

Mining for Gold

Unearthing Collective Intelligence in Teams

Some other eyes will look around, and find the things I've never found.

—MALVINA REYNOLDS

The second they saw the avalanche start raining down from above, a group of men raced for cover. Some of their colleagues couldn't see it yet, but the sound was unmistakable: an ominous low rumble that intensified into an earsplitting crack. A gust lifted one of them off the ground and sent

another sailing through the air. They picked themselves up and started making their escape on foot.

Struggling to see or hear with rocks flying everywhere, they feared they wouldn't make it. Then they spotted a pickup truck barreling down the road. They jumped aboard and held on for dear life as the truck crashed twice. When they reached the bottom of the road, they were finally safe from the avalanche. But they weren't really safe. They were trapped 2,300 feet underground.

It was August 2010, and a gold and copper mine in the Chilean desert had just collapsed. A massive chunk of rock as tall as a 45-story building had broken free from the mountain above. The only entrance was blocked by more than 700,000 tons of rock. There were 33 men sealed inside. They were given less than a 1 percent chance of making it out alive.

Yet 69 days later, they were all reunited with their families. It was a monumental and miraculous rescue effort—this was the longest humans had ever survived after being trapped underground. As I watched the rescue capsule bring the first miner to safety, my eyes welled up with tears of joy and relief. If you were one of the billion people tuning in to the event live, yours probably did too. At the time, most of the coverage focused on how the miners made it. It wasn't until years later that I realized how

much the rescue team could teach us about how groups travel great distances together.

At the outset of the rescue mission, no one knew if the miners were even still alive. And there was no easy way to determine that. The maps of the mine were unfinished and outdated, leaving the rescue team “drilling blind.” It was like searching for a needle in a haystack twice the height of the Eiffel Tower. They had to estimate the location of the miners and the curved path of a massive drill. If they were off by just a few degrees at the surface, they could miss the mark by hundreds of feet in the mine.

On day seventeen, the rescue team found a glimmer of hope. As one of the drills finally reached the area where they expected the safety refuge to be, they tried to send a signal to the miners by pounding the drill with a hammer. It sounded like something was banging back. Sure enough, when they spun the drill in reverse to bring it to the surface, they found the end covered in orange paint, with pieces of paper attached to it. The trapped miners had written notes announcing that they had all survived. Just in case the notes got shredded or detached, they’d spray-painted the drill as proof of life.

By that point, however, the miners were in dire straits. Their supplies had dwindled. They were down to contaminated water

and a single bite of tuna fish every three days. The rescue team was able to buy them some time by drilling tiny holes that wouldn’t risk another collapse of the mine—one for food and water, another for oxygen and electricity. But now they had to figure out how to drill a hole wide enough for humans...half a mile deep...through rock harder than granite...without burying the miners alive. A rescue like this had never been attempted before, let alone successfully.

When we face complex and pressing problems, we know we can’t solve them alone. We assume our most important decision is to assemble the most knowledgeable people. Once we’ve found the right experts, we put our future in their hands.

But that’s not what the leaders of the Chilean mine rescue did. Instead of merely relying on an exclusive group of established experts, they built a system to bring a broader and deeper pool of ideas and intelligence to the surface. When they made their first voice contact with the miners, it was thanks to a \$10 innovation from a small-time entrepreneur. The eventual rescue was made possible by a series of suggestions from a 24-year-old engineer who wasn’t even part of the core team.

Maximizing group intelligence is about more than enlisting individual experts—and it involves more than merely bringing people together to solve a problem. Unlocking the hidden potential

in groups requires leadership practices, team processes, and systems that harness the capabilities and contributions of all their members. The best teams aren't the ones with the best thinkers. They're the teams that unearth and use the best thinking from everyone.

ANY TEAM WON'T DO

I first started wondering how groups come together to achieve greater things when I was a junior in college. It happened in the class that hooked me on organizational psychology, affectionately known as Psych 8:30 a.m. Rumor had it that the professor taught it so early in the morning in the hopes of attracting only the most motivated students.

When I showed up early for the opening lecture, the room was already packed, but the professor wasn't there. Then I looked through the window and saw a disheveled giant of a man outside, tall enough to be an NBA forward. He paced back and forth, holding a pipe in one hand and scanning a stack of notes in the other. When he lumbered into the classroom, he didn't walk us through the

syllabus. He announced that he had failed our country.

It was September 13, 2001.

The professor's name was Richard Hackman, and he was the world's leading expert on teams. He'd spent nearly half a century studying teams in every field imaginable—from airline cockpit crews to hospital units to symphony orchestras. He'd found that in most cases, teamwork failed to make the dream work. *It was more likely to be a nightmare...as anyone who ever did a group project in school can attest.* Most teams were less than the sum of their parts.

For several years, Richard had been studying how to improve collaboration within the major U.S. intelligence agencies. He told us that although analysts had tried to sound the alarm about the threat of airplanes being hijacked as weapons, the intelligence community had failed to heed their warnings. If his research had produced the needed results sooner, they might have been able to prevent the 9/11 attacks.

Richard spent the next few years working with one of his star protégés, Anita Woolley, to study how to make teams smarter. Eventually, Anita and her collaborators made a breakthrough. They revealed something vital to making teams more than the sum of their parts.

Anita was interested in collective intelligence—a group's capacity to solve problems together. In a series of pioneering studies, she and her colleagues tracked how well various teams performed on a wide range of analytical and creative tasks. It was basically an IQ test for groups. I expected collective intelligence to depend on how well the task matched the abilities of individuals in the group. I thought teams of verbal virtuosos would dominate word scrambles, teams of math whizzes would win out at geometry problems, and teams of proactive people would have the edge in planning and execution situations. I was wrong.

Surprisingly, certain groups consistently excelled, regardless of the type of task they were doing. No matter what kind of challenge Anita and her colleagues threw at them, they managed to outperform the others. My assumption was that they were lucky to have a bunch of geniuses. But in the data, collective intelligence had little to do with individual IQs. It turned out that the smartest teams weren't composed of the smartest individuals.

Since these initial studies, scientific interest in collective intelligence has exploded, shedding light on what propels teams to achieve greater things. In a meta-analysis of 22 studies, Anita and her colleagues discovered that collective intelligence depends less on people's cognitive skills than their prosocial skills. The

best teams have the most team players—people who excel at collaborating with others.

Being a team player is not about singing “Kumbaya.” It's not about getting along all the time and ensuring everyone's cooperation. It's about figuring out what the group needs and enlisting everyone's contribution. Although it's nice to have a savant or two on the team, they do little good if no one else sees their value and people pursue their own agendas. It's well documented that a single bad apple can spoil the barrel: when even one individual fails to act prosocially, it's enough to make a team dumb and dumber.

You can see the bad-apple problem in a study of NBA basketball teams—a setting where players who lack prosocial skills stand out as self-centered and narcissistic. Psychologists coded players' narcissism from their Twitter profiles. *Yes, I'm flexing, and no, I couldn't find a shirt. When I look in the mirror, all I see staring back is greatness. My biggest regret is that I'll never be able to watch myself play live.* If teams had many narcissists or even one extreme narcissist, they completed fewer assists and won fewer games. They also failed to improve over the season—especially if their point guard (the primary passer and play caller) scored high

on narcissism. Narcissists are ball hogs, and the most undervalued players are the ones who help their teammates score.

When they have prosocial skills, team members are able to bring out the best in one another. Collective intelligence rises as team members recognize one another's strengths, develop strategies for leveraging them, and motivate one another to align their efforts in pursuit of a shared purpose. Unleashing hidden potential is about more than having the best pieces—it's about having the best glue.

IT'S NOT ALL ABOUT ME

Prosocial skills are the glue that transforms groups into teams. Instead of operating as lone wolves, people become part of a cohesive pack. We normally think about cohesion in terms of interpersonal connection, but team building and bonding exercises are overrated. Yes, icebreakers and ropes courses can breed camaraderie, but meta-analyses suggest that they don't necessarily improve team performance. What really makes a difference is whether people recognize that they need one another

to succeed on an important mission. That's what enables them to bond around a common identity and stick together to achieve their collective goals.

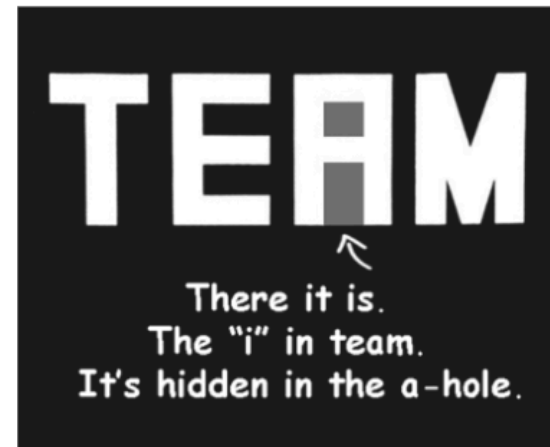
This kind of cohesion is what the Golden Thirteen built to ace Navy officer training together. And it's what Richard Hackman eventually found was missing in too many intelligence units. In his research, most analysts were assigned to specific units, but that's all it really was—an assignment. They shared a boss and a water cooler, but not much else. They didn't spend enough time exchanging ideas, coaching one another, or learning together. When they sent reports to one another, it was mostly a formality. They were just checking a box.

Putting people in a group doesn't automatically make them a team. Richard showed that the best groups of intelligence analysts gelled into real teams. They were evaluated on a collective outcome. They aligned around a common goal and carved out a unique role for each member. They knew their results depended on everyone's input, so they shared their knowledge and coached one another on a regular basis. That made it possible for them to become one big sponge—they were able to absorb, filter, and adapt to information as it emerged and evolved.

Leaders play an important role in establishing cohesion. They have the authority to turn independent individuals into an interdependent team. But all too often, when it comes time to decide who takes the helm, we fail to consider the glue factor.

When we select leaders, we don't usually pick the person with the strongest leadership skills. We frequently choose the person who talks the most. It's called the babble effect. Research shows that groups promote the people who command the most airtime—regardless of their aptitude and expertise. We mistake confidence for competence, certainty for credibility, and quantity for quality. We get stuck following people who dominate the discussion instead of those who elevate it.

It's not just the loudest voices who rise to lead even if they aren't qualified. The worst babblers are the ball hogs. In many cases, the people with the poorest prosocial skills and the biggest egos end up assuming the mantle—at a great cost to teams and organizations. In a meta-analysis, highly narcissistic people were more likely to rise into leadership roles, but they were less effective in those roles.^[*1] They made self-serving decisions and instilled a zero-sum view of success, provoking cutthroat behavior and undermining cohesion and collaboration.



Collective intelligence is best served by a different kind of leader. The people to promote are the ones with the prosocial skills to put the mission above their ego—and team cohesion above personal glory. They know that the goal isn't to be the smartest person in the room; it's to make the entire room smarter.

GLUED TOGETHER WE STAND

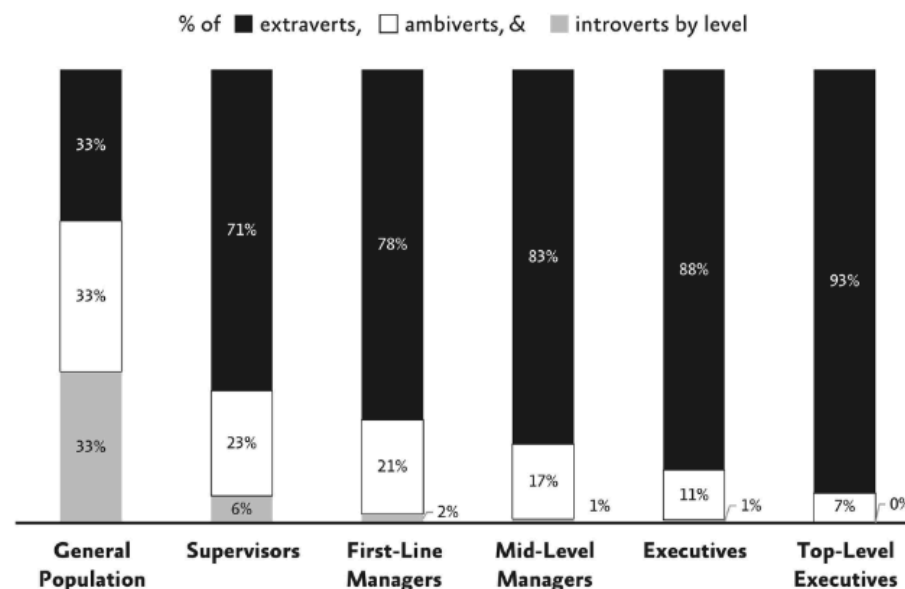
After the mine collapsed in Chile, the first few days of the rescue effort were sheer chaos. There were multiple police units on the scene along with mining professionals, firefighters, rescue workers, and rock climbers. There were geologists and engineers analyzing the technical possibilities. There were mining convoys working haphazardly to deploy six different types of drills. It was a group of capable people, not a cohesive team capable of collective intelligence. Four days in, Chile's president summoned a leader.

The order came so suddenly that André Sougarret would later say it felt as if he'd been kidnapped. After more than two decades as a mining engineer in Chile, André was managing the world's largest underground mine. He was working there, about 600 miles south of the accident, when he got an urgent request to report to the presidential palace. He was still wearing his miner's helmet as he boarded the presidential jet and received his directive in midair: lead the mission to rescue the 33 men trapped in the Copiapó mine.

It was a race against the clock—every second counted. Facing that level of pressure with lives hanging in the balance, many of us would rely on drill sergeants to whip the group into shape and establish order. But when people are already determined, we don't need a leader to bark commands. Research demonstrates that when organizations have cultures that prize results above

relationships, if they have a leader who puts people first, they actually achieve greater performance gains. When everyone is scrambling to make a rapid rescue, you want someone in charge who cares about everyone.

It's Very Extraverted at the Top



Source: research by Stephan Dilchert and Deniz Ones with over 4,000 U.S. leaders and managers

Competence matters, but it isn't enough. André was certainly respected for his technical knowledge, but so were many other candidates. What set him apart was his reputation for prosocial skills. He was selected based on his ability to bring out the best in teams. "He has a lot of patience," an executive who recommended him observed, and "an exceptional ability to listen and reach conclusions after listening to all sides."

We don't normally think of listening skills as vital to leadership. Around the world, great leaders are stereotyped as outgoing and assertive. In the United States, the vast majority of leaders and managers score above the midpoint on extraversion. The higher you look up the hierarchy, the more extraverts you find. Even in more traditionally introverted countries like China, extraverts are seen as the prototypical leaders. But one of my research projects examined whether extraverts are actually more effective leaders than introverts, and revealed a more nuanced picture of the ideal leadership style. What made for effective leadership depended on how proactive a team was.

When teams were relatively reactive, waiting for direction from above, extraverts drove the best results. They asserted their visions and motivated teams to follow their lead. But when teams were proactive, bringing many ideas and suggestions to the table,

it was introverts who led them to achieve greater things. The more reserved leaders came across as more receptive to input from below, which gave them access to better ideas and left their teams more motivated. With a team of sponges, the best leader is not the person who talks the most, but the one who listens best.

In Chile, André's first leadership move was to wield his listening skills. Despite the time pressure, he didn't rush into action. When he arrived at the mine, aptly nicknamed Campamento Esperanza (Camp Hope), he was greeted by familiar faces. His support team of 32 included people he already knew well from years of collaboration—they included mine superintendents he'd trained with and a crisis communication psychologist he'd worked with. The shared mission was clear: to find the miners and save them as quickly as possible.

What was missing was a cohesive strategy. André began interviewing the experts on-site to find out what they knew. As he listened, he learned that his original plan of entering the mine through the tunnels wasn't an option. He quickly shifted his attention to drilling and set out to appoint the right leaders to coordinate the efforts.

André intentionally didn't hand the reins to the most experienced drillers or the most assertive managers. Instead, he

put the people with the strongest prosocial skills in charge. The mine superintendent who ended up spearheading the collaboration between the drillers was known for his consultative leadership style. He went out of his way to seek the team's input on strategy and walk them through his reasoning as he made each and every decision.

Due to the collapse, the mine was increasingly unstable, with the ground shifting as the team worked. To maximize the chances of a rescue, André and his colleagues made a critical decision. Instead of committing to one drilling plan, they would pursue multiple plans simultaneously.

André needed ideas—fast. He started holding daily meetings with the full rescue team. As he put it later, he knew there would be “no super leader who had all the answers.” It was time to build a team process and an organizational system to unlock collective intelligence.

MANY BRAINS MAKE LIGHT WORK

When we're confronting a vexing problem, we often gather a

group to brainstorm. We're looking to get the best ideas as quickly as possible. I love seeing it happen...except for one tiny wrinkle. Brainstorming usually backfires.

In brainstorming meetings, many good ideas are lost—and few are gained. Extensive evidence shows that when we generate ideas together, we fail to maximize collective intelligence. Brainstorming groups fall so far short of their potential that we get more ideas—and better ideas—if we all work alone. As the humorist Dave Barry quipped, “If you had to identify, in one word, the reason why the human race has not achieved, and never will achieve, its full potential, that word would be: ‘meetings.’”

The problem isn't meetings themselves—it's how we run them. Think about the brainstorming sessions you've attended. You've probably seen people bite their tongues due to ego threat (I don't want to look stupid), noise (we can't all talk at once), and conformity pressure (let's all jump on the boss's bandwagon!). *Goodbye diversity of thought, hello groupthink.* These challenges are amplified for people who lack power or status: the most junior person in the room, the sole woman of color in a team of bearded white dudes, the introvert drowning in a sea of extraverts.

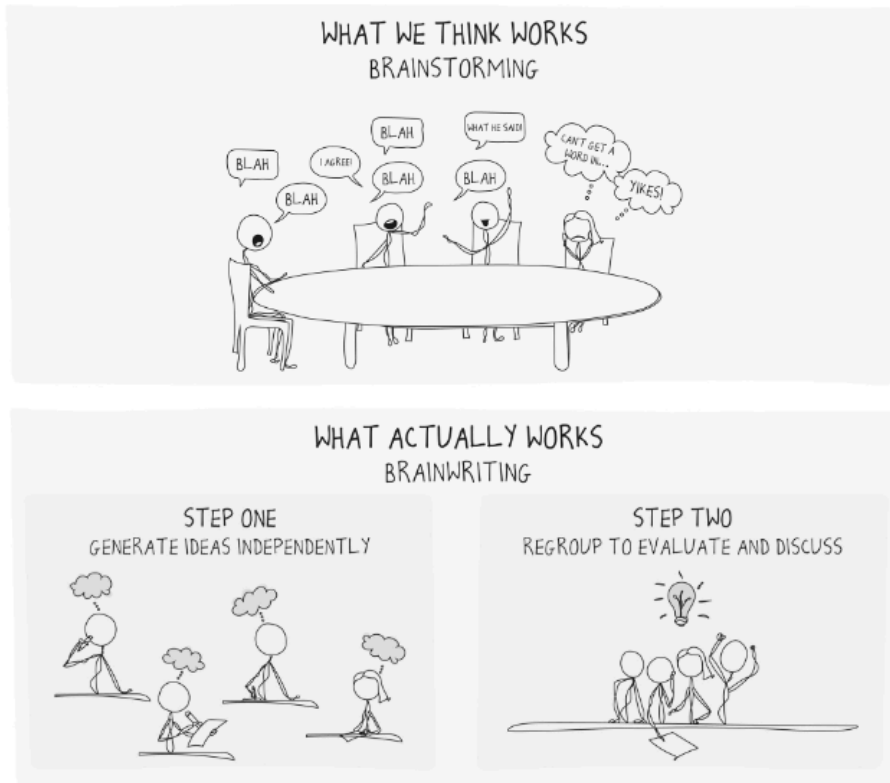


To unearth the hidden potential in teams, instead of brainstorming, we're better off shifting to a process called brainwriting. The initial steps are solo. You start by asking everyone to generate ideas separately. Next, you pool them and share them anonymously among the group. To preserve independent judgment, each member evaluates them on their own. Only then does the team come together to select and refine the most promising options. By developing and assessing ideas individually before choosing and elaborating them, teams can

surface and advance possibilities that might not get attention otherwise.

Research by Anita Woolley and her colleagues helps to explain why this method works. They find that another key to collective intelligence is balanced participation.^[*2] In brainstorming meetings, it's too easy for participation to become lopsided in favor of the biggest egos, the loudest voices, and the most powerful people. The brainwriting process makes sure that all ideas are brought to the table and all voices are brought into the conversation. Sure enough, there's evidence that brainwriting is especially effective in groups that struggle to achieve collective intelligence.

Collective intelligence begins with individual creativity. But it doesn't end there. Individuals produce a greater volume and variety of novel ideas when they work alone. That means that they come up with more brilliant ideas than groups—but also more terrible ideas than groups. It takes collective judgment to find the signal in the noise.



In Chile, André Sougarret didn't get the best ideas by gathering his team for long brainstorming sessions. Instead, he

and his colleagues established a global brainwriting system to crowdsource search and rescue proposals from a diverse network of contacts. To shield the process from the havoc at the mine, they set up a separate team to gather and vet ideas off-site, hundreds of miles south in Santiago.

That team gathered submissions from around the world via Chile's Ministry of Mining website. They also invited ideas from sources as varied as UPS, NASA, the Chilean Navy, an Australian company that specialized in 3D mapping software, and a group of American drilling experts who had been stationed in Afghanistan. They ranked the proposals on feasibility and then interviewed the people with the most promising submissions.

Hundreds of ideas poured in, and some were far-fetched. One contributor suggested strapping panic buttons to a thousand mice and letting them loose in the mine, hoping the miners would find them. Another had spent two weeks inventing a miniature yellow plastic telephone to send down a hole to the miners. It looked as if it had arrived straight from 1986 and gave the engineers on-site a much-needed laugh. As usual, brainwriting yielded variance as well as volume.

Thankfully, some of the submissions provided more than entertainment value. An independent mining engineer pitched the

idea of transporting food and water via 3.5-inch tubes. The team adopted his suggestion, and it ended up becoming a lifeline for the miners. Along with providing sustenance, it became their conduit for communicating with the rescuers.

The rescue team sent a high-tech camera down to the miners. For the first time, they could see one another. But the audio didn't work. The engineers tried a number of solutions, but all of them failed. Finally, they swallowed their pride and called for the tiny yellow phone. After attaching it to a fiber-optic cable, the plastic device that cost \$10 to make became the sole means of speaking with the miners. The solo entrepreneur who built it, Pedro Gallo, talked with the trapped men every day.

LETTING A THOUSAND FLOWERS BLOOM

Having located the miners and opened communication lines, the rescue team moved full speed ahead on extracting them. Plan A was to use a massive drill to bore a hole. The problem was that it was expected to take four months, and there was no guarantee that the mine would remain intact through the process. And no one

could predict whether the miners would face medical emergencies or mental breakdowns before then.

The most extensive analysis of the collaboration lessons from the rescue team was led by my colleague Amy Edmondson. She started her career as an engineer, became a disciple of Richard Hackman's, and is now among the world's foremost experts on teams. After interviewing many of the key players in the rescue effort, Amy encouraged me to dig into one story in particular, assuring me it was worth its weight in gold.

One day, a young engineer named Igor Proestakis was on-site delivering drilling equipment when he bumped into the geologists overseeing the drilling. He told them about an idea he had to access the miners faster. It was a bold alternative to plan A: Instead of slowly drilling a new hole, what if they rapidly expanded one of the existing holes? Igor thought they might be able to do it with a tool called a cluster hammer—a special drill designed to smash right through rock.

Igor didn't expect his suggestion to go anywhere. He was one of the youngest, least experienced engineers at the site. His role was to advise drill operators on how to use his company's equipment effectively, not to propose new strategies and technologies. But when he mentioned his idea to the geologists, they asked him

to share it with André Sougarret. Could he have his presentation ready in two hours? “You want me to do *what?*” Igor remembers thinking. He didn’t know why anyone would listen to him. “I was just a 24-year-old, giving my opinion.”

Igor immediately got to work. He wasn’t sure whether the right tools even existed, so he called the owner of an American company that manufactured cluster hammers, and they hatched a plan. They predicted that it would only take a month and a half—but with that speed came higher risk. The technology had never been tried in Chile, and it had never been used to drill holes this wide anywhere near this deep. They would also have to custom-design a drill to do it, and they wouldn’t have time to test it before they used it.

Later that day, when Igor presented the idea, André didn’t shut him down. He wasn’t looking for an excuse to say no—he was listening carefully for reasons to say yes. “This was probably the most important job of his life,” Igor recalls, “and despite my experience and age, he listened to me, asked questions, gave it a chance.” André asked him to put together a pitch for Chile’s mining minister. Soon, the idea was approved: it was now plan B, and the two plans would operate in parallel.

In many organizations, Igor wouldn’t have had the chance to

pitch his idea in the first place, let alone have it adopted. “In a normal organization, he would never have spoken up,” Amy Edmondson told me. “But in this setting, the climate had been created where he felt he could—and he did.”

We normally call that a climate for voice and psychological safety. There’s evidence that just being looked at by the leader is enough to encourage people who lack status to speak up. But as I dug into Amy’s research, something caught my eye. The rescue leaders hadn’t just established a climate—they had built an unconventional system for making sure that ideas were carefully considered rather than dismissed. And it’s a system that I’ve seen unlock collective intelligence in all kinds of settings.

BARBARIANS AGAINST THE GATEKEEPERS

In most workplaces, opportunity exists on a ladder. The person immediately above you is in charge of decisions about your growth. Your direct boss sets your job description, vets your suggestions, and determines your readiness for promotion. If you can’t get your boss to hear you out, your proposal is toast. The

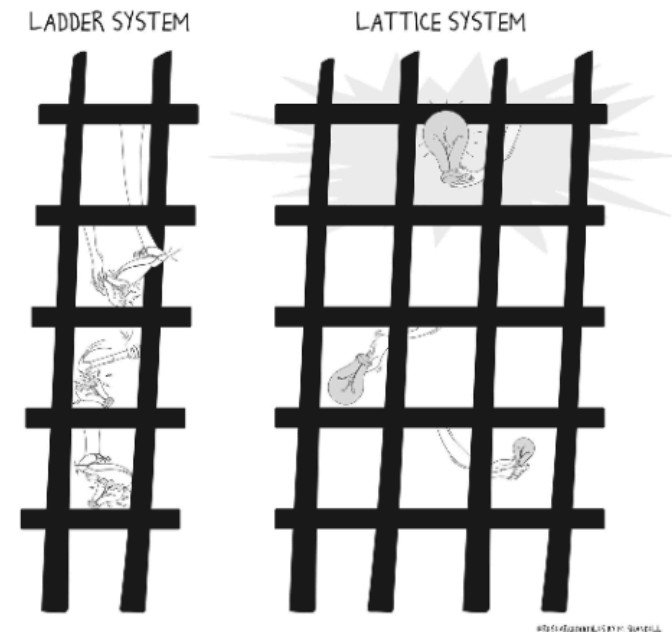
system is simple. But it's also stupid—it gives one individual far too much power to shut creativity down and shut people up. A single no is enough to kill an idea—or even stall a career.

It's easy for managers to find reasons to say no. Your idea might be a threat to their ego (if it's good) or their image (if it's bad). They might question your motives or your reasoning. My research shows that when you bring a suggestion to managers, if you don't have a reputation for being prosocial and levelheaded, that can be enough to turn the tide against you.

In many cases, unproven ideas carry too much risk and uncertainty. Managers know that if they bet on a bad idea, it might be a career-limiting move, but if they pass on a good idea, it's unlikely anyone will ever find out. And even if managers are supportive of an idea, if they perceive leaders above them as opposed to it, they tend to see it as a losing proposition. All it takes is one gatekeeper to close off a new frontier.

That kind of hierarchy is set up to reject ideas with hidden potential. You can see it clearly in the tech world. Xerox programmers pioneered the personal computer but struggled to get managers to commercialize it. An engineer at Kodak invented the first digital camera but couldn't persuade management to prioritize it.

Organizations can solve this problem with a different kind of hierarchy. A powerful alternative to a corporate ladder is a lattice. A physical lattice is a crisscrossing structure that looks like a checkerboard. In organizations, a lattice is an organizational chart with channels across levels and between teams. Rather than one path of reporting and responsibility from you to the people above you in the hierarchy, a lattice offers multiple paths to the top.



A lattice system isn't a matrix organization. You're not stuck with eight different bosses breathing down your neck like in *Office Space*. You don't have multiple managers holding you back and shooting you down. The goal is to give you access to multiple leaders who are willing and able to help move you forward and lift you up.

The best example I've seen of a lattice system is at W. L. Gore, the company known for making waterproof Gore-Tex gloves and jackets. Back in the mid-1990s, a rank-and-file medical device engineer at Gore named Dave Myers figured out that coating the gear cables on his mountain bike with Gore-Tex protected them from grit. It dawned on him that Gore-Tex might also be useful for repelling the grit from human hands that leads guitar strings to lose their tone over time.

Even though it wasn't part of his day job, Dave took the initiative to mock up a prototype. He brought it to some senior people, but they didn't think it was worth pursuing. They had technical objections. *You can't coat a vibrating string with fluoropolymer—you'll ruin the sound!* They had strategic concerns too. *We're not in the music business—why would we make guitar strings?*

In a typical organization, those protests would have been

enough to squash the idea. But Gore has a lattice system. Whenever you have an idea, you're granted the freedom to go to a range of different senior people. To get your project off the ground, all you need is one leader who's willing to sponsor it. So Dave kept socializing his idea. Eventually he found a sponsor, Richie Snyder, who connected him with an engineer named John Spencer.

For the next year, Dave and John dedicated part of every work week to their unproven idea. Instead of seeing those kinds of side projects as diverting or disobedient, Gore encouraged them—they gave people “dabble time” to tinker. To make headway on the guitar strings, Dave and John didn't need Richie's formal approval. They just gave him regular updates as they developed and tested prototypes with thousands of musicians.

A lattice system rejects two unwritten rules that dominate ladder hierarchies: don't go behind your boss's back or above your boss's head. Amy Edmondson's research suggests that these implicit rules stop many people from speaking up and being heard. The purpose of a lattice system is to remove the punishment for going around and above the boss.

At Gore, Dave and John weren't shy about going above Richie when they needed ideas and support. They took advantage of the leeway to contact anyone at any time. At one point, they even

had the chairman-CEO himself dropping into their meetings and giving advice.

It took Dave, John, and their makeshift team 18 months to develop and launch the product. Just 15 months later, their Elixir strings became the market leader in strings for acoustic guitars. It's not every day that an idea hatched in a medical products division makes a dent in the music industry. But it did, thanks to the lattice system.

Even when organizational charts look like ladders, it's possible to design ad hoc lattice systems to surface and propel fledgling ideas. I see these systems often in innovation tournaments—contests to generate novel solutions to problems. Dow Chemical once issued an internal call for proposals to save energy and reduce waste, offering to sponsor the most promising ideas from employees that cost no more than \$200,000 and had the potential to pay for themselves within a year. Over the next decade, they bet on 575 ideas, which saved the company an average of \$110 million a year.

In this kind of innovation tournament, decisions aren't up to individual gatekeepers. A lattice system engages people at different levels to do peer reviews of the submissions. This prevents entries from being shut down prematurely or unfairly, ensuring that every

idea gets due consideration.

Weak leaders silence voice and shoot the messenger. Strong leaders welcome voice and thank the messenger. Great leaders build systems to amplify voice and elevate the messenger.

LIGHT AT THE BOTTOM OF THE TUNNEL

When I first learned about how Igor Proestakis pitched his plan B, I immediately recognized the hallmarks of a lattice system. It was why he was able to bring his idea to the geologists supervising the drilling—and why they took him straight to the top despite his youth and inexperience. But the benefits of the lattice system became even more visible about a month into the rescue initiative.

Plan A was moving even slower than anticipated, and plan B was looking better and better. Igor had been right about the cluster hammer: it was smashing swiftly and smoothly through the rock. It had a clear advantage...until it stopped working altogether. A third of the way down, it kept spinning but stopped cutting.

It turned out that they'd hit a series of iron rods that were in place to reinforce the mine, which had shattered the hammer's drill

bit into pieces. One of those pieces—a hunk of metal the size of a basketball—was now blocking the hole they were expanding to reach the miners. The team tried to bash the metal out and pull it out with magnets, but it wouldn't budge. They were ready to give up on Igor's plan B.

The next day, Igor had another idea. He remembered an extraction tool he'd read about in school—an industrial version of an arcade claw machine. *My wife, Allison, is the master of that machine, but we had no idea it served a purpose higher than winning plush teddy bears.* It was exactly the kind of approach they needed. If they could lower a metal jaw and clamp its teeth around the obstructing piece of metal, they could extract it and clear the hole.

When Igor first suggested the claw machine to a few people on-site, they didn't listen. But due to the lattice system, he knew he had other routes to getting his idea heard. After two days of having his idea ignored at lower levels, Igor managed to get an audience with the Chilean mining minister himself, who gave it the green light right away. For the next five days, they tried and failed until it finally captured the broken drill bit, lifted it out, and opened the hole. *Best claw prize ever.* To everyone's relief, plan B was back on track.

Late one evening the following month, a rescue worker went

down through that hole in a capsule. Shortly before midnight, the capsule came back up carrying the first miner. And less than 24 hours later, the rescue capsule carried the foreman—the last of the 33 miners—out through the hole.

Igor's claw idea saved his plan B—and his idea for plan B helped save 33 lives. There's no question that we should applaud the creative, heroic efforts from him and so many others. But let's not forget the unsung heroes of this story: the leadership practices, team processes, and systems of opportunity that made it possible for people to speak up and be heard.

If we listen only to the smartest person in the room, we miss out on discovering the smarts that the rest of the room has to offer. Our greatest potential isn't always hidden inside us—sometimes it sparks between us, and sometimes it comes from outside our team altogether.

[SKIP NOTES](#)

[*1](#) Sadly, the gravitation toward narcissistic leaders starts early: psychologists find that narcissistic kids get more peer nominations as leaders and claim to be better leaders, even though they aren't. In 22 out of 23 Dutch primary and secondary school classrooms, the most

leadership nominations went to the students most likely to agree with statements like “Kids like me deserve something extra.” When they grow up, those narcissists often wreak havoc on their teams.

*2 Interestingly, smarter teams also tend to have higher proportions of women. The key reason is that on average, women outperform men in tests of reading other people’s thoughts and feelings. It’s not clear whether they’re more capable or more motivated to use prosocial skills, but there’s a case to be made that women tend to instill these skills in their teams. Both economists and psychologists find that good team players motivate the rest of the group to contribute more. And when a law professor studied corporate boardroom dynamics, he found that as women joined Norwegian boards, they were more likely to actually read the materials before the meeting. Not wanting to be unprepared and outdone, men picked up the norm and started doing their homework too.