectives can harness different motivations into concerted and specific courses of action. Can they provide patterns of belief to their members, as well as patterns of behaviour?

The late anthropologist Mary Douglas, thought so. She observed in her classic collection of essays *Risk and Blame* that almost all societies, regardless of geography, hold to concepts of witchcraft and they practice witch-killing, at some point in their history. The concepts and practices are typically directed at weak, marginal and non-productive members of the community – eg the very old, the very young, or the mentally incapacitated.

They seem to arise spontaneously and flourish in societies that are under stress from resource constraints, rapid change and uncertainty, and where there is weak central leadership and governance. Concepts of witchcraft and practices of witch killing die out, not as a result of scientific rationalism taking over from primitive superstition as popular notions would have it, but when social mechanisms for assigning blame and punishment, mature with a strong legal system and transparent disinterested government.

For example, the practice of witch-killing is currently widespread in Africa, and has been so for decades. In 2008 Al Jazeera estimated that over a hundred women were murdered on suspicion of witchcraft every year in Tanzania alone (Al Jazeera 2008).

Belief in witches is not just a rural phenomenon – it exists in cities as well, alongside mobile phones and automobiles. In Kinshasa, the capital of the Democratic Republic of Congo, for at least the past decade, it is estimated that thousands of children have been living on the streets after having been thrown of their homes, accused of witchcraft by their families. Some have been tortured, others killed (Vine, 1999; Crawford, 2008).

This is not confined to Africa. At least two notorious child abuse cases in the UK that led to the deaths of the children involved had suspicions of witchcraft or possession by evil spirits in their toxic mix.

Witch killings seem to be a phenomenon of communities under stress. The most egregious killings in the Africa of the past few years have been in places where war, election violence, political instability, land reform and tribal conflicts have compounded the existing problems of endemic poverty and weak governmental and legal institutions. The violence against accused witches has often been instigated by close family members or neighbours. Stresses, grudges, competition and envy all play their part.

From the 1950s to the 1970s, a group of Manchester anthropologists traced the apparent links between spikes in witchcraft accusations and the presence of social and economic stresses. They interpreted this association as an evolved functional group behaviour aimed at keeping the group size at a manageable scale (Gillies, 1976:xxiv).

Among the Azande tribe, who inhabit the region where the Democratic Republic of the Congo, south west Sudan and Central African Republic meet, there was a belief that witches could only send their spirits to do harm within walking distance of their

bodies; the anthropologist Evans-Pritchard believed this drove Azande families in pre-colonial times to live in small, scattered homesteads rather than in large villages – a strategy perfectly suited for a relatively resource-poor landscape where contagious disease was prevalent (Evans-Pritchard, 1976: 12-13). Scatter worked well for nutrition as well as limiting contagion. Beliefs provided by the culture preserved a beneficial way of living.

The argument that witchcraft belief is an evolved cultural behaviour would certainly explain its apparent universality, and it would also explain why witch killings often seem to focus on the more marginal, less productive members of a community, the very young, and the very old.

The most telling sign of witchcraft which was described to Evans-Pritchard by his Azande informants in the 1920s is still in wide circulation in the same region today: “One knows a witch by his red eyes” (Evans-Pritchard, 1976:2). This signal seems almost perfectly designed to identify the old, especially old women, who frequently have red, irritated eyes from years of cooking over smoky fires (Evans, 1999).

Now we can see two distinct layers of narrative emerging: one at the level of troubled individuals, for whom belief in witches gives a response strategy when afflicted with misfortune; and one at the level of the community, which has found a way to activate community preservation strategies when its members encounter undue environmental stress. Let’s look at each in turn.

Witchcraft allegations are very specific, and very grounded. They arise from an experience of misfortune, whether relatively minor such as a loss or an injury, or a major harm such as a severe illness or death.

In Kinshasa, for Pandi and Kilumbu Mahonda, it is the breakdown of the icebox, followed by repeated problems with the maize grinder, followed by a car accident and money going missing from the home, that leads them to suspect their two sons, Ikomba, 8, and Luwuabisa, 10, of being witches (Vine, 1999).

In London, “Kindoki [witchcraft] is something you have to be scared of because in our culture kindoki can kill you and destroy your life completely. Kindoki can make you barren. Sometimes kindoki can ruin your chances of staying in this country. The authorities will arrest you and deport you and kindoki can be part of it.” (BBC, 2005).

In northern Tanzania, at a village council called to persuade the villagers that witchcraft does not exist, a man exclaims, “Three times I’ve found that my door was open, and all our food was eaten.” (Al Jazeera 2008).

In Kisii, Kenya, the horrific public burnings of four old women and one old man in early 2009 were prompted when a boy in the village “had spent the night walking around and then was unable to talk the following morning – except to one of the so-called witches.” It turned out later that the boy was suffering from epilepsy (Odhiambo, 2009).

There are close parallels with Evans-Pritchard’s investigation of witchcraft among the Azande in the late 1920s. When a granary collapsed because of termite damage, when

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a buffalo injured someone, when a man set the thatched roof of his beer-brewing hut on fire by entering it with a lighted torch, or when he committed suicide, witchcraft was invariably blamed – specifically, envious, back-biting neighbours who were witches and seeking to harm him.

Evans-Pritchard was at pains to point out that the Azande were not blind to natural causes and effects. They understood, for example, that the roof of the beer hut caught fire from the lighted torch. But “every year hundreds of Azande go and inspect their beer by night and they always take with them a handful of straw in order to illuminate the hut in which it is fermenting. Why then should this particular man on this single occasion have ignited the thatch of his hut?” (Evans-Pritchard, 1976:21-2). When things that normally go well start going badly, they are taken to be unmistakable indicators of witchcraft at work, whatever the visible, proximate cause might be.

The belief in witchcraft has tremendous attractiveness and explanatory power. Of the Azande, Evans-Pritchard wrote, “the concept of witchcraft provides them with a natural philosophy by which the relations between men and unfortunate events are explained and a ready and stereotyped means of reacting to such events.” Witchcraft belief can serve a powerful sensemaking function for reducing uncertainty and dealing with misfortune. But it does not simply help to explain why things are going badly, it also provides an avenue for personalizing misfortune, and for redirecting the pains of suffering into channeled aggression towards the perpetrator, who is invariably known to you (Evans-Pritchard, 1976:18-19).

Belief in witches helps you make sense of what’s happening to you, but it also gives you a ready course of action where society provides no other. Belief in witches tells you that you are not powerless in the face of misfortune. This alone would make it hard to relinquish.

Of course, witchcraft belief can be attractive for other reasons. It can be enlisted in support of other motives, whether they be to exact revenge for slights real or imagined, to challenge existing authority structures, to act on long held grudges and resentments, to disburden oneself of an onerous duty to care for elderly relatives or difficult, school age children, or simply to steal what you cannot get in any other way.

In Tanzania, complex land reforms in the 1990s opened up numerous land disputes where allegations of witchcraft and incitement to murder may have seemed a useful strategy to achieve resolution (Evans, 1999). In another series of witch killings in Kisii, Kenya, where eleven elderly people were killed, some of the perpetrators were later arrested for being in possession of the murdered people’s livestock and property (BBC, 2008). In Malindi, those targeted for murder were village elders, one of them an assistant chief, suggesting an inter-generational struggle for power (Nyassy, 2009).

These mechanisms of denunciation, by the way, whether motivated by ideology or malice are not unique to witchcraft belief. They have also been used in societies undergoing revolutionary ferment, from the Terror of the French Revolution, Mao’s Cultural Revolution, Cambodia’s Pol Pot regime, to counter-insurgency operations in occupied Iraq and many others.

What makes them extraordinarily terrifying and violent is the opacity of the

allegations as well as their unpredictability. “To be successful an accusation should be directed against victims hated by the populace. The cause of the harm must be vague, unspecific, difficult to prove or disprove. The crime must be difficult to deny, even impossible to disprove. One accusation that sticks will make the accused infamous, and will collect other infamy.” (Douglas, 1992:87-88).

But witchcraft beliefs do not always have to use social terror and violent reprisal in order to operate. The Azande documented by Evans-Pritchard had a highly organized and regulated witchcraft belief, operating under strict social controls and protocols. Witchcraft accusations had to be submitted to a poison oracle for validation, and only in cases of suspected death by witchcraft could a vengeance killing be authorized by the prince, after he had consulted his own oracle.

The normal protocol in non-death cases was for the afflicted family to approach the accused witch and ask them to withdraw their witchcraft (if it was not too late) or demand compensation (if the deed was done). To deny a reasonable request presented in the normal way, would be to demonstrate a crime against the community and warrant punishment. Children were excluded from the process because they could not consult the poison oracle, and they themselves could not be accused. Neither could the ruling aristocracy. In the Azande society described by Evans-Pritchard, witchcraft belief served as a regulating mechanism for managing social relations, in particular, to prevent ill-will between members of the community from escalating into vendettas (Evans-Pritchard, 1976).

So we can see that witchcraft beliefs have utility at the personal level and they can be practised in socially structured or unstructured ways. They do not always entail violent response. They can serve a range of personal needs – to explain misfortune, to give an avenue of redress or revenge, to conceal a grudge attack or remove a rival.

But even if we can explain why witchcraft beliefs are taken up and deployed by individuals, there are some mysteries still to explain. We know why witchcraft beliefs might be deployed, but where do these beliefs come from? Why do they crop up time and again in diverse cultures, exhibiting such consistent patterns?

The patterns of behaviour we have traced around witchcraft accusations and killings can be tremendously destructive to a society, even when we can see how the collective also sometimes benefits from them. Why do such beliefs survive and persist if they are so damaging? Why don't the communities that believe in witchcraft wither away and die from internal strife and vendettas? How does a society move away from witchcraft beliefs, and what happens to it when it does so?

Just as puzzling is the question of why individual resentments gets transformed into social anger. Why do these beliefs have such social force? How is it that they can harness such strong emotions, particularly of collective anger, and inspire such horrific acts of violence against vulnerable people who have no avenue of defence except flight?

“We are very angry and that's why we end up punishing these people and even killing them” says one youth involved in the Kisii killings (Odhiambo, 2009). Not everyone in the Kisii murders stood to gain from the deaths of the old people in that village, yet

they all stood and watched, and many of them brought branches for the fire. In the BBC correspondent's audio recording of the youths involved in the killings, they sound excited, angry and full of a sense of purpose. The village killed those people, and felt justified (Odhiambo, 2009).

There is something *collective* happening here, over and above the individual contributions to the act. Do witchcraft beliefs also serve a social need, and is this why a social collective preserves these beliefs and makes them available for use by unhappy individuals? To answer these questions, we need to look at our second narrative, that of witchcraft belief as a phenomenon of the collective interest, and not simply the individual interest.

In her essay 'Witchcraft and Leprosy' Mary Douglas compares accusations of witchcraft in both Africa and Europe with accusations of leprosy in medieval Europe, and characterizes them as patterns of individual rejection intended to isolate and remove people from the community. These patterns give insight into the community's current struggle to maintain itself as a community (Douglas, 1992:83-101). As the conditions facing the community change, so the mechanisms behind the patterns are redirected and repurposed.

In this narrative, witchcraft belief operates as a mechanism for social stabilization, change, or construction. It is one of many possible patterns of behaviour that might be used by a society. In twelfth century Europe the weapon of choice was leprosy accusations. Two hundred years later it was witchcraft. In McCarthy's America it was Communism.

The point here is that the social implication of the pattern is not simply the sum of the individual intentional acts – I do not accuse my social superior of witchcraft because I want to change society. I do so because I have been having a run of bad luck, I resent him and believe he is against me, I know others dislike him, and I think I can profit from his downfall. The belief in witches is circulating and available to be deployed. It fits my circumstances and my needs so I adopt, utilize and reinforce it in my own social networks. The orchestrators of systematic campaigns using these mechanisms may have broader social agendas, but they themselves are working within a basic set of assumptions and beliefs that were handed to them by society.

At the collective level, from an anthropological perspective, there is a clear meaning and function for the overall, emergent pattern of behaviour. This meaning is not wholly transparent to the actors contributing to the pattern and exploiting it, nor is it always intended. It is frequently hidden. To the extent that our behaviours are shaped by culture, to that extent the social drivers and the social meaning of our actions are frequently concealed from us. What we think is an individual choice may also, in a different analytical frame, serve a social purpose of which we may be unaware.

So the meaning of behaviour at the collective level is not the same as the aggregate of the meanings of behaviours at the individual level. This is a second, novel narrative to get to grips with, and it is critical for us to do so, because much of what we see and believe and know in our individual decisions and actions is heavily coloured and influenced, if not determined, by this meta-narrative.

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Mary Douglas reports that in late medieval Europe, witchcraft allegations tended to be political in nature. They mobilized popular sentiment in support of different factions involved in courtly intrigues. Later on, with political and economic change creating a troublesome underclass, they tended to be directed downwards at the common people, as an instrument of pacification. Very similar patterns had been deployed in 12th century Europe with accusations of leprosy, which started first as an instrument for getting rid of resented superiors (upwards accusations), and later on became an instrument of segregation and social control over the vast, disenfranchised poor (downwards accusations) (Douglas, 1992).

In 1950s Malawi, Clyde Mitchell found that witchcraft accusations often served as a proxy for a struggle within an extended family over inheritance rights (Mitchell, 1956). Among the central African people the Lele, Mary Douglas found in the 1950s that witchcraft beliefs served as an outlet for inter-generational conflict between younger and older men, with older men being frequent targets. Women and children were largely excluded from this dynamic. Forty years later, the pattern of accusations had changed.

“The range of accusations had widened completely so that it was plausible to accuse young men and women, and even children. The accusations of children against their parents were now taken seriously. The pattern had lost its structure... But the incidence of accusations in the new epidemiological model was not entirely unstructured. The arrow of accusation was stronger going in the direction from town to country.” (Douglas, 1992:88-91).

Here, witchcraft beliefs served as a channel to express a sense of envy and distancing and with it for the townsfolk, an absolution from their responsibility to support their country cousins.

In her 1986 book *How Institutions Think*, Douglas started to address some of the basic social mechanisms that produce collective beliefs and values – which in turn can be deployed for a range of motives and purposes. She was particularly interested in destructive belief and behaviour patterns such as witchcraft beliefs, where collectives turn on their own members. How do these patterns function to preserve the collective, when they seem so self-destructive?

Douglas noted that in communities with resource constraints and weak leadership and governance, there is more cost to individuals to contribute to the social collective, than there is benefit. There are few rewards available. However, social collectives need, from an evolutionary perspective, to be able to get past this net-cost model, and preserve against the loss of collective action if members defect, in order to be able, in the longer term, to reap the economies of scale and individual rewards that large, well structured societies can provide. So human collectives have evolved to conserve themselves at any cost, even at the cost of their members.

There is a distinct pattern or “grammar” to how they do so. They first strengthen their boundaries, defining who is inside the group and who is outside, and they impose a cost to exit from the group. They do this most often by identifying and describing external forces or enemies who are engaged in a conspiracy against the group. They then use suspicions of treachery and betrayal among group members, and particularly

among influential group members, to control for free-riding – ie unfair exploitation of the group's limited resources (Douglas, 1986).

Factionalism, suspicion, denunciations, overthrow, punishment and exclusion are characteristic of these kinds of groups, which can range from poor rural communities acting on witchcraft beliefs, to sects and cults, or highly politicized corporate cultures in businesses that are under great stress. Belief systems are provided by the collective to individuals, and those belief systems evolve to meet larger scale needs than those of individual members or groups within the collective. They have evolved to conserve membership and commitment to a group, even when there is little or no benefit to be gained from belonging to the group. And they arise spontaneously when the conditions are right.

In this account of a basic grammar of behaviour for collectives in particular kinds of circumstances, Douglas provides an explanation of two entirely different levels of thought. For individuals, each event is a highly contextualized narrative, with its own reasons and motives and explanations. However, the individual is using beliefs and values handed to them by their collective culture, and these have evolved for specific reasons relevant to the social collective and its self-preservation, and not necessarily in the interests of the individuals involved. The more individuals there are using this grammar at any given time, the more available it is, and the more its collective function is in play.

Of course, individuals can resist the belief systems provided to them by their cultures – indeed this is partly how changes occur in cultures. But this takes more cognitive effort than most of us are ready for, and resisters must be able to weather strong and emotionally charged sanctions from the group, not to mention the frequent threat of exclusion or violence. By and large, it is the minority that resists, and the majority of us deploy the beliefs and values provided to us relatively uncritically, or we stand by silently, not daring to disagree in public.

(2) The Natural Social Collective Response to Insights is to Impose Friction

How does all this relate to the ability of organizations and other forms of social collective to leverage and harness insight?

We have already seen that cities are structured to be better at cultivating and harnessing insights than corporations are.

The sociologist Everett Rogers discovered that all social groups have an inbuilt mechanism for dealing with the adoption or non-adoption of innovations. Rogers started his career examining how innovations in agricultural practice got diffused across farming communities, but he quickly expanded his scope to cover all kinds of innovations in society and business, using both his own observational data and a comprehensive literature review of prior research in the field. His pivotal work *Diffusion of Innovations*, first published in 1962, became the standard textbook in the field, and ran to five editions between 1962 and 2003 (Rogers 2003).

Rogers looked at many factors that influenced whether or not new insights and innovations would spread across social groups, including the characteristics of the innovation itself, the ease with which it could be linked to prevailing practices and experimented with, the adoption environment, and so on.

However, one of his most influential insights was the role of social networks in spreading innovations, and it was Rogers who identified a bell curve typology of personality types who had progressively more conservative attitudes towards innovations. What Rogers discovered was that in any given social group, there were predictable percentages of each innovation attitude-type, as shown in Figure 2 below.

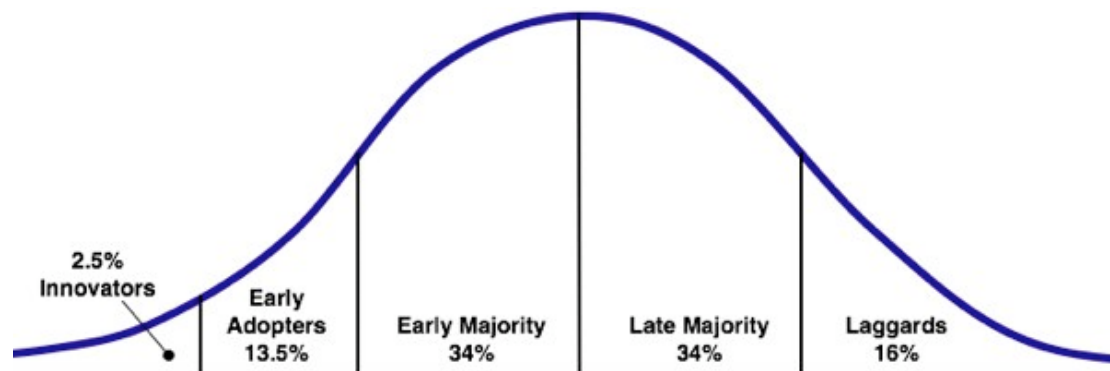


Figure 2: Social distribution of attitudes towards innovation (Source: Rogers 2003).

A very small percentage of people are actual Innovators, and the interesting thing is that to be successful innovators, they need to be socially isolated. We can see why – it’s hard to have new ideas if you are too easily influenced by the prevailing culture. So innovators tend to be grouchy and difficult to deal with.

This, of course, makes it hard to connect innovators’ ideas with the rest of society, which has to happen for the ideas to spread. Just as innovators resist the influences of society, so society resists the adventures of innovators.

There is a second group, the Early Adopters, who come to the rescue – Rogers found that they represented slightly more than a tenth of the population. Early Adopters like new ideas, and they also like to be popular. They enjoy taking leadership positions and being seen as avant-garde, and so they cherry pick new ideas from Innovators, things that they think can work, and they introduce their followings to these new ideas, and try to get them excited about them.

Behind the Early Adopters are their followers, whom Rogers labeled the Early Majority. They represent about a third of the population. Early Majority personality types are willing to explore new ideas and try them out, if the practical benefits and applications can be articulated. This is part of the burden of effort carried by the Early Adopters. If we think in terms of corporate environments, Early Majority types are like the project managers, who sit down and work out the implementation implications, and write change plans. They are not resistant to change, but they need to think practically about how it will work on the ground. If they don’t get that, the innovation will die there.

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The shift from Early Majority to Late Majority is seen as a tipping point for an innovation, because this is the point at which adoption passes the fifty percent mark of the population. Late Majority personality types are extremely focused on processes and rules. They like things to be predictable and stable. They are extremely intolerant of Innovators, and don't follow the enthusiasms of the Early Adopters. However, they will listen to the practical wisdom of the Early Majority. The wonderful thing about Late Majority types is that because they like procedures and rules, if they don't find the procedures and rules defined for them, they will articulate and embed those procedures and rules themselves. So acceptance of an innovation is essentially stabilized and routinised by the Late Majority.

The final group, labeled Laggards by Rogers, represent about an equal proportion of the population to the Innovators and Early Adopters combined. There is a symmetry to this.

The characteristic reaction of a Laggard to any innovation is to resist it. Laggards, like Innovators, are not worried about social acceptability, so they can continue to resist an innovation after the majority of the population has adopted it. In fact, they can be vocal in rationalizing why the innovation is no good. They will continue resisting until a newer innovation comes along, when they will quietly adopt the old one and start to resist the new.

It would be a mistake to think of these personality types as absolutely fixed character traits, although different people may favour some role-types over others. Social groups tend to generate this range of attitudes using the population available, whatever the underlying character traits.

To give an example, when I worked for a fairly bureaucratic and slow-moving organisation, I most often found myself playing the role of an eager Early Adopter. When I moved to an internet startup which was idealistic, full of brave new ideas but little practical wisdom, I often played the role of Late Majority and Laggard, just to slow things down sufficiently to get useful and revenue generating things achieved.

Circumstances and the surrounding social makeup can call out different behaviours and attitudes from us, and it is important to recognize this. The social group and its situation calls us to rise to different roles, and we often play those roles unconsciously. We can encourage insights in one context, and actively discourage their flow in others.

The symmetry of this bell curve is also telling. It reveals another piece of the grammar of social collectives, the bit that relates to how insights and innovations are treated. Social groups generate equal and opposite behaviours around innovations, from introducers to resisters. But most importantly, they also generate a diffusion mechanism by the way in which they set up a range of roles specifically designed to communicate new ideas from the less skeptical to the more skeptical, at the same time adding implementability and stability to the innovation. What we are looking at in Rogers' typology bell curve, is a social machine for the filtering, quality assessment, and risk management of new ideas.

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We can see why we might evolve to do this as a species, entirely unconsciously. It gives very powerful survival value. It ensures that we don't rush off like lemmings after every new idea that comes along. Most new ideas will fail, and Innovators are often bad at thinking through the practical details. We have Early Adopters who pick and choose the things that they think will get support. It ensures that the practical value of innovations gets explored and defined early, the Early Majority do this. It gets routinised and stabilized by the Late Majority.

The Laggards, whom we fear most inside organizations, and whom we seek to isolate, perform the most valuable support of all – by articulating and rationalizing vocal resistance to the innovation, they perform what could be an extremely valuable quality and risk assessment function, if we would only exploit it. In naturalistic terms, they perform the devil's advocacy function – and in responding to them, we are forced to make our ideas more robust, we cover for the failure points that the Laggards so actively seek out, and we bullet proof against the quality issues that they spot straight away.

So here we have an emergent social mechanism for managing the successful integration of new ideas into social collectives – at face value it seems to be set up to slow down the adoption of new ideas, but we can see that it also performs a selection, improvement and risk management function. The innovation capability of cities that Geoffrey West noticed so prominently, depends on this social mechanism.

But as West also noticed, corporations are constructed differently from cities. In creating closed networks, “stiffened” identities, strict criteria for inclusion and exclusion, and specialized-directed functions within corporations, the flow of ideas and innovations can become distorted. Our social structures can become distorted from their natural symmetry. For example, decisions about insights and innovations get taken by managers. To become managers, very often (depending of course on the function they serve), people have to display leadership and idea-chasing behaviours characteristic of Early Adopters.

In some environments, decisionmaking power around adoption shifts to the Early Adopters, who try to push more innovations than the rest of the population can see the point of, or will tolerate, or that the existing infrastructure can support. The artificially specialized social structure of the corporation frontloads the decisionmaking power on the bell curve, where we evolved as a species to spread those adoption decisions and behaviours along the whole curve. This helps to explain why change management is a much harder problem within a corporation than it is within society at large.

In other environments, people who are more comfortable on the conservative end of the bell curve are placed into Early Adopter roles that they are not comfortable with. They expose new ideas to the scrutiny and rigour more characteristic of Late Majority or Laggards, than the role they are supposed to fill, which is to be the gateway for new ideas to reinvigorate, renew or grow the business for which they are responsible.

Finally, for some of us, we find ourselves naturally receptive to new ideas, but in situations where the pressures and stresses of trying to deal with the practical implications of too much change pushes our own behaviours further down the

adoption curve than we would normally sit – as happened to me in the start-up company.

And this is one of the ways in which we can explain the mystery of perfectly good and rational people exhibiting behaviours more characteristic of evil saboteurs, such as we saw described in the OSS sabotage manual. They are called forth from us by the cognitive machinery supplied to us by the collective, by the situation we find ourselves in, and by the roles that our colleagues are already playing. We rise to the gaps in the situation, to the gaps in the social networks we are operating in, and to the roles set up for us by the collective.

The Value of Understanding the Grammar of the Collective

It can be incredibly powerful to recognize this particular piece of grammar in the collective. The instruments for thinking and emotional response are handed to us by our cultures; the scripts and routines available to us from the collectives we belong to can be very hard to resist. But we have something that social collectives do not have – and that is metacognition, the ability to reflect on our own thinking processes and to question them.

To become aware of a particular piece of social behavioural grammar, just like becoming aware of psychological mechanisms at work in our personal behaviours, allows us first to identify levers for change in our behaviours, and secondly to acquire tools and skills to implement changes. The fact that I can see in Rogers' typology a range of different strategies for responding to insights and innovations, means I can more consciously direct my own behaviours in a way that is most productive for the group, instead of simply reacting as the culture nudges me.

At the institutional level, because organizations do have rules and processes for inclusion and exclusion, they (through their leaderships) can look at how their population is exploiting the adoption and diffusion mechanisms that society provides us with, and can then loosen them up or rebalance them if they are front loading (with overly adventurous people) or back loading (with overly conservative people) the bell curve.

In an essay comparing the 2003 Space Shuttle Columbia accident with the 1986 Challenger accident, Diane Vaughan noted that “Comparing their investigative data on the organizational causes of Columbia with those of Challenger, the [Columbia Accident Investigation Board] systematically looked for similarities and differences, but found few differences.” (Vaughan 2005:42).

She goes on to ask, despite the rigorous investigation of Challenger and the extensive structural, process and personnel changes that were put into place at NASA in its aftermath: “Why do negative patterns persist? Why do organizations fail to learn from mistakes and accidents?” (Vaughan 2005:44).

Vaughan concludes that it is not sufficient to treat issues of culture change as a matter of persuading a system of individuals to change the way they think and do things. There are supra-personal and extremely influential mechanisms at place – which we

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have termed here the “grammar” of social collective behaviours – that must be addressed. Our state of knowledge and understanding in this area is extremely thin. As Vaughan concludes: “rather than waiting until after a gradual slide into disaster or repeat of a negative pattern to expose the dark side of culture and structure, organizations would benefit from ongoing cultural analysis by ethnographically trained sociologists and anthropologists giving regular feedback, annually replaced by others to avoid seduction by the cultural ethos and assure fresh insights.” (Vaughan 2005:57).

Mary Douglas had already called for a stronger science of the cognitive aspects of collective behaviours in 1986: “A theory of institutions that will amend the current unsociological view of human cognition is needed, and a cognitive theory to supplement the weaknesses of institutional analysis is needed as well.” (Douglas 1986:ix).

The persistence of negative, culturally-driven patterns that organizations are victim to in ways that cities are not, whether they emerge in Space Shuttle disasters, or in petty and frustrating bureaucratic “sabotage” behaviours, calls for a stronger study and theory of collective behaviours. If we understand more of the grammar of such behaviours, we can more easily influence our own behaviours, and perhaps can manage better the ways in which the collective turns off our brains and has us doing stupid and dangerous things.

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