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AN INTRODUCTION TO THE CONFLUENCE TOOLSET

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Abstract
How do complex patterns affect our lives, families, teams, communities, organizations, and societies? What are the practical implications of self-organization as it intermingles and interacts with our intentional actions? Confluence is a set of thinking tools and a group exercise designed to help all of us make sense of how the twin forces of self-organization (spontaneous patterns) and organization (purposeful plans) flow together through the situations we face and the decisions we make. In this paper, the author introduces the concept and purpose of Confluence and illustrates its use with a worked example that employs all seven tools in the Confluence toolset. The author hopes to help more people learn how to use and benefit from Confluence, and to build a community that will continue to refine and improve it in the future.

Keywords
Confluence, self-organization, complexity, organization, planning, group exercise, decision making, sensemaking, brainstorming, mapping

1 | Introduction

In this paper I will introduce you to a set of tools I built to help people and groups make sense of complexity as it truly exists in our human lives: intermingled with intentional action. I have been working on these ideas for over thirty years, on my own and in collaboration with others (Kurtz, 1991; Kurtz and Snowden, 2003; Kurtz, 2021). As I have worked to develop and improve these tools, I have come to know and rely on them, and I hope to interest you in trying them out for yourself.

2 | Clouds and Crowds

When things interact with their closest neighbors, their local interactions sometimes join up to form global patterns. These global patterns often look as if they were planned in advance, but they were not. They formed themselves. For example, individual starlings sometimes form vast flocks that soar through the sky in shapes that bear an uncanny resemblance to the wings of giant birds (Figure 1). This phenomenon is called *self-organization*.

Figure 1. Flocks of starlings

Things that form self-organized patterns don't have to be alive (Figure 2). They just have to be capable of *iterative interaction*, of connecting and disconnecting with their closest neighbors in response to local conditions. It is these local interactions that create the global patterns we see.

Figure 2. More self-organized patterns.

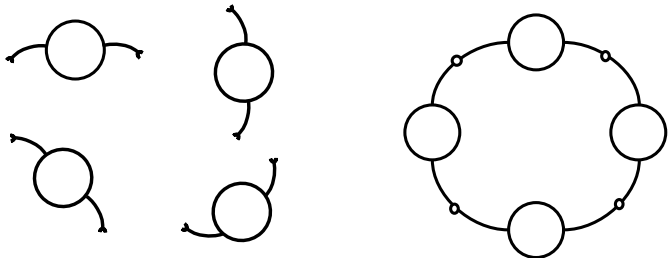
Immanuel Kant, in his 1790 *Critique of Judgment,* was the first person to give this phenomenon the name of self-organization. But of course he was not the first person to *notice* it. It's hard *not* to notice it. It's all around us, and it always has been. For as long as we have been able to think about the world, we have been asking: Where do these patterns come from? What do they mean? And what should we *do* about them? Are they dangerous? Are they useful? Questions such as these can be found in folk tales told thousands of years ago. We are still asking them today, and we will keep asking them for thousands of years to come.

3 | Interactors and Their Neighbors

The shape of any self-organized pattern depends on the specific way in which each thing-that-interacts connects with its closest neighbors. How these things—call them *interactors*—bump into each other, bounce off, and cluster together determines the shape of the pattern that emerges.

In Figure 3, I have represented this dependence symbolically by keeping the shape of each interactor's arms consistent as the interactors come together. It is the shape of those arms that makes the emergent pattern a circle. If each arm was bent differently, say at a ninety-degree angle, the shape would be a square, not a circle. If each arm was perfectly straight, the shape would be a straight line.

Figure 3. Interactors and a self-organized pattern they form

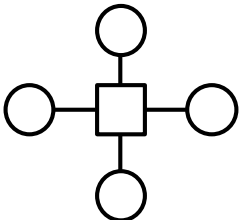


Also notice that each interactor in Figure 3 interacts *only* with its two closest neighbors. If every one of these interactors could (and did) interact with every other interactor, many patterns might form, but a circle wouldn't be likely—at least not without some kind of central control.

4 | Organizers and Their Plans

Now I want to show you a different diagram (Figure 4). The pattern in this diagram is not a self-organized one. It was constructed, on purpose, by the square thing you see in the middle of the diagram. I call this activity *organization*, and I call the thing in the middle an *organizer*.

Figure 4. An organizer at work



When an organizer wants to create a global pattern, it moves itself to a place where it can see all of the interactors—as it has done here, by jumping into the middle of the circle. Then it grabs hold of the interactors and puts them where it wants them to be. A perfect organizer could see and reach every interactor in the universe; but practically speaking, we can assume that organizers have global awareness and access within a less-than-universal context.

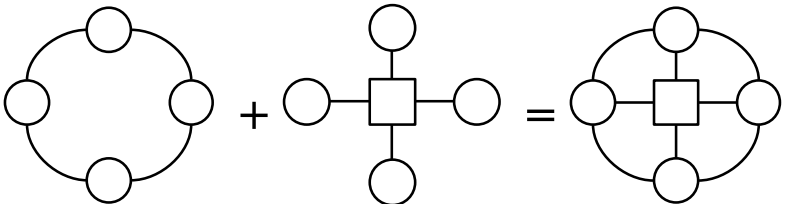
Human beings are organizers. We spend our lives putting things where we want them to be. And we build things: houses, trains, governments, games (Figure 5).

Figure 5. Something an organizer built

5 | A Confluence of Forces

In our human-dominated world, organization and self-organization are rarely found in their pure states. Few places remain that have not been influenced by our organized plans. And though we are organizers, we are also (mostly) self-organized patterns, and we interact (mostly) with our closest neighbors—whatever closest might mean in any particular context. Thus the two forms of order flow together through our lives, intermingling and interacting, like a confluence of streams (Figure 6).

Figure 6. Self-organization + organization = confluence



We all encounter situations in which organization meets self-organization every day (Figure 7). But we don't always realize what is going on. Usually it's easiest to focus on one aspect or the other: the train or the flock, the building or the fire, the treatment or the disease, the performance or the crowd, the administration or the corruption. But that's not good enough, not if we need to make sense of what is going on and decide what to do next. To fully develop our situational awareness, we need a way to focus not just on organization, and not just on self-organization, but on the *interactions* between the two forces. We need to think about how those interactions happen, why they happen the way they do, and what we should do about them.

Figure 7. Organization (a train) meets self-organization (a flock)

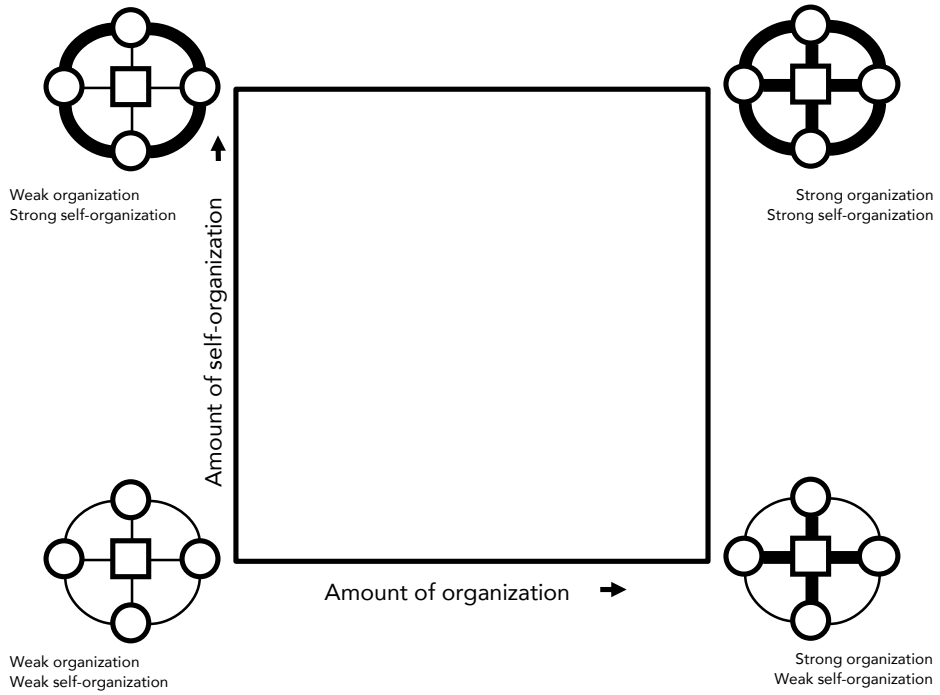
6 | A Space for Thinking

The set of tools I built to fill this need begins with the diagram in Figure 8. I call this a *thinking space*: an empty space defined by two named dimensions. You use it by putting things into it and talking about why you put them where you put them.

In the Confluence thinking space, the horizontal dimension shows the amount (or strength, degree, extent, scope) of organization. The vertical dimension shows the amount of self-organization. Each point within the space represents a situation in which the two forces co-occur.

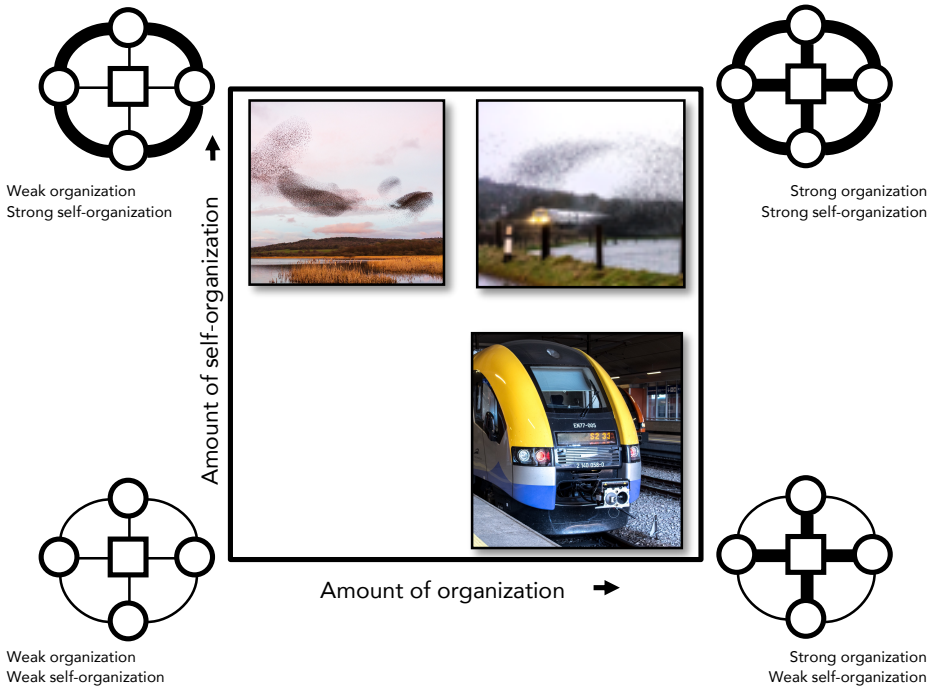
The symbols outside each corner of the space describe situations closest to that corner. Thick lines denote strong connections, and thin lines denote weak or absent connections. In the upper-left corner, for example, self-organization is strong (so there are thick lines between each interactor and its closest neighbors), and organization is weak (so there are thin lines between the organizer and each interactor).

Figure 8. The Confluence thinking space



If we place our earlier starling-and-train examples into this thinking space, we get the diagram in Figure 9. In the upper-left corner, a flock of starlings flies high in the sky, far from buildings and power lines. In the lower-right corner, a train sits in an empty station, far from storms, crowds, and flocks. In the upper-right corner, the two forces come into contact.

Figure 9. Flocks and trains on the Confluence thinking space.



6.1 | Perspectives differ

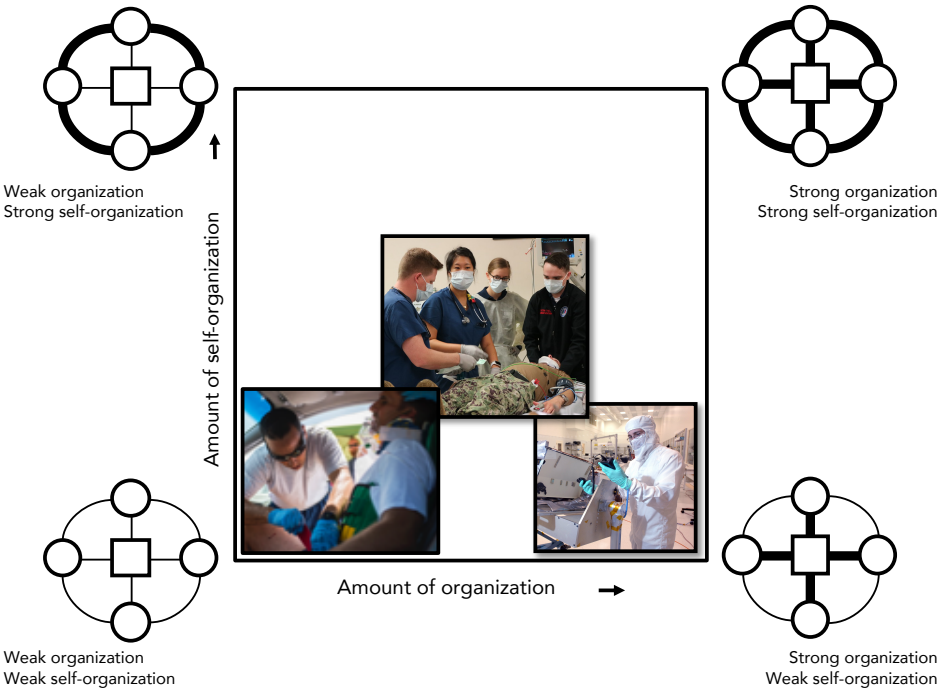
Maybe you wouldn't put those photographs into the space where I put them. That's one of the most useful aspects of a thinking space: its ability to surface disagreements and make constructive use of them.

Seeing where other people place situations into a thinking space can be an enlightening experience. It shows you their perspectives on the situation, but it also shines a light on your own perspective. I see this as fundamental to the process. If you haven't taken into account every relevant perspective, including your own, your situational awareness will be incomplete.

Let's pretend, for example, that you and I are health-care professionals, and that you just watched me place three situations into a thinking space (Figure 10). In a *medical emergency*, I explain, connections of both kinds are torn apart as bodies and plans collapse. This places the situation in the lower-left corner. First responders rush victims to *emergency rooms*, which pull situations back in the direction of order—of both kinds, as procedures and networks work together to restore health. In a *medical device cleanroom*, by contrast, we actively discourage the formation of self-organized patterns, so we can carry out carefully organized observations and experiments.

Do you agree with my placements? Where would *you* put these situations? And where do you think a patient would put them? An administrator? A regulator? These are things we can discuss.

Figure 10. Health-care situations on the Confluence thinking space



7 | A Group Exercise

The Confluence toolset works best when groups of people use it to talk about real situations in their lives, families, teams, communities, and organizations. The group exercise that goes with the thinking spaces is described at length elsewhere (Kurtz, 2014, 2021), so I'll just summarize it briefly here.

First, choose a *topic* you want to discuss. Lay out a thinking space on a table, wall, or online whiteboard. Talk about the dimensions of the space and what they mean to you.

Next, think of some *situations that matter* related to the topic: situations that have happened, that could or couldn't happen, that should or shouldn't happen. As you think of each situation, describe it to each other. Summarize it on a sticky note (physical or on-screen), and place the note into the thinking space where it seems to belong. If you disagree on where a note belongs, talk about it. If you still can't agree, write multiple notes, each with a different perspective on the situation.

After you have placed twenty or thirty sticky notes, you should start to see some *patterns* in the space. Look for emerging clusters, gaps, and boundaries. Talk about the patterns you see. What do you think they mean? What do you think you should do about them?

Finally, wrap up the exercise by talking about what surprised you, what you are curious to learn more about, and what you would like to do next.

8 | Six More Tools in the Set

The Confluence thinking space is the first of seven thinking spaces in the Confluence toolset. Each space represents a different aspect of Confluence and supports a different goal of situational awareness (Table 1). You can use the group exercise with any or all of them.

Table 1. Thinking spaces in the Confluence toolset

When you want to think about . . .	Use this space
How organization and self-organization co-occur	Confluence

Self-organization by itself	The Jungle
Organization by itself	The Plan
How self-organization influences organization	Inundation
How organization influences self-organization	Regulation
How organization and self-organization interact	The Mix
Connections that are unclear or in dispute	Connecting the dots

9 | The Almost-always-but-not-quite Traffic Jam

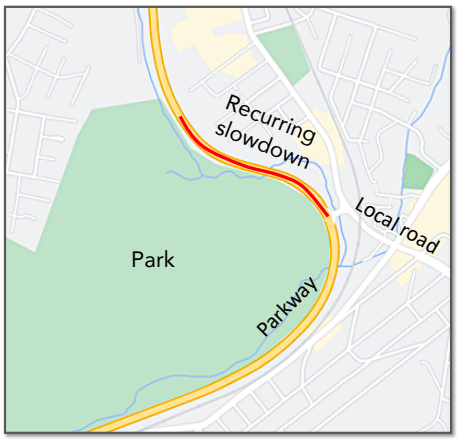
To give you a sense of how the whole Confluence toolset works, I will examine a single event using each of the seven thinking spaces. I have briefly mentioned this example in two other places (Kurtz, 2018, 2021), but here I will delve more deeply into it.

Around the turn of the last century, I lived in Westchester, New York, about an hour north of New York City. I usually drove to work on the Saw Mill River Parkway. One day, I was driving South. Just before I got to a curve in the road, I noticed that traffic was beginning to slow down. Traffic *always* seemed to slow down just there, and I was annoyed. So I decided to get off the parkway and take the local road for the rest of the way.

I knew that to *get* to the local road, you had to turn left at the next intersection. So I worked my way into the left-turning lane. A lot of other drivers had the same idea, and we all crammed ourselves into the lane, smug in our certainty that we knew better than the fools inching past us on our right.

After a long wait, I finally arrived at the traffic light. I looked at the road ahead. It was empty. There *was* no traffic jam. On that day I joined the ranks of the enlightened drivers who inched past the fools turning left, creating the very traffic jam they sought to avoid (Figure 12).

Figure 12. Where the slowdown happened. (Map data: © 2022 Google)



I have thought about that traffic jam many times over the past two decades. It had such a fascinating blend of organized and self-organized elements in it. The road was designed by people who had an organized plan, and every driver on the road had an organized plan. But every driver on the road interacted with the drivers around them, and those interactions were influenced by the design of the road. A confluence of organized plans and self-organized patterns led to the constant waxing and waning of a recurring slowdown.

I drove on that road for years, and I saw the same slowdown take shape many times. It fluctuated in intensity from day to day, but it never stopped. That is, it never stopped the flow of traffic, not entirely, but it never stopped *happening*, either. It lingered in the liminal state of an almost-always-but-not-quite traffic jam. It's probably still there today.

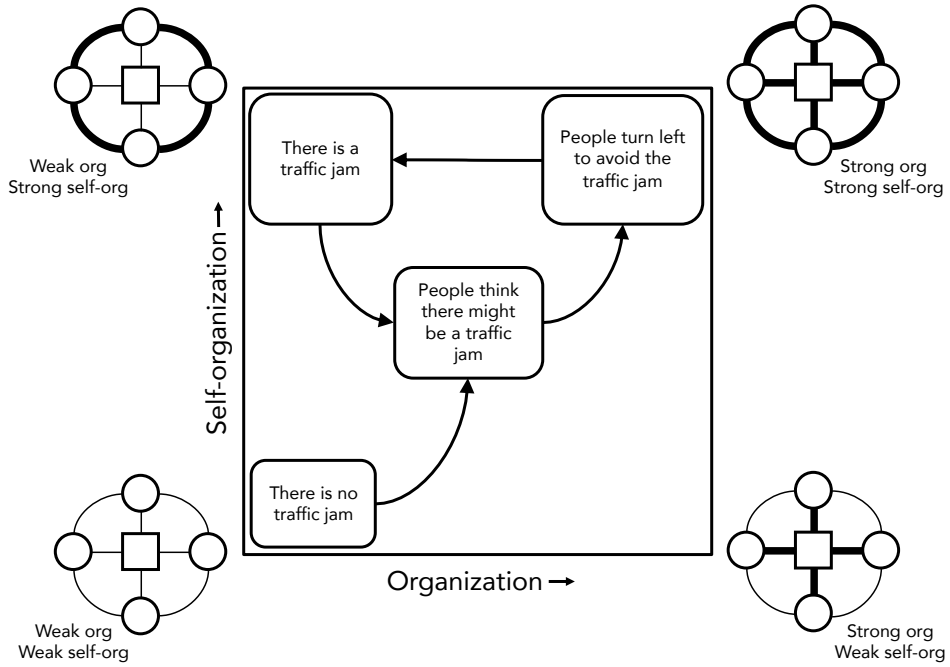
9.1 | Confluence (organization and self-organization) and the traffic jam

Now I'll show you how I used the Confluence thinking spaces to think about the traffic jam.

Before we begin, a caveat. I know next to nothing about road design and traffic control. My goal in telling you this story of exploration is not to explain to you how traffic works. I couldn't do that if I tried. In fact, some of what I am about to say will seem laughably naïve to anyone who actually understands these topics. That's all right, because my goal is not to be factually correct. My goal is to *use the toolset in front of you* so you can use it to think about situations that matter to you. In fact, if you disagree with the way I have drawn any of the diagrams in this paper, that's a good sign. It means you are using the spaces along with me.

With that caveat in mind, let us begin (Figure 13). The story starts in the lower-left corner: there is no traffic jam. Then traffic begins to slow down, pulling the situation to the center of the space, where the self-organized pattern (the slowdown) and the organized response (what drivers intend to do about it) are growing in tandem. Then drivers begin to queue in the left-turning lane. This increases the strength of both the jam and the response, moving the situation to the upper right. Eventually, drivers become powerless to act on any plan except to move when their closest neighbors move. From a driver's perspective, the situation has landed in the upper-left corner: fully self-organized.

Figure 13. The traffic jam on the Confluence thinking space



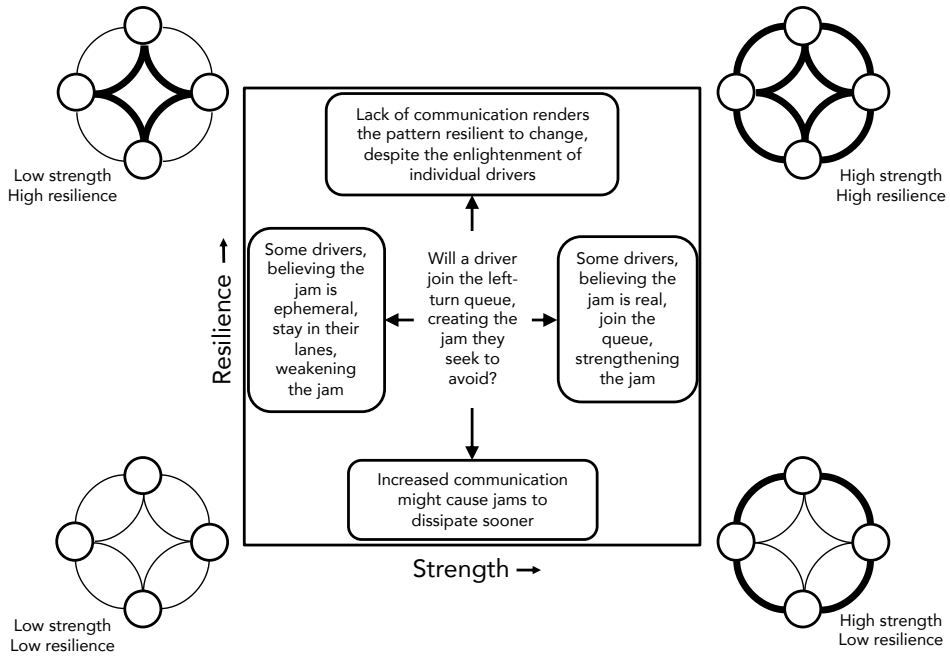
9.2 | The Jungle (self-organization alone) and the traffic jam

Now let's look at the same traffic jam again, this time using the Jungle thinking space (Figure 14). This space focuses only on self-organization, mapping the *strength* and *resilience* of self-organized patterns. Connection strength among interactors (the outside line on the corner symbols) increases from left to right, and the resilience of those connections (the inside line) increases from bottom to top.

Before the slowdown started, traffic was flowing smoothly. Then something—a gust of wind, a song on the radio, a wandering thought—caused one driver to slow down, just a bit. The tiny disruption rippled back through the pack. Most such disruptions dissipate quickly, but this one grew. A second driver was distracted or upset, and they slowed down a bit more than was necessary. Eventually the disruption grew until a critical mass of drivers had slowed down—still just a bit, but enough to notice.

At this point, the road's regular commuters had a decision to make. They knew that an intersection was coming up soon, and they knew that if there *was* a traffic jam up ahead, they could avoid it by switching to the local road. So they slowed down just a bit more to weigh their options. Without any way to *see* the road ahead, drivers could only take their cues from each other. So they watched what everyone else was doing. Some of the regular commuters stayed in their lanes, betting that traffic would speed up again soon. Others vacillated, unsure.

Figure 14. The traffic jam on the Jungle thinking space



Then one driver made a definitive decision to leave the parkway. Perhaps they were annoyed, as I was on that day. Or perhaps the memory of the hour they spent in standstill traffic the previous week was still vivid. For whatever reason, they prepared to turn left. A second driver saw them do this, wondered what they might know, and decided to follow them—just in case. More drivers saw this, and they crowded into the left-turning lane as well.

Eventually, the regular commuters who chose to stay on the road, along with non-local drivers (to whom a slowdown was not necessarily worse than getting lost on a local road) reached the intersection, only to discover that the slowdown ended there. But even as this was happening, new drivers were arriving at the back of the slowdown and making their own guesses as to what was going on and what they should do.

The resilience of this pattern—the fact that it kept reappearing, day after day—could, I think, be best attributed to two things. First, drivers could not see past the curve, which created a situation not unlike driving in foggy conditions. Second, there was a profound lack of communication among drivers, in both the spatial dimension (from the front of the slowdown to the back) and the temporal dimension (from one slowdown to the next).

I learned my lesson that day, and I never turned left to avoid that particular slowdown again. But I had no way of communicating that insight to other drivers. I would have been happy to tell them about it, because it would have reduced my commuting time as well as theirs.

9.3 | The Plan (organization alone) and the traffic jam

Now let's move on to the next thinking space, which focuses only on organized plans (Figure 15).

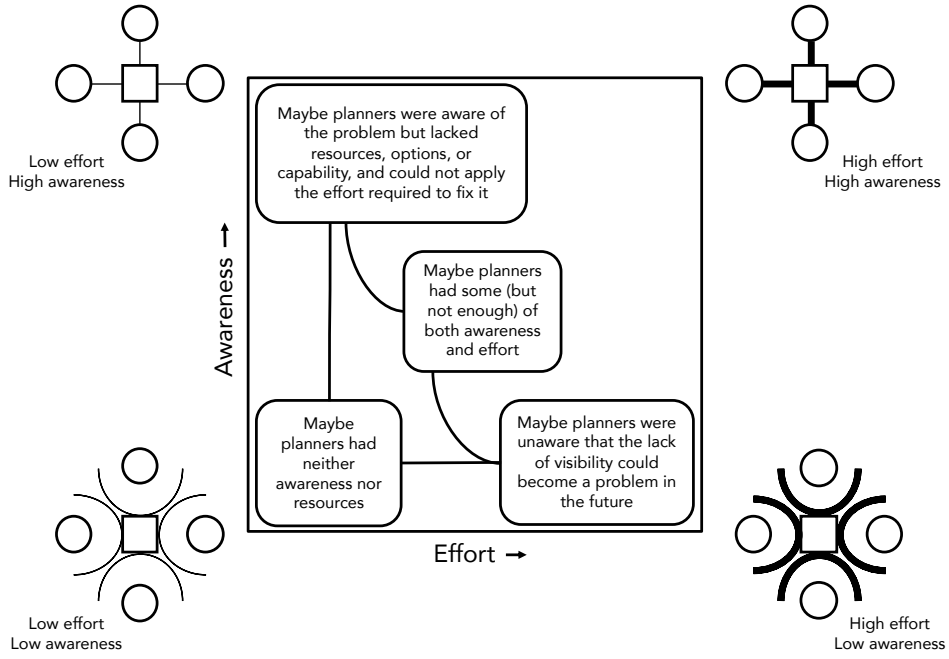
Organizers rely on two things: their global *awareness,* and their ability to change the world around them through the application of *effort*. We can use these two dimensions to think about organization. At the top of the space, where awareness is high, an organizer knows where the interactors are, so it simply reaches out and grabs them, weakly (on the left) or strongly (on the right). At the bottom, an organizer has to *guess* where the interactors are—or just flail around hoping to hit them. The curved lines on the bottom symbols could represent either satellite dishes or flailing arms.

Placement of a situation on either the awareness or the effort dimension could represent any mixture of *conditions* and *choices*. A situation could be to the left of the space because an organizer is weak; but it could also be there because the organizer has *chosen* to limit their effort for some reason. Similarly, a situation could be low in the space because an organizer lacks information about the situation; but it could also be there because the organizer has chosen to look away.

One of our weaknesses as organizers is that we often mistake choices for conditions. This thinking space gives us a way to talk about that. A group using it in an exercise, for example, could create and discuss a third dimension of *intent*. They could use notes of one color to denote that an organizer has *chosen* a position in the space, and they could use notes of another color to show that an organizer has been *placed* into that position by the conditions in which they find themselves. Disagreements about this third dimension are sure to be as useful as the others.

But let's go back to my traffic jam. Why does the Saw Mill River Parkway bend the way it bends at that point? What organized plans might lie behind the self-organized patterns I saw? Figure 15 shows my first attempt at an explanation. If the road's planners were *aware* that the planned curve would cause traffic congestion, maybe they couldn't *do* anything about it. On the other hand, maybe they weren't aware. Maybe they couldn't see it coming.

Figure 15. The traffic jam on the Plan thinking space



Today, the land that lies West of the Saw Mill River Parkway at the Marble Avenue intersection is Graham Hills Park, a popular destination for mountain bikers. Before 1940, much of that land was in private hands. Westchester County purchased a thin strip of land next to the Saw Mill river from a private landowner in 1940.

When I first read about this, I thought: Why would the County buy a *curved* strip of land for the parkway? Why didn't they buy a different strip of land and build a straight road? I can think of five

reasons. The first three support my lack-of-available-effort guess, and the last two support my lack-of-awareness guess.

Sale Negotiations. Maybe the landowners didn't want to divide their land. Maybe they refused the idea or asked for an extravagant price. Maybe the County never even considered asking them to divide their land, knowing they would refuse such a sale.

Challenging Terrain. In Figure 16 you can see that the land on which a straight North-South parkway section might have run was not an easy place to build a road. It would have been difficult to justify the steep cost of construction there, no matter how much it would have improved the flow of traffic.

Figure 16. Topographical map of the slowdown area (Map data: © 2022 Google)

Scenic Beauty. Perhaps the County built the road next to the river to attract tourists and Sunday drivers. According to the US National Parks Service (NPS, 2022), "Parkways are beautifully designed roads . . . where visitors can enjoy scenic views. During the 1930s, many parkways were designed as part of the national park system as job creation projects."

Fewer Cars. In 1940, there were roughly 32 million registered US vehicles (FHWA, 2022). In 2020, the number was 275 million (Statistica, 2022). So when the parkway was built, it might have not have been obvious that it would someday need to handle almost an order of magnitude more cars.

Less Knowledge. Yet another possibility is that the parkway was built too long ago to be influenced by research that could have improved its design. One of the first researchers to write extensively about roadway sight distances was Donald A. Gordon, a research psychologist. In a seminal paper from 1966, he wrote:

> *Perceptual anticipation is of central importance to the driving task. The design of highways must permit the driver to anticipate ahead. . . . It is unfortunate that so little is known about the important factor of anticipation in driving. . . . (Gordon, 1966, p. 66)*

This seems to imply that inadequate awareness of the limits of driver awareness had led to poor road designs. In 1975, Alexander and Lunenfeld proposed a solution to the problem:

> *An acceptable level of safety at all hazardous locations could be achieved through reconstruction to conform to current design state of the art, but it would take years and billions of dollars to produce such a program. (p. 6) . . . What we come down to, then, is providing positive guidance for reasonably competent drivers on roads that are reasonably capable of sustaining safe travel. (p. 16) . . . Any information carrier, including the highway, that assists or directs the driver in making speed or path decisions provides guidance information. (p. 22, Alexander and Lunenfeld, 1975)*

I interpret this as follows. Researchers realized that the effort needed to fix the problems caused by low awareness of driver awareness through *physical* means was prohibitively large. So they applied effort in a different direction. Eventually, they built up a greater awareness of the nature of driver awareness. This helped them find new ways to *transfer* awareness from organizers to interactors, rendering drivers more capable of applying effort to carry out organized plans on less-than-perfect roads.

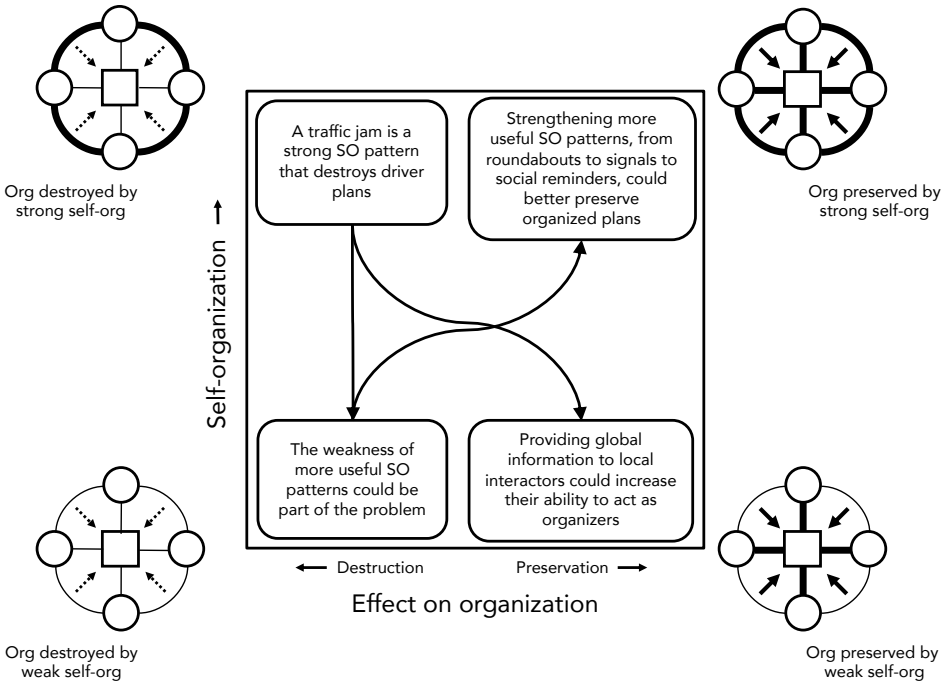
Decades later, researchers used this increased awareness to *simulate* self-organized patterns in traffic flows, further reducing the effort required to enhance driver awareness. According to a 2016 report, "Data-driven methods and models now make it possible to pursue a more precise quantification of bottlenecks. . . . [and] put a more precise price tag on transportation investments." (FHWA, 2016, p. 10)

9.4 | Inundation (how self-organization influences organization) and the traffic jam

Now let's consider the Inundation space, which explores how self-organization alters organized plans. The vertical dimension shows the amount of self-organization. Towards the left, the amount of self-organization—the fact that it is strong or weak—tears apart organized structures and plans. Towards the right, strong or weak self-organization preserves organized structures and plans.

Figure 20 shows how I used the Inundation space to think about the traffic jam. When I first looked at the space with the traffic jam in mind, the upper-left corner, where strong self-organization destroys organized plans, filled up right away. That was what happened when I encountered the slowdown: my plans were disrupted. The opposite corner also filled up quickly; it's the solution I've been telling you about, of bringing global information to local interactors.

Figure 20: The traffic jam on the Inundation thinking space



The upper-right corner of the space, where strong self-organization preserves organized plans, was a little harder to fill up. But as I read more about traffic control, I realized that people are working on a whole host of ways to support self-organized patterns that *prevent* traffic jams. For example, traffic patterns that flow around roundabouts are self-organized patterns that move more smoothly than patterns around four-way intersections. Even signs that remind people of their social obligations (Figure 21) support helpful self-organized patterns.

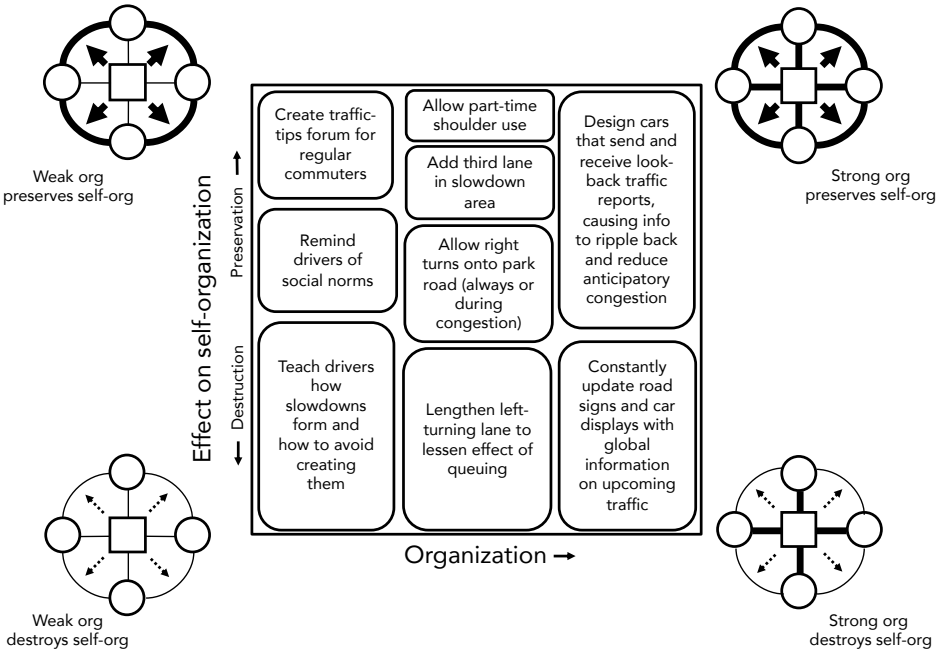
Figure 21. A road sign reminding drivers of a social obligation (Oregon DoT, 2017)

The hardest corner to fill was the lower-left corner, where the *absence* of self-organized patterns destroys organized plans. This is another benefit of a thinking space. It can be surprisingly useful to confront areas of the space where nothing seems to fit. After some time staring at the empty spot, I realized that well-flowing traffic is *also* a self-organized pattern. I had never thought of that before. A complete lack of self-organization would be a more pathological situation than a traffic jam. If every driver ignored every other driver, driving wouldn't be annoying; it would be deadly.

9.5 | Regulation (how organization influences self-organization) and the traffic jam

The Regulation space, up next, is the opposite of the Inundation space. It looks at how organized plans seek to control self-organized patterns. When I looked at the traffic jam on the Regulation space, many ideas sprang to mind, as you can see in Figure 22.

Figure 22. The traffic jam on the Regulation thinking space



Lowest-organization solutions. Helping regular commuters learn from each other in a traffic-tips forum could create a helpful self-organized pattern among drivers. If such a forum had existed when I made my discovery, I would have been glad to contribute to it. A forum could also remind drivers of their social obligations on the road. Also, driver education programs could teach new drivers how slowdowns form and how to avoid playing a part in creating them. Driving simulations could give players the virtual experience of encountering a self-perpetuating slowdown and learning from it.

Medium-organization solutions. There *is* a road on the right at the Marble Avenue intersection. It's an emergency access road for Graham Hills Park. If that road were to be opened up to traffic during times of congestion, it could help to relieve the pressure. It might also be helpful to lengthen the left-turning lane, so more cars could enter it without slowing the remaining traffic.

Another solution would be to allow *part-time shoulder use* during peak traffic hours or times of congestion, essentially adding a temporary third lane. Sight distance would still be a factor, as drivers would need to decide whether they wanted to use the shoulder. But if the shoulder-use area was at least as long as the left-turning lane, it could relieve congestion by giving drivers a third path to follow. A permanent third lane in the area would help even more, but it would also cost more.

High-organization solutions. If cars could communicate with each other, those that reached the intersection and discovered that there was no traffic jam beyond it could signal to those entering the slowdown that they should stay on the road. Such an intervention would weaken one self-organized pattern by strengthening another. Alternatively, electronic signs or in-car displays with constantly updated information about upcoming traffic could expand drivers' zones of awareness past every curve in every road. This is what is happening in many cars equipped with satellite navigation systems today.

9.6 | The Mix (how organization and self-organization interact) and the traffic jam

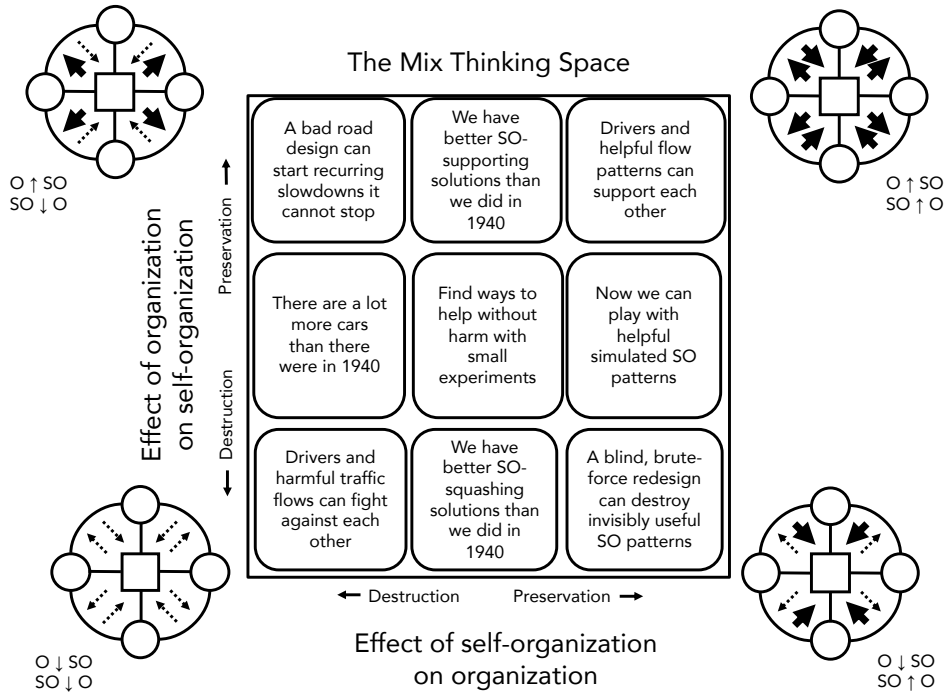
The Mix thinking space combines the axes of influence from the two previous spaces to define a space of *mutual* influence. Figure 23 shows my interpretation of the traffic jam on the Mix space.

Halfway down the space, organization has little or no effect on self-organization, so these are situations of unbidden pattern formation. Towards the left, self-organization destroys organized plans, and towards the right, self-organization preserves organized plans.

When I pondered this horizon line, I thought of the changes that have taken place in the world of traffic between 1940 and the present day. On the left side, there are more cars today, and more cars means more jams. But on the right side, computer simulations have given us access to helpful self-organized patterns that don't exist in physical reality. We didn't have those in 1940. (We didn't have the internet either, but that counts on both sides.) Overall, despite ongoing mismatches between roads and traffic patterns, today's drivers might be better able to get where they are going than drivers of any previous generation.

On the vertical center line of the Mix space, self-organization has little or no effect on organization. These are situations of intentional action. At the top, we can act to support emerging helpful self-organized patterns. At the bottom, we can act to crush harmful self-organized patterns. Our actions will never be perfectly error-free, but we have more awareness, thus more options, than we did in 1940.

Figure 23. The traffic jam on the Mix thinking space



Now let's consider the corners of the space. The ultimate goal of any traffic management solution is to land, and stay, in the upper-right corner, where organization and helpful self-organization support each other. In reality, however, it is difficult to stay away from the lower-left corner, where organization and harmful self-organization circle each other like combatants in an endless boxing match.

The two remaining corners are cautionary tales. In the upper-left corner, organized plans support self-organized patterns that destroy organized plans. Sounds like a bad idea, right? This is what caused the recurrent slowdown in the first place. A road that was designed to support a helpful self-organized pattern spawned an endless series of harmful patterns as well.

In the opposite corner, the lower right, organized plans destroy self-organized patterns that support organized plans. Here is another bad idea, possibly worse than the first. It points to the possibility that a poorly planned or brute-force solution could dismantle whatever it is that is keeping recurring slowdowns from getting even worse.

The center of the space, where neither force has much influence on the other, seems a good place to start. Small experiments and careful observations can map out a landscape of possibilities, revealing dangers as well as opportunities.

The Mix space has an optional second side, where you consider situations from the self-organized point of view, but I don't have room to explore it here.

9.7 | Connecting the dots (for connections that are unclear or in dispute) and the traffic jam

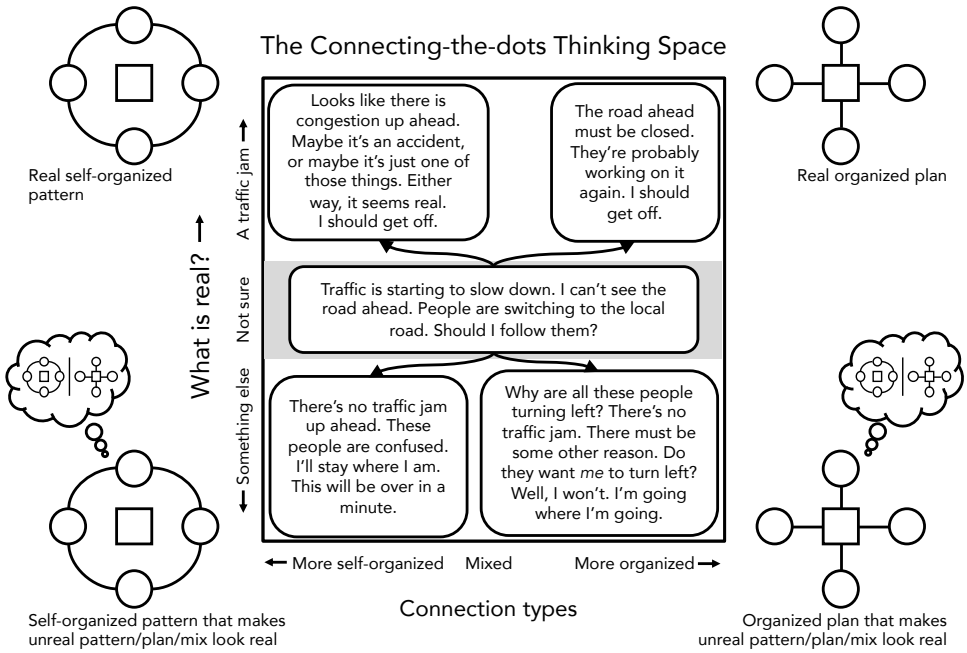
Finally we have arrived at the last of the seven spaces. The Connecting-the-dots space is of special use in exploring situations in which beliefs about connections are in conflict (Figure 24).

The gray band across the middle of the space is a *zone of uncertainty*, an area in which we are not sure whether the patterns or plans we see are real. Towards the top of the space, self-organized patterns (which grow in strength towards the left) or organized plans (which grow in strength towards the right) are seen as real things—real phenomena or real actions. Towards the bottom, supposed patterns or plans are seen as *illusions* caused by self-organized patterns (to the left) or *deceptions* created by organized plans (to the right).

Every driver arrived at the slowdown wondering what was going on up ahead. That is, they entered the Connecting-the-dots space in the zone of uncertainty. Some drivers immediately ascended to the conclusion that the possible jam was real (top) and intentional (right). They prepared to leave the road, assuming that they would soon be forced to do so. Other drivers were also convinced that the jam was real and prepared to leave the road, but they had an array of other explanations for its cause. This is where I found myself on the day in question.

Below the zone of uncertainty were those who descended into a belief that there was no traffic jam ahead and that they should ignore the left-turning queue. This is where I found myself *after* the day in question. I could have been wrong, eventually; but as it happened, I never was.

Figure 24. The traffic jam on the Connecting-the-dots thinking space



The lower-right corner was a challenge to fill. Why would anyone attribute an ephemeral slowdown to an organized action? Remember, they would have to believe that they were being tricked or coerced into leaving a road on which traffic was flowing well. Why would anyone believe that? I don't know. But again, that's why these spaces are useful. They help you think about situations and perspectives that are both easy and difficult to imagine. There is value in making sense of situations in which some perspectives don't make sense to you, especially when those perspectives represent the views of real people you need to understand.

10 | Conclusions

I have now worked my way through seven portraits of a recurrent traffic slowdown. Each is different, each is useful, and each is interesting (to me, at least). I hope I have given you a sense of how you can use these thinking spaces to make sense of situations that matter to you.

Consider a topic you care about or find fascinating, a topic that matters to your community or organization. It could be a pattern you would like to support or prevent. It could be a plan about which there is consensus or contention. What would happen if you convened a group of friends or colleagues and looked at the topic through any or all of these lenses? What would you discover—and not just about the topic, but about yourselves and the way you see things? It might be worth your time to find out.

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Note: All photographs not referenced here are in the public domain.

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