CHAPTER 1

The MacGyver Mindset

"With a little bit of imagination, anything is possible."
—Angus MacGyver

In the 1980s, throughout the popular television series *MacGyver*, the title character is admired for his resourcefulness and talent for solving problems using everyday items. His imagination and ingenuity help him solve complex problems, catapulting the narrative forward with his cognitive skills. In one episode of the show, MacGyver used a ballpoint pen case to fix a car's fuel line. In another, he plays back an old phonographic record on a black cylinder using a piece of paper and a safety pin. In another example of functional flexibility, MacGyver fixed a broken rowing boat using a stick with a fork, a sleeping bag cover, some ropes, and a tarpaulin. MacGyver consistently escaped difficult situations by repurposing objects beyond their intended use, using his extensive knowledge, problem-solving mindset, and cognitive skills. The term "MacGyver" has become a part of our cultural vocabulary. Merriam-Webster defines it as the ability "to make, form, or repair something using whatever is conveniently on hand."[1] This skill involves looking beyond the intended uses of objects and repurposing their components to create inventive solutions.

MacGyver's success depended on many of the creative thinking skills we will cover in this book. For example, he demonstrated combinational and improvisational creativity, rule-breaking, and opposite thinking to tackle challenges, all of which will be discussed in later

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chapters. A lateral thinker, MacGyver was able to make associations between seemingly unrelated concepts. For example, in episode 6 of season 2, co-written by Kerry Lenhart and John Sakmar, whose interview appears at the end of this chapter, MacGyver used red wine to charge a battery. His ability to think on his feet and maintain an open mind when under stress were critical to his problem-solving skills. He was undeterred when faced with constraints because he was extremely confident in his understanding of how things worked and in his ability to improvise solutions with limited resources on hand. MacGyver was never hindered by knowledge of an object's conventional functionality when working toward his goals. He was naturally comfortable deconstructing the object to its simplest form, combining it with other items, or modifying elements of it to achieve a different purpose.

In the 1930s, German psychologist Karl Duncker identified the cognitive bias that blocks one's ability to repurpose objects beyond their intended use. By the 1940s, the term *functional fixedness*[2] gained traction with social scientists. Since then, researchers have investigated the causes of this bias and explored the circumstances that can help people avoid it and adopt a MacGyver mindset, which accelerates creative velocity. They discovered that the ability to creatively repurpose items depends upon flexible thinking and an open mind.

Functional fixedness arises from ingrained beliefs and rigid mindsets about how things work based on prior knowledge and experience. Researchers learned that while we use these beliefs as a mental shortcut, they narrow our vision and imagination over time.[3] Functional fixedness strengthens as we get older and can become part of our cognitive operating system. It can cause us to become focused or stuck on traditional and established solutions, preventing us from considering new and improved alternatives. This can hinder our ability to come up with creative ideas and may even make it difficult for us to consider innovative approaches to solving problems. The good news is there are techniques you can use to break fixations that will prevent you from seeing novel solutions.

For example, doodling engages our brain in a different activity, disrupting habitual thought patterns, which can help increase our functional flexibility. It encourages us to think beyond the usual associations with objects or tools. Doodling allows more abstract,

free-flowing connections to form. Pat Copeland, whose interview appears in Chapter 9, has said, "Doodling serves as a stress reliever and gives us a view of our unconscious thoughts." This low-stress way of exploring our subconscious can open our minds to consider unconventional uses for familiar objects. In addition, the visual-spatial aspects of doodling can facilitate making novel associations and connections that can overcome a fixation on a single idea or approach. And since doodling is often described as aimless, it permits unexpected mixtures of shapes and forms without the pressure to produce a viable outcome. When we're less anxious about "getting it right," we're more open to exploring alternative solutions and breaking free from functional fixedness.

In a research study that explored the role of AI in extending human creativity, Northwestern researchers noted, "A key component of creativity involves abstraction, the process of learning how to make sense of information by identifying the conceptual components which are relevant" for meaning, mechanics and purpose.[4] Observing and analyzing objects, focusing specifically on their structure and potential for reuse, is foundational for overcoming functional fixedness and helpful when using analogic thinking, explored in more detail in Chapter 3.

In Chapter 4, you will learn more about the SCAMPER technique, a methodology that also benefits from breaking down an idea into its core components to challenge existing assumptions about its structure and encourage a fresh perspective. Introduced in the 1970s, SCAMPER prompts different actions to take to reformulate a novel solution that looks different than the current sum of a solution's parts. The "P" part of the SCAMPER methodology considers what can be "put to other use." Abstraction facilitates repurposing by increasing awareness of an object's components, their relationships within the design space, and how they collectively contribute to the overall utility and experience. This opens the mind to considering other ways to utilize or modify the parts and is essential to busting the bias of functional fixedness.

Design thinking is based on foundational tools such as ethnographic research, problem reframing, and experimentation, which help to avoid being stuck in conventional thinking. When engaging in design thinking, it is essential to abstract the specific problem at

hand to eliminate cognitive bias and reduce attachment to a specific approach when creating potential solutions. By framing the challenge in a less concrete manner, it becomes possible to explore a wider range of potential solutions and overcome functional fixedness.

Ethnographic research, observing and understanding your target customer behaviors, is foundational to design thinking, and often reveals how customers develop workarounds and shortcuts in their current processes. Your lead customers are often the most motivated to MacGyver a solution if it makes their life easier. Design thinking requires you to be open to the broadest view of the problem space, as MacGyver would, which ensures you don't miss unconventional solutions hidden in plain sight. You may realize that the original issue you were trying to address is just a symptom of a different, deeper underlying problem, or you may find a solution from a different domain that can be applied to a new context. The objective of this approach is to be open to seeing more than the limited set of solutions you are considering.[5] Whether you use design thinking or SCAMPER, the important thing is to recognize the existence of conscious and unconscious biases that can constrain your capacity to generate initial ideas by limiting your openness to unexpected approaches.

When you hear a colleague say "This is how we have always done things" or "This is how things work," it may signal that the person is fixated on a specific way something functions and is resistant to considering alternative approaches. It can also indicate a closed mindset, which limits the possibilities they'd be willing to explore to identify novel solutions. These types of statements suggest a lack of cognitive flexibility and a resistance to looking at the challenge in a new way. After initially validating their fixed mindset, it will take a conscious effort to help them overcome that fixation because the conventional approach won't work. The goal is to move the person into a mental impasse when they realize for themself that the conventional approach isn't the only option.

Insight problems are one tool that can help challenge someone's specific assumptions or fixed mindset. They are a type of problem that requires a sudden restructuring or shift in perspective to solve. These problems are often difficult to solve using only logic and require visual, spatial, mathematical, or verbal skills. This type of

problem requires restructuring the stated issue to overcome a mental block and reach a novel or counterintuitive solution. When trying to move a fixated person to a new perspective, begin by presenting a scenario or task that initially seems to require the functionally fixated use of the item. Then, slowly reframe the problem such that the functionally fixated solution is inadequate or impractical.

An example of an insight problem is the "Surgeon Riddle": A child is brought into the emergency room after a serious accident. The surgeon on duty looks at the child and exclaims, "I can't operate on this child; he is my son!" However, the surgeon is not the child's father. How is this possible? Of course, the surgeon is the child's mother. This problem requires letting go of gender bias, unconsciously assuming the surgeon must be a man.

You can reframe the problem and expand the solution set by providing an approach that challenges a fixated person's assumptions. In the 2015 article "Find Innovation Where You Least Expect It," published in the *Harvard Business Review*, Dr. Tony McCaffrey, a cognitive psychologist who has studied functional fixedness, suggests that one way around functional fixedness is to change how you describe the problem or the object. By reframing the issue, as you do when using design thinking, you can change the context of the solution.

For example, consider the Titanic collision. McCaffrey points out that if the goal had been reframed as "keep people out of the water" instead of just "save people," more solutions might have been considered, potentially leading to more survivors.[6] McCaffrey goes on to describe alternative approaches to only seating people in lifeboats, such as building a platform out of doors and lashing them to the lifeboats so more people could be saved than could fit in the lifeboat. Another idea was to use the tires from the 40 or so cars on the ship to create a raft upon which a mattress or door could be placed. McCaffrey even suggests that the lifeboats might have ferried people from the sinking ship to the iceberg, where they could have stayed dry while waiting for help to arrive. However, this solution would have required the passengers and crew to see the iceberg as a savior and not the enemy, which, under the stress of the situation and with the initial framing of the problem, was highly unlikely.

Generic Parts Technique

To overcome a tendency toward functional fixedness, McCaffrey suggests deconstructing the issue or object into discrete elements, which allows one to see it in its most general terms. His methodology, the Generic Parts Technique, depends upon the reduction of any issue or item to its simplest, most generalized description and the least defined use, repeatedly posing two questions: "Can this be decomposed further?" and "Does this description imply a use?"[7] With his colleague, Jim Pearson, McCaffrey studied the impact of generating generic descriptions of the elements on creative velocity and discovered that the group using this Generic Parts Technique (GPT) was better able to solve insight problems than the control group that was not taught this method.

Design fixation, a form of functional fixedness, occurs when designers exclusively focus on an object's intended function and their previous experience while neglecting other possibilities. This can happen when designers lean too heavily on existing or prior art, especially when they are under pressure to solve a problem quickly. Falling in love with an idea or an approach can also make it difficult to move beyond the initial design, causing the designer to become blind to its shortcomings or to new approaches. To protect against this, designers should consider less obvious aspects of the design and consider features that are easy to overlook. For instance, how does this affect the senses? How could the shape be transformed? How might the materials be changed? The SCAMPER methodology covered in more detail in Chapter 4 can potentially help overcome design fixation by prompting designers to explore different types of modifications and transformations to an existing design or concept.

As the Titanic example illustrates, sometimes the barrier to innovative solutions is a fixation on the goal. Goal fixedness arises from how the target outcome is defined and can limit consideration of adjacent or related ideas that don't seem to specifically address the stated outcome. This type of fixedness reflects a cognitive bias that causes an individual to narrowly focus on a specific goal, neglecting other important factors or alternative paths to achieve that goal. It can negatively impact the process of defining and articulating effective problem statements when teams embark on exploring, designing, and identifying novel solutions. Fixating on a goal, like fixating

on an object's function, can narrow your field of vision. McCaffrey and Pearson point out that framing a problem in more general terms, using hypernyms, and choosing words that do not limit or imply the solution can invite new possibilities.

Hypernyms are words that represent a broader, more general category or concept. For example, the word *attach* covers a set of more specific terms, like connect, glue, staple, tape, pin, clamp, and more. *Hyponym* is the term that describes these more specific words. If your problem statement or object description uses hyponyms instead of hypernyms, you will not open doors to a wider range of potential solutions. Hypernyms can help remove unnecessary details, making the problem statement easier to understand. They can also make it easier to deconstruct an object as the sum of its most generic parts, enabling new solutions to emerge.

The purpose of the Generic Parts Technique is to abstract a concept or object to dissect the problem into its constituent parts. The first step is to describe the topic in general terms using hypernyms to describe broader categories. For example, if you're out hiking and injure your leg, you may need to make a makeshift splint out of what you have on hand, like MacGyver. To explore all possible solutions to this problem, you could start by creating a general statement such as, "I need to design a flexible and easy-to-apply support structure that can be used in various situations to restrict the movement of a nonfunctional limb." The basic components for this would then include an adjustable restrictive enclosure, an immobilization component, and an attachment mechanism. Now you can envision how to address each of these needs using the resources available to you.

Exquisite Corpse Technique

My friend Kate Collins introduced me to the Exquisite Corpse technique, which originated with the Surrealist artists in Paris in the 1920s. Participants add to a composition in sequence, by following a specific rule and by only seeing the end of what the previous person contributed. Players create, in turn, an image on a sheet of paper, fold it to conceal most of their work, and then pass it to the next player for a further contribution. No one knows what comes before or after their work. The game was originally played by writers with

words, not pictures, which is the source of the technique's name. The phrase "Le cadavre exquis boira le vin nouveau" ("The exquisite corpse shall drink the new wine") was collaboratively created using this technique, leading to the French name "cadavre exquis."[8]

This technique also demonstrates the effectiveness of the "yes and" approach in generating new ideas. Breaking free from a linear mindset and preconceived notions about how the parts combine to create the final image is crucial for overcoming functional fixedness. The game's random collaborative process creates unexpected and bizarre combinations, reflecting the Surrealists' intention to embrace the irrational and unconscious. Evolving from a parlor game, Exquisite Corpse is not limited to combining words in a Mad Libs–style format. Individuals can draw the elements directly on the paper or produce a collage to create the figure. The game's emphasis on spontaneity, chance, and collaboration, as well as the unexpected output, makes it accessible to artists as well as nonartists.

The benefit of the Exquisite Corpse exercise is that it taps into the unconscious creative process, leaving linear thinking aside. The technique produces unexpected results that defy traditional logic. To encourage this, the technique has very few rules beyond not sharing your work before the figure is complete. Contributors are encouraged to use abstract shapes and patterns rather than realistic images to inspire more creative and unconventional combinations. This also allows for the use of metaphors to communicate abstract concepts about the figure. For instance, the pattern or color chosen can communicate tension, style, or emotion. A fluffy white cloud positioned as the hair on the head of the corpse might communicate the character being created is spacey or absent-minded. Or choosing to cut out a pair of angel wings instead of arms could imply a mythical creature. Using watches as eyes, for example, has layered meaning here. Using a timepiece may convey the character's age and, simultaneously, can communicate the act of observing, or watching, attentively.

Allowing each contributor to the project the private time to think, imagine, and create helps to suspend judgment and criticism, thus creating an environment where unconventional and innovative ideas can thrive. This approach can help overcome functional fixedness because no contributor is tied to the prior art.

Figure 1.1 Exquisite Corpse Art Project.
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Additionally, it fosters a playful mindset, which we will explore further in Chapter 9, by acknowledging that there is no single correct answer. It reduces the stress that hinders creativity, as contributors are required only to comply with a very limited set of rules. Kate described her experience in art class building the Exquisite Corpse, shown in Figure 1.1, as liberating. However, she mentioned that she and her classmates had to first get comfortable with the strange and nonsensical possibilities for how the final product might appear.

As Kerry Lenhart, one of the writers interviewed at the end of this chapter, points out, "Creatively, I think we all stand on the shoulders of those who created before us, people who inspired us. When MacGyver creates his various objects, he uses found bits and pieces scavenged from objects built by others. Often, when John and I are creating projects, we scavenge ideas rather than objects. And, like MacGyver, we hope we are using them in new and unexpected ways."

Partnering with Generative AI

When working with generative AI tools, it's important to consider their limitations as collaborators in developing functional flexibility. These tools lack a deep understanding of the complexities of human experience, which can hinder their ability to recognize or adapt to functional fixedness. While partnering with these tools for a generic parts technique exercise may be feasible, engaging them in an exquisite corpse exercise could prove more challenging.

That is because the process of co-creating with generative AI is characterized by its linear and logical nature, making it suitable for the systematic problem-solving approach of Generative Parts Technique. The structured format of such exercises necessitates clear prompts and systematic approaches to building, which aligns well with the capabilities of generative AI tools.

Using structured methodologies to remove fixations can improve a co-creation partnership with AI. An example of a generative AI tool that can help guide you through the process of abstracting a problem and ideating solutions is the Supermind Ideator, built on ChatGPT and developed by the MIT Center for Collective Intelligence's Design Lab. It leverages a methodology that suggests "moves" people can make to accelerate their creativity. This approach's "basic design moves" align well with the generic parts technique; queries prompt you to zoom in and out of the problem and then explore analogies that might provide the cue for a solution.[9] Looking at both the generalized and detailed perspectives of the specific problem can help break functional fixedness and open novel paths to a solution. This approach to partnering with the generative AI gives your computational partner the responsibility of providing you with challenging questions to help break the box you feel you may be stuck in creatively.

When trying to let go of design or goal fixation, you may find generative AI tools are less flexible than you would have hoped. This can be due to the nature of the prompt used to co-create. The more specific the brief you use in your prompt, the narrower the field of vision your generative AI partner will take. Researchers in Australia have found that generative AI tools may restrict

exploration based on vocabulary provided in the prompts and that "the effectiveness of co-ideation with AI rests on participants' chosen approach to prompt creation and on the strategies used by participants to generate ideas in response to the AI's suggestions."[10] The research showed that providing abstractions to the problem can improve the effectiveness and diversity of the AI output. Using hypernyms instead of hyponyms can help abstract the problem when you craft your prompts.

How effectively you define the problem schema to your AI partner carries a lot of the weight of your success when co-creating with computational tools. The problem schema refers to the details and vocabulary used to structure a challenge or task so the AI can process, analyze, and respond constructively to the prompt. You might ask AI for help generating ideas, but if you frame your creative boundaries too narrowly, your AI partner could produce ideas that don't consider disruptive solutions that may still meet your needs. Intention and purpose should guide the AI's approach without building in the fixations and biases that limit exploration.

It might challenge your natural tendency to be ambiguous and nonspecific, but this is essential to removing any intrinsic bias in how you express the issue to avoid fixation. It is also crucial not to fixate on any one idea that emerges. Take your time wandering through the ideation process and evolving the initial output.

Interview with Kerry Lenhart and John Sakmar

I met John and Kerry in 1994 when they were scouting locations in Seattle for a Fox Network medical drama series they created called *Medicine Ball*. At the time, I was working at the Washington State Film Office supporting TV series and film productions, like *Northern Exposure* and *Sleepless in Seattle*. Kerry and John have had an illustrious career in television since the mid-1980s, writing for and producing series including *MacGyver*, *Boston*

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Public, *Ally McBeal*, *Chicago Hope*, *Psych*, *Mr. and Mrs. Smith*, and, more recently, *Kingdom Business* on BET. During their time working on *MacGyver*, they shared that they were relied upon for their capacity to create "MacGyverisms."

1. **As writers on the show, what does it mean to "Think like MacGyver?"**

   To think like MacGyver, you have to get into an ingenious, inventive, and problem-solving mindset. You want to be as creative, knowledgeable, analytical, resourceful, improvisational, and calm under pressure as you can. I wish there was a cool acronym to encapsulate those, but I can't think of one. They're all important, and they all work together. They're all parts of the whole that make MacGyver, MacGyver.

   To think like MacGyver means thinking *creatively*. It takes imagination and innovative thinking to find unconventional solutions to problems.

   To think like MacGyver means thinking *knowledgeably*. Drawing on a broad base of knowledge, particularly in science, engineering, and general mechanics, to inform decision-making.

   To think like MacGyver means thinking *analytically*. Assessing situations quickly and effectively to understand the core issues and potential solutions.

   To think like MacGyver means thinking *resourcefully*. Looking at the resources you have with fresh eyes. Thinking about other ways they could be used. Being open to repurposing everyday objects to serve new functions.

   To think like MacGyver means thinking *improvisationally*. Adapting to new challenges on the fly, thinking outside the box to devise practical solutions in real time.

   And finally, to think like MacGyver means thinking while remaining *calm under pressure*. Maintaining your composure and clear thinking helps you effectively solve problems even in high-stress or emergency situations.

In a nutshell, to think like MacGyver is to be a quick-thinking, inventive problem-solver who can navigate complex situations with limited resources by leveraging creativity, knowledge and adaptability.

2. Do you have a personal favorite "MacGyverism" from the episodes you contributed to? What makes it stand out to you, and what was the creative process behind it?

The first episode that John and I wrote was episode 6 of season 2. It was called "Jack of Lies" and introduced the character Jack Dalton. Jack was an old friend of MacGyver's and needed his help to rescue a friend being held hostage in South America. MacGyver learns that this friend is being held captive inside a heavily guarded monastery filled with cloistered monks. MacGyver manages to break into the monastery but is discovered and pursued by Colonel Antunez, the murderous villain of the episode. As Antunez searches the monastery for MacGyver, he sees that all the monks inside are wearing floor-length hooded robes. Suspecting that MacGyver has disguised himself in a robe, he begins to pull the hoods from monks so he can see their faces.

Eventually, Antunez enters a room where one vulnerable monk, his back to Antunez, stands alone. Antunez approaches . . . reaches for the hood to pull it back . . . and is caught completely off-guard when the monk punches him in the face! How does this monk throw a roundhouse punch without even turning around? We discover that the "monk" is indeed MacGyver. But he was *not* standing with his back to Antunez as it appeared. He was actually *facing* Antunez, but wearing the robe backwards!

The thing that John and I loved about this MacGyverism was the simplicity of it. We had been told by executive producers on the show that every MacGyverism

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didn't need to involve MacGyver mixing chemical compounds gleaned from everyday objects to make an explosive. Or involve complicated mechanics to build a rocket launcher or booby-trap from gathered pieces of discarded or disassembled machinery. What makes MacGyver, the character, special, is that he can look at *any* object and see how it can be used in ways that were not intended. A monk's robe is not intended to be worn backwards, and MacGyver used that to his advantage.

This particular MacGyverism was inspired by Buster Keaton. I have a collection of his silent movies, and he's known to be a genius for inventing silent film "gags." In one movie I had seen, Buster needed to hide from someone who was chasing him. He put on a long trench coat, pulled the collar up over his head, and hung himself from a wall hook alongside other coats. Then he pulled his feet up and simply blended in with the other empty coats! We loved this idea so much that we actually used it in the same episode above; MacGyver hung himself up on a wall hook alongside other empty robes. After that, John and I simply brainstormed to think of other ways we could make use of the robe. The backward robe was what we came up with, but it was Buster Keaton's genius that put our train of thought on the right track.

3. **How do you re-energize your creative spirit during periods of frustration or stagnation? Where do you find inspiration?**

Inspiration can be found anywhere if you look for it. And, more often, when you don't. You can't force inspiration. Or make it happen. You can certainly put yourself in an environment that is more *conducive* to inspiration striking.

Sometimes I'll browse books at a bookstore. Or a library. Both for inspiration and to see what's trending. What are people reading? What do they like? What genres are popular? Same can be said for movies. A spontaneous

matinee might seem like an indulgence or "playing hooky," but one scene, or plot device, or style of filmmaking, or actor's performance, or song, or musical moment might spark something.

To re-energize your creative spirit during periods of frustration or stagnation, try a change of scenery. Or environment. If possible, get away. Go outdoors. Go for a walk. Go on a hike. To the beach. Up a mountain. When you "get away from it all"—and if you're quiet—you might be surprised what you find. What inspires you. Speaks to you. Away from distractions and foolishness, you might actually have an epiphany. Keep your senses open. It sounds counterintuitive, but when you rest, your brain keeps working. Making connections. You might be surprised by what pops into your head.

Switching gears is also good. If "task A" is vexing you, frustrating you, stymieing you, don't force it. Pivot to "task B." It's amazing how your brain will "work on" task A and offer a solution when you're not focused on it. Not forcing it. Let inspiration *happen*. Naturally.

4. **How important is failure or the acceptance of failure in cultivating creativity?**

What is creative failure? John and I have pitched countless ideas that we have loved. We think they would make amazing television shows. Yet, in spite of our best efforts, no one has bought the idea and asked us to develop it into a script. Is that failure? If we were to *accept* that as failure we would need to ignore everything we believe; everything that our gut is telling us about the value of our creation; everything that *we* love about our creation. At times like this we sit back and evaluate; are *we* crazy or is everyone else? Is it an issue of right idea, wrong audience? Or is it simply a bad idea?

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How we define failure can also impact how we handle it. If you walk into a room looking for your keys and they are not the first place you look, have you failed? You look someplace else. Not there either? Now have you failed? Let's say you look a dozen more places, but you still haven't found the keys. Now have you failed? Maybe at this time you realize that you must be looking in the wrong room so you search a different one. Still no keys. But in this new room you find your tennis shoes.

The tennis shoes remind you that you played tennis last night. Aha! You go into your closet and find your keys in the side pocket of your tennis bag. Success! Now, if you had stopped searching after the first place you looked, that would have been a failure. You could say that every place you looked and didn't find the keys was a failure. But they weren't. They were all necessary steps leading you to where you would eventually find the keys.

That's the way I feel about creativity; you haven't failed until you give up. Sure, it's not always possible to cling to an idea or concept as long as you'd like because there are deadlines to work with and people other than yourself to please. But don't think of it as failure; it's a course correction. Years of *experience* has taught us that we're not going to run out of ideas; whether we like it or not, we can always "accept failure" and do the note. And maybe create something even better.

5. **Everyone knows a famous story about a flash of brilliance—a eureka moment when innovation happened. Has that happened to you? What were the circumstances and the idea?**

It may sound counterintuitive, but a flash of brilliance sometimes comes *after* you've "done your homework." It often comes after you've surveyed the landscape, read the room, gotten a lay of the land, noticed what's in the Zeitgeist, or considered the competition. Other times, a flash of brilliance is truly

a response to creative problem-solving. They say, "Necessity is the mother of invention." And we have discovered that often leads us to flashes of brilliance.

On *MacGyver*, we knew that the actor playing the title character (played by Richard Dean Anderson) was being pushed to the limits, long hours, stunt work, appearing in every scene, carrying the show single-handedly. In a flash of brilliance, we imagined a guest character—Jack Dalton—as a friend/buddy/sidekick for MacGyver who proved to be so good and so well-liked that he was brought back 18 times. This gave the MacGyver actor some much-needed and well-deserved relief and gave us fresh fuel for storylines.

Exercises

INSIGHT PROBLEM

Scenario:
Three friends decide to rent a hotel room for the night. The room costs $30, so they each contribute $10. Later, the hotel manager realizes that the room rate should have been $25. He gives the bellhop a $5 bill to return to the guests. The bellhop, being dishonest, pockets $2 and gives each guest back $1. Now, each guest has paid $9 for the room, totaling $27. The bellhop has $2.

Challenge:
Adding these together, we get $29. Where is the missing dollar?
The answer to this challenge appears in the back of the book.

PRACTICE THE GENERIC PARTS TECHNIQUE (GPT)

Exercise 1: Everyday Objects

1. **Object Selection:** Pick a common household object, like a blender, a teakettle, or a lamp.
2. **Break It Down:** List all the parts of the object. Can any of these parts be further broken down?

3. **Functional Inventory:** List the elements or components of the item at the most atomic level.
4. **Reimagine Functions:** Consider each item listed has a typical function. Now, imagine it in a more generic category. What other functions could it have in this broader sense?

Exercise 2: Scenario-Based Problems

1. **Problem Setup:** Describe a typical situation that requires a solution, such as pulling up a dandelion weed.
2. **Identify Needs**: List the basic needs to resolve the situation. For example, it must be long enough to get the whole root.
3. **Identify the Tool:** Imagine a new tool that could potentially solve the problem, but there's a catch: it must be adapted from existing products that were not originally designed for this intended use.
4. **Apply Generic Parts Technique:** Break down the tool into its parts and consider how each part's generic functionalities can address the problem creatively.

Exercise 3: Open-Ended Exploration

1. **Choose a Hypernym:** Pick a broad category like "carrier" or "connector."
2. **Imagine Unusual Applications:** Think of situations where a typical item like a carrier or connector might not be readily available. How could you use the generic concept of carrier or connector to address the situation creatively using everyday objects and accomplish the same action? What is required for an item to functionally be considered a "carrier" or "connector"?

PRACTICE THE EXQUISITE CORPSE TECHNIQUE (GROUP)

This group exercise is adapted from a similar one on the Museum of Modern Art website.[11] You can do this exercise as a drawing or as a collage. You will need three to four players. I recommend first attempting it as a collage as described here so you are not constrained by your or your teammate's drawing skills.

As a group, you will contribute to the design of a creature without seeing what the others have contributed. When you repeat this exercise, choose a different figure or structure to create.

- **Collect scissors, glue, and an 8.5×11 sheet of paper.**
- **Take a piece of paper and fold it into the same number of equal parts as there are contributors.**
- **Grab a stack of random magazines, newspapers, or junk mail you don't mind cutting up.**
- **As you browse the media you have collected, look for evocative shapes, colors, patterns, and images that capture your imagination.** Feel free to cut them into unexpected shapes to help communicate the part of the body.
- **Build a collage on the top section of the paper** to create the head of an imaginary character. Limit the time each person has to collect the items and build their section to no more than 15 minutes.
- **Fold your image back to conceal it.** Extend the base of your character's neck over the edge of the fold so that your collaborator will know how to connect their image to yours.
- **Pass the paper on to a collaborator.** Keep your image hidden and have them add a body to your figure in the middle section of the page.
- **Repeat.** Pass the paper to a third person, concealing the first two sections of the page, and have them add the legs and feet. If you are working with four collaborators, then hide that section and pass it to a fourth person to add the feet. Remember to carry over just the end of your section through the fold into each new section so the following person knows where to start.
- **Unfold the page and reveal your collaborative image.** Reflect upon each collaborator's choices.