

LEE LEFEVER

the art of explanation

making your ideas,
products, and services
easier to understand



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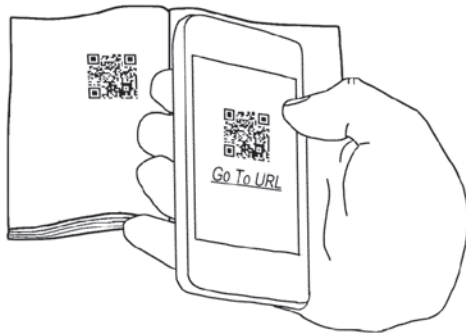
AUTHOR NOTE

Using QR Codes with your Smartphone

Throughout this book, I reference a number of short Common Craft videos. The videos are on our website and can be viewed for free with most smartphones.

To access the videos quickly, we've provided QR (Quick Response) codes. These codes are like links on a website, but instead of clicking them, you point your camera phone at them and use an app to scan the code, which opens the corresponding web page on your device. This makes it quick and easy to watch as you read without typing long URLs.

To use QR codes, you need a smartphone and a free app. Search your device's app store for "QR Reader" and download it. Then open the app and follow the instructions to scan a QR code.



You can test this process using the code above. Once the code has been scanned, select "Go to URL" (or something similar) and the web page will appear. Just click "play" to watch QR Codes Explained by Common Craft.

To see a complete list of the Common Craft videos referenced in the book and their URLs, see the Links to Common Craft Videos section at the end of this book.

INTRODUCTION

For most of my life (especially in school), I struggled to grasp some of the subjects I was supposed to be learning. Although I grasped subjects such as science and history fairly easily, topics such as math and accounting consistently proved to be challenging. In my mind, these subjects were made up of thousands of rules that I had to memorize to solve the associated problems. The ideas seemed to float around in my head without any foundation or place.

As so many students who struggle do, I felt inadequate at the time, as if my brain was not wired for solving these problems. I became a person who said “I’m not good at math” and avoided anything related to it. The notion of trying to memorize rule after rule frustrated me, and I wondered how others did it with such apparent ease. Were they simply more skilled at memorization? What was I missing?

At the same time, however, I knew I was a capable student. Along with science and history, writing came easily to me. But as much as I wanted math and subjects like it to work for me, it seemed like the light bulb never went on.

However, I learned to work with this apparent limitation throughout my years of education. I eventually earned a graduate degree in health administration and moved to Seattle, where I currently live. It was during this phase of my career that I identified the underlying cause of my struggle with subjects like math and started to see how the same problem affected others. When I looked back, it seemed like there were some people in my classes who could look at a set of rules or details and naturally see the big picture—in other words, the *why*. They seemed to be able to understand math and accounting at a higher level, whereas students like me were getting so mired in trying to memorize the *how* that the *why* faded into the background. We could still pass tests

and make good grades, but we did it by memorizing facts, not by developing a true understanding of the material.

The more I thought about this, the clearer the solution became. My learning style meant that I needed a way to approach new ideas in a unique way. I needed to see the big picture first, the foundation of the details. Therefore, to understand accounting, I needed to understand business basics first. To understand math, I needed to understand the reasoning behind it first. I needed to see the *forest* before the *trees*.

Soon enough I realized what was missing: I needed better explanations. My learning style demanded that I see the *why* before the *how*. This revelation became a part of my communication style. I became a student of communication and watched my friends and peers explain ideas. I began to recognize how people got confused or lost confidence in their ability to understand something completely. This experience made a deep impression on me.

But it was not until I got involved in the technology industry in 1998 that this realization became a part of my work. I was hired as a data analyst at a healthcare software company in Bellevue, Washington. Within two years I met my wife and business partner, Sachi, and I developed a strong passion for the idea that customers should be able to communicate and get support using message boards on the company website. What is now known as social media was called *online communities* in 1999, and I wanted to be the online community manager.

As you might imagine, this was not an easy sell inside the company. Most of my colleagues had never considered the potential of an online community and were naturally risk-averse. But I had a plan: I would explain my way into creating this program. So I set up meetings with product managers and created materials that supported my ideas. I educated my colleagues in the way *I* had wanted to be educated throughout my life.

I provided a foundation by building context and discussing big ideas—the forest. I helped them feel confident that they fully understood what I wanted to do before talking about any details—the trees. I planned my explanations and told stories that highlighted how this online community had the potential to be a rich source of customer information. It could even become an early warning system for product teams.

I asked them to imagine a world in which customers could solve each other's problems. I explained the idea to executives and connected it to the company's

strategy and goals. Slowly but surely, the stakeholders saw the potential, and most became advocates.

Soon enough I was the online community manager—a job I held until 2003, when I left to found Common Craft. I launched it as an online community consulting company aimed at helping organizations understand and implement their own online communities. My job as an explainer was just beginning.

My role as a consultant was to influence my clients and help them see and understand new opportunities. I soon realized my clients were experiencing difficulties very similar to those I experienced when attempting to understand certain subjects in school. Their view of social media was like my view of accounting: they knew the words and had memorized the features of various tools, but they had no foundation. They were stuck with countless trees, but no forest, and like me, they could not fully apply what they were learning.

This gave me an idea.

I decided to take subjects such as wikis and RSS feeds—topics that had proved challenging for my clients to grasp—and write my own explanations using the tagline “in plain English.” The idea was to help solve a problem for my clients and to create something interesting for the Common Craft blog. This was the first time I realized that my unique perspective on explanation could be a useful business tool. I had developed the ability to put myself in other people’s shoes and create media that helped them feel confident. They loved reading the blog posts and I enjoyed writing them, but it would be a few years before they would be called into action.

At around the same time, I put my explanation skills to the test. A few companies sponsored what they called “The Perfect Corporate Weblog Pitch Contest.” The idea was to explain the value of corporate weblogs in the time it takes to ride an elevator (under 160 words). When I saw this contest, I thought to myself, “Man, I am all over this!” It was true. My award-winning pitch read as follows:

First, think about the value of the Wall Street Journal to business leaders. The value it provides is context—the Journal allows readers to see themselves in the context of the financial world each day, which enables more informed decision making.

With this in mind, think about your company as a microcosm of the financial world. Can your employees see themselves in the context of the whole company? Would

more informed decisions be made if employees and leaders had access to internal news sources? Weblogs serve this need. By making internal websites simple to update, weblogs allow individuals and teams to maintain online journals that chronicle projects inside the company. These professional journals make it easy to produce and access internal news, providing context to the company—context that can profoundly affect decision making. In this way, weblogs allow employees and leaders to make more informed decisions through increasing their awareness of internal news and events.

My goal was to convey the value of weblogs in a way that would appeal to the judges; however, I learned something else from this experience. For the first time, I felt that explanation was not simply a tactic or way of approaching communication. It was something that excited and motivated me. I specifically remember my heart beating rapidly when I drafted the corporate weblog pitch. It made me feel like I had found my calling, like I was born to make ideas easier for others to understand in the form of explanations.

I came to realize over the next few years that the consulting clients with whom I worked were not unique in their thoughts about technology. The general public also struggled to see the value of these new online products and tools. Most people were constantly caught up in the features and details. They wanted to stay ahead of the curve but were cautious about wasting time on a product they did not fully understand.

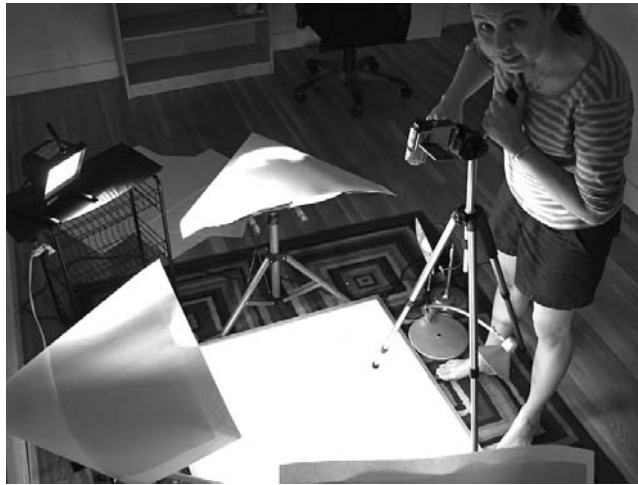
The tragedy from my perspective was that the tools were often free, easy to use, and could have a positive impact on people's lives. However, people weren't adopting them because of how they were *explained*. The technologists were doing the explaining, and doing it poorly.

We came to call this an *explanation problem*, which is when the biggest barrier to adoption is not design, features, or benefits but communication. And the problem was epidemic. Thousands of life changing tools and ideas were not being used because they lacked clear explanations of their value.

When Sachi joined me at Common Craft in 2006, we set out to solve this problem. It was the year YouTube went mainstream; suddenly, anyone could easily publish videos to the Web. We started to experiment and looked for ways to make video part of Common Craft. After feeling awkward trying to be the guy standing in front of a

whiteboard, Sachi had the idea to point a camera straight down onto a whiteboard and use hands, markers, and paper cut-outs to tell a story.

Common Craft videos were born in 2007, and we created our first video based on a blog post for my clients from years before, entitled “RSS in Plain English” (www.commoncraft.com/video/rss). We shot the video in our basement with no expectations or video production skills, and it showed. We lit the whiteboard with the strongest portable lights we had: bedroom lamps. And for the narration, I spoke directly into the microphone on the camera. As it turned out, this three-minute video changed our lives.



Sachi with our second generation studio setup, summer 2007.

We posted it on YouTube in April, and it became a viral hit. It was viewed tens of thousands of times the first day and we received a torrent of e-mails, comments, and blog posts about our work. People contacted us and encouraged us to make more videos. It was one of the most exciting days of my life. Our explanation was a hit because it solved the RSS explanation problem and invited people to use it by helping them see it from a new, more understandable perspective.

The next question became: can we do it again? We published our second video about a month later, which was also based on a previous blog post. This one was called “Wikis in Plain English” (www.commoncraft.com/video/wikis), and was received in a similar way. People seemed to love our videos and want more.

By the end of the summer of 2007, we had published four more videos and started making custom videos for products and services. In August of 2007, we decided that Common Craft would become a video production company that specialized in video explanations. We redesigned our website, and our tagline became “Our Product Is Explanation.” One of our first custom videos, called “Google Docs in Plain English,” hit the web that fall (www.commoncraft.com/google-docs-plain-english). We were on our way.

Since that time, people around the world have come to know Common Craft for our explanation skills. We have made more than 100 video explanations in the same format as the first video on RSS—what is now known as Common Craft Style. Our videos have been viewed more than 50 million times online and we have worked with companies such as LEGO, Intel, Google, Dropbox, and Microsoft to explain their products and services. Further, teachers and students are now creating their own video explanations in classrooms and calling them “Common Craft Style Videos.” Perhaps no company is better known for video explanations than Common Craft.

Now more than ever, I am a believer in the power of explanation, and not just for product and service videos. I believe it is a skill that everyone can learn and improve upon, and one that is needed to help people grasp ideas in a useful and productive way. This book is designed to give everyone an opportunity to rethink how he or she explains ideas, and learn to package them into explanations that work.

the art of
explanation

CHAPTER 1

Learning to Run



Trevor limped through the front door, sore again. These past few months had been tough on his joints. Six months ago he picked up running again after his doctor said he needed to get more exercise. To help keep himself motivated, he set a goal of completing a half-marathon within a year. But it didn't seem like this was going to happen—not the way things were looking now. Trevor was beginning to realize that his body just couldn't take a beating these days, and he joked with friends that he felt like an old man at 45.

It wasn't always this way. Trevor had always been a runner in one way or another. He played soccer in high school, and started to run as a way to stay in shape in college. He took to it naturally. But as he moved onto a career, his time became limited and he ran less and less frequently.

Trevor knew that something needed to change if he was going to complete the half-marathon. He tried a variety of tactics—buying new running shoes, wearing knee braces, and concentrating on stretching. However, nothing seemed to work, and the date for the half-marathon was drawing closer.

Trevor had recently been enjoying a drink with a friend and mentioned that he was having a difficult time preparing for the race. After some probing, his friend asked a simple question that he wasn't sure how to answer: "Have you tried changing how you run?" Perplexed, Trevor replied, "I'm not sure what you mean . . . I run how I run. It's always been the same—one foot in front of the other!" After a chuckle, his friend asked again "Seriously, have you ever thought about *how you run*—and what you could do to run *better*?"

The thought had never occurred to Trevor. He had always taken his running style for granted. After all, it had usually come easily to him, and he achieved the results he wanted. He assumed that his running style was as good as it ever could be, so he responded "Nah, the way I run is fine. And anyway, aren't we born with the ability to run?"

His friend replied, "Of course we can all run. But like anything, there is an art and skill to running, and part of getting what you want out of it is knowing how to run correctly."

Trevor had never considered that there might be a right or wrong way to run, and questioned incredulously, "What could possibly make my running better?"

His friend smiled and answered, "Look it up." And that is just what he did.

Trevor's perspective started to change within a few days. The more he researched, the more he saw running as a skill that he could improve. He learned about proper posture, stride, and how a foot strikes the surface, and discovered tactics that professional runners use to stay healthy. For the first time, he could see that his joint problems were likely due to *how* he was running. A feeling of relief came over him. Unlike his age, *this* was something he could change!

As he trained for the race, he began paying attention to his form and movements. Within a few weeks, his knee and back pain began to fade, and his endurance seemed to jump, which gave him the energy to run longer than ever. The half-marathon now seemed like a reality and it felt good.

If you ask Trevor about running today, he will tell you that his only regret is not discovering how he could improve his running earlier. But now that he has this new perspective, a full marathon doesn't seem too far away.

Like Trevor and his running, we all take *explanation* for granted. Because it is a natural part of how we communicate, the thought may never occur to us that

explanation is a skill we can improve and put to work in achieving our goals. In this way, running and explanation have much in common:

- We have the ability to do it
- We may do it so frequently that we never think about it
- We think the way in which we do it is normal
- We never consider that we could improve the way we do it, but,
- Improvement *is* possible, and creates positive results

Because explanation is a skill that we can improve and apply to nearly every part of our lives, let's get started in doing so. In Chapter 2 we'll define *explanation* and consider the characteristics that make it useful and powerful.

What Is an Explanation?



For most of my life, I never considered the definition of the word “explanation”—and I doubt I am alone in this. We all explain things so often, why would we need to define something we do every day?

The fact is, however, that most of us take explanation for granted. For many people, it’s just something that happens. Someone asks a question, we answer it in the form of an explanation. We do not often step back and think about what makes an explanation an explanation or how we could approach it differently. Our explanations happen without much planning or editing.

It’s a little like dancing. Your grace on the dance floor may mean that you take dancing for granted: it just happens when there is a rhythm. But even the best dancer can only get so far without defining specific dances, such as what makes the samba the samba and the waltz the waltz. These definitions create a standard form and shape that can be honed and refined. Only by defining the standards of the dance can we hope to improve it.

We'll begin to define explanation below by first looking at what is NOT an explanation. This will allow us to see it not as a simple shake of the hips, but as a dance that has a deliberate form, intent, and emotion.

What Is *Not* An Explanation

The following is a list of the various ways we can relate ideas and information. Although we will define explanation a bit later, it is useful to think about what is *not* an explanation. For instance, if explanation is the samba, these are some other dances:

Description—A description is a direct account of an action, person, event, and so on in which the intent is to help someone imagine something through words. For example, if I describe my coffee mug, my intent is to provide details that help you picture it. A description may relate that a mug is white, four inches tall, has a single curved handle, and is made of ceramic.

Definition—A definition is a description of the precise and literal meaning of something. A definition is meant to make clear exactly what something means. If I define a word, I am providing statements that help you see the exact meaning of the word. I might define coffee as a beverage that is made from roasted and ground seeds of the coffee plant.

Instruction—An instruction is a direction or order to do something. The intent of instruction is to make clear what is expected and how to proceed. If I give you instructions on how to make coffee, I am laying out the exact process or sequence of events that are required to achieve the desired outcome. Instructions may be related in short sentences such as: Insert filter into coffee maker. Pour ground coffee into filter. Pour water into coffee maker reservoir. Press start.

Elaboration—An elaboration is a presentation of information with detail, with the intent to provide a comprehensive and rigorous look at a concept, idea, theory, and so on. If I elaborate on the core concepts of coffee production, I will try to cover every detail. If I elaborate on the farming of coffee, I may describe the specific content of the soil in which it is grown, how to test the soil, and what levels of nitrogen will produce the best product for a specific geographic region.

Report—A report is a spoken or written account of an event and is intended to relay facts and details to others. If I visit coffee plantations in Colombia, I will report my experiences upon my return. This may appear in the form of a news story or magazine article and relate an account such as: “The moment I arrived at the plantation, I was offered a sample of their finest product, which I drank with joy. The company roasted the beans just a mile away, and you could smell the roasting beans in the air.”

Illustration—An illustration is an example that serves to clarify an idea. The intent of an illustration is to help make an idea more real by providing an example. I might say that the size of the plantation is an illustration of the coffee company’s power in the region.

Of course, this doesn’t mean that these communication forms have no role in explanation. Quite the opposite, in fact; they could all contribute to improved explanations. I list them simply to show that explanation is one of many communication forms, each with its own definition. Now we can look specifically at the definition of explanation.

Defining Explanation

Let us start with a formal definition. *Explanation*, according to Merriam-Webster, is “the act or process of explaining.”

OK, so maybe that’s not very helpful. We obviously need to use a slightly different word. Here is the Merriam-Webster definition of *explain* as a verb: “To make known; to make plain or understandable.”

We can deduce from this that an explanation is an *act or process* that makes something *known, plain, or understandable*. That is pretty simple and straightforward. Personally, I am fond of the current Wikipedia version (Wikipedia, 2012):

An explanation is a set of statements constructed to describe a set of facts which clarifies the causes, context and consequences of those facts.

To put it into the form we used above:

Explanation—An explanation describes facts in a way that makes them understandable. The intent of an explanation is to increase understanding. If I explain coffee roasting, I am clarifying the facts and making the ideas more understandable. For example, an explanation may highlight the role of heat in giving coffee a distinctive color and flavor when roasted.

As you can see, explanation is different from the other examples above, especially in intent. Explanations make facts more understandable. It seems to be that simple, but is it? As we'll see below, there are a number of nuances and ideas that make explanations a particularly potent form of communication.

Explanations Require Empathy

Every once in a while, I encounter someone who is a natural explainer, whose approach to communication naturally jibes with many of the points illustrated here. These people seek out unique and helpful ways to explain ideas to others. Sometimes, the best are teachers and journalists who combine their natural communication style with a focus on the professional standards of their profession. When I meet one of these people, I look for common traits and ask: what do great explainers have in common?

In a word, it is *empathy*. Great explainers have the ability to picture themselves in another person's shoes and communicate from that perspective. A great example of this is offering driving directions. From my unscientific research, natural explainers are better than average at giving directions. Why? My guess is that they can account for the experience of approaching a location for the first time. They are able to block out what is already familiar to them and instead focus on what the driver is likely to see at each turn.

And so it is with explanation. Creating a great explanation involves stepping out of your own shoes and into the audience's. It is a process built on empathy, on being able to understand and share the feelings of another. Only by seeing the world through the windshield of a driver in a foreign land can we ever hope to help them feel at home.

Act and Art

We live in a world of facts and fact-makers. Scientists, for example, have very rigorous standards used when claiming a statement is a fact. As such, the scientific method is a standard process that can lead to the discovery of facts. In this way, fact-making is a science, and we are all better off for it.

But facts are not perfect. Although they may be proven many times over, they are often difficult to understand and apply. And when people provide them without much context and with a high degree of specificity, their value becomes limited. It is more difficult to make sense of facts alone, which is why we need explanations. Explanations make facts more understandable, and the need for explanations becomes clear once you think about how many important facts are out there. Imagine a world where every fact was presented as an explanation—complete with context and simple language—with the goal of making the fact understandable. We could feel confident about so much more of the world around us!

Unfortunately, this is not the case. Good, effective explanations are in short supply, for valid reasons. You might look at it as means of production. Look at science, for instance, where the scientific method can be used by anyone to validate or invalidate an idea with certainty. A particular scientist's personality, preferences, or experiences do not impact the production process; only cold hard science matters, and that opens the means of production to anyone with an interest.

Explanation of those facts, on the other hand, is more of an art. Great explanations often do not come from rigorous research and testing; they come from someone's unique approach to communication. Two people could have profoundly different ways of explaining a single idea and still achieve equal levels of understanding. Like any art form, explanation thrives on being unique and novel; it succeeds when it helps people see ideas from a new perspective. It is a conscious act that depends on creativity more than a specific formula or set of steps.

However, I do not mean to make the case that you must have a creative mind to create great explanations. My wife Sachi is a perfect example of how this is in fact *not* the case. She is very analytical and prefers a spreadsheet to a paintbrush. Although she identifies herself as not having a very creative mind, she is very good at explanation because she approaches it with the right perspective. The art of explanation is unlike

the ability to draw or write poetry; it is more about perspective, or orienting yourself around the idea that explanations are creations, made of facts, that represent a new way of approaching an idea.

This is the perspective that has driven our work at Common Craft. We do not produce facts; rather, we package them. We take these facts and transform them into something that makes people feel confident and informed. And that is one of the underlying lessons of this book—that explanation is a creative act that turns facts into useful, informative, and memorable ideas.

Look at Your Fish

Although there is no formula that stamps out cookie-cutter explanations, we believe that the ability to learn the skill of explanation is all about perspective.

The challenge is to take ideas that are in plain sight and transform them into something more useful. I recently read an interview with author David McCullough that frames this idea in terms of “seeing” what is in front of everyone. The interviewer asks about a motto that McCullough has hanging framed over his desk. His answer (The Paris Review, 2012):

It says, “Look at your fish.” It’s the test that nineteenth-century Harvard naturalist Louis Agassiz gave every new student. He would take an odorous old fish out of a jar, set it in a tin pan in front of the student and say, Look at your fish. Then Agassiz would leave. When he came back, he would ask the student what he’d seen. Not very much, they would most often say, and Agassiz would say it again: Look at your fish. This could go on for days. The student would be encouraged to draw the fish but could use no tools for the examination, just hands and eyes. Samuel Scudder, who later became a famous entomologist and expert on grasshoppers, left us the best account of the “ordeal with the fish.” After several days, he still could not see whatever it was Agassiz wanted him to see. But, he said, I see how little I saw before. Then Scudder had a brainstorm and he announced it to Agassiz the next morning: paired organs, the same on both sides. Of course! Of course! Agassiz said, very pleased. So Scudder naturally asked what he should do next, and Agassiz said, Look at your fish.

I love that story and have used it often when teaching classes on writing, because seeing is so important in this work. Insight comes, more often than not, from looking at what's been on the table all along, in front of everybody, rather than from discovering something new. Seeing is as much the job of an historian as it is of a poet or a painter, it seems to me. That's Dickens's great admonition to all writers, "Make me see."

"Make me see"—perhaps the best thing we can hope to accomplish from an explanation. If only it were as easy as looking at a fish.

Explanation Lowers the Cost of Understanding

Feeling informed is a constant struggle. Every day, headlines introduce us to new crises, discoveries, and products. Although overwhelming, most people have learned to cope by filtering out the things that do not interest them. Occasionally, interesting topics emerge that just seem too big to tackle. Examples include news about the Large Hadron Collider in Europe or recent discoveries in health-care. The cost of understanding these subjects is too high to justify the investment; it would take too much time and effort, so we filter it out.

Explanation is a powerful asset in a world of constant change; because it can lower the cost of understanding, it invites people to participate in a variety of new topics.

A good example is the story of NYU journalism professor Jay Rosen and his path to learning about the mortgage crisis in 2008. As the crisis began, we received many suggestions from our fans to explain the mortgage crisis. They were anxious about it and had no resources that helped them understand it fully. For them, the cost of figuring out all the moving parts was high—too high. They needed an explanation.

Over that summer, Ira Glass, Adam Davidson, and Alex Blumberg set out to solve this problem and produced an episode of the *This American Life* radio show whose goal was to explain the crisis. Called "The Giant Pool of Money," it is an amazing example of explanation at work (*This American Life*, 2008).

One of the listeners to the show was Jay Rosen. From his blog (PressThink, 2008):

Going into the program, I didn't understand the mortgage mess one bit: subprime loans were ruining Wall Street firms? And I care because they are old, respected firms?

That's what I knew.

Coming out of the program, I understood the complete scam: what happened, why it happened, and why I should care. I had a good sense of the motivations and situations of players all down the line. Civic mastery was mine over a complex story, dense with technical terms, unfolding on many fronts and different levels, with no heroes. And the villains were mostly abstractions!

The hour-long show successfully lowered the cost of understanding a very complex issue for Jay and countless others. And although that is a wonderful outcome, it's only part of the equation. Rosen continues:

I noticed something in the weeks after I first listened to "The Giant Pool of Money." I became a customer for ongoing news about the mortgage mess and the credit crisis that developed from it (since the program's conclusion explained how one caused the other.) 'Twas a successful act of explanation that put me in the market for information. Before that moment, I had ignored hundreds of news reports about Americans losing their homes, the housing market crashing, banks in trouble, Wall Street firms on the brink of collapse.

"'Twas a successful act of explanation that put me in the market for information." What a powerful statement! The explanation moved him from being someone who simply filtered out mortgage crisis information to someone who actively sought it out. For the first time, Rosen knew enough to care.

We all feel indifference at one point towards some topic. There are simply not enough hours in the day to figure it *all* out. Thankfully, we have explanations, which lower the cost of figuring out an idea and invite people to become customers of it in the future.

An Explanation Is a Way to Package Ideas

The art of explanation is the art of transforming facts into a more understandable package. Chances are you know the facts of plagiarism: the act of passing someone else's work off as your own, or using someone's ideas without credit. The facts—and the

consequences—are clear in this case. Although it is not often an illegal act, it is serious enough for people to lose jobs and be kicked out of school.

And the facts are also quite clear for students in high school and college. They know that plagiarism is wrong and has serious consequences. Despite this clarity, however, it is still a big problem for schools—so much so that Common Craft received multiple requests to make a video that explains plagiarism. In 2011, we decided to make this video and started “looking at our fish.” This meant thinking about how we could package the facts about plagiarism into a form that would help students see it from a new perspective.

This process of packaging was creative; we weren’t simply making the language simpler to understand. Rather, we had to think about context and themes that *live in the same world* as plagiarism. Over time we started to see that plagiarism is often presented in terms of facts, that is, “it is against the rules.” But the idea behind what makes plagiarism wrong goes much deeper. It threatens a system on which we all depend. Plagiarism is not just cheating; it actually reduces our ability to keep track of who made contributions to the knowledge we need to be successful. It is disrespectful to our entire system of ideas.

It was this perspective that drove our thinking on how to explain plagiarism. Here is the transcript from the first 42 seconds of the 2:41 length video:



You have something in common with the smartest people in the world. You see, everyone has ideas. We use our minds to create something original, whether it’s a poem, a drawing, a song, or a scientific paper.

Some of the most important ideas are published and make it into books, journals, newspapers, and trustworthy websites that become the building blocks for things we all learn.

But ideas are also very personal, and we need dependable ways to keep track of the people behind the ideas we use because they deserve credit for their contribution, just as you do if someone uses your idea. Passing off another person’s ideas or words as your own, without credit, is called *plagiarism*. Whether it’s your friend’s term paper or words of a well-known author, plagiarism is cheating and dishonest.

Notice that this explanation did not even mention plagiarism until the very end of the section, about a third of the way through the video. This was our approach to packaging plagiarism into a form that discusses facts, but presents them in a way that is unique.

Explanations Answer the Question “Why?”

It is really quite breathtaking how much of the world around us is based in fact. There is a reason for almost everything. Consider the laws of physics. Through years of research and experiments, scientists have theorized, with very high confidence, the basic rules of our universe. We can be certain at what temperature water boils and freezes at sea level. We know the exact speed of sound and how to calculate how much weight a wall can bear.

In essence, science has helped us make sense of the world by showing that there is a *reason* things are the way they are. There is a reason that water freezes at 32 degrees Fahrenheit and airplanes can fly. The laws of our universe have been tested and are proven: they explain *why*.

Unfortunately, many of the facts and ideas we see on a day-to-day basis cannot be defined by laws of the universe. We cannot, for example, explain Twitter’s popularity in terms of gravity or inertia. We need explanations to tell us why Twitter is so popular, or to illustrate why it makes sense to save for retirement. Explanation is the art of not just packaging facts but presenting them in a way that answers the question “why?”—as in, why does it make sense to do this? Or why should I care?

Explanation is not focused on facts, laws, or specifics. Explanation is the art of showing *why* the facts, laws, and specifics make sense. By clarifying the reason an idea makes sense, we can put the facts into perspective. As such, explanation is the practice of packaging facts into a form that makes them easier to understand and apply.

Explanations Make People Care

A quick search on Google about how to do something will reveal a plethora of information. From plucking a chicken to changing a tire to programming a mobile app, how-to instructional texts, photos, and videos are arguably some of the most informative

and powerful features of the Web. Most instructions are tactical, a step-by-step process that, when followed, achieves the desired outcome.

You could say that this information is a type of explanation. And although that's a valid point, there's actually a better way to think about what explanations really are.

Let's return to our earlier points. First, explanations are packages of ideas that help people see what is already in front of them in a new way. Second, explanations show why things are the way they are. These are not what people consider when they're assembling Ikea furniture or mixing a cocktail.

Explanations have a different goal: to present an idea in a way that makes people *care*. Explanations grab their attention and let them see an idea from a personal perspective so they can make informed decisions about learning more. And that is the key point: explanations are packages of ideas that help people feel confident in choosing to learn more because they *care* about the idea.

Twitter is a great example. Twitter is a free service that makes it easy for people to share short updates with other individuals who choose to "follow" them. I joined Twitter in November of 2006 and quickly became addicted. It was clear that Twitter was going to be important, but it was also clear the service had a big challenge to face: it was a fundamentally new idea that was difficult to explain. The facts concerning Twitter are fairly simple: you post updates about what's going on in your life and read updates from others. The problem is that the facts did a poor job of presenting the value of engaging in these kinds of online interactions. Most people who heard about Twitter for the first time had essentially the same reaction: "Why would I want to do *that*?" It was only after experiencing it that they could see the value of it. The experience made them care in a way that the facts could not.

This became a challenge for Common Craft. How could we explain Twitter in a way that makes people care enough to want to try it? Is it possible to make a three-minute video that packages the ideas behind Twitter in a form that helps people see them in a new way?

In 2007, we created "Twitter in Plain English" as a way to explain the service to all those who asked, "Why would I want to do *that*?" As the final cuts of the video came together, I contacted Twitter co-founder Biz Stone, who loved it. We made a handshake deal, and within a few weeks the video appeared on the front page of Twitter.com, where it remained for more than a year. Since that time, the video

has been viewed about 15 million times and has turned innumerable people onto the service. The main reason I think it was successful is that it helped people see why they should care about Twitter.

Here is the transcript:



So, what are you doing? It's one of the first questions we often ask friends and family. Even if the answer is just mowing the lawn or cooking dinner, it's interesting to us. It makes us feel connected and a part of each other's lives.

Unfortunately, most of our day-to-day lives are hidden from people that care. Booooo! Of course, we have e-mail and blogs and phones to keep us connected, but you wouldn't send an e-mail to tell a friend you're having coffee—your friend doesn't need to know that.

But—what about people that want to know about the little things that happen in your life? Real life happens between blog posts and e-mails and now there's a way to share.

This is Twitter in Plain English

Thanks to Twitter, it's possible to share short, bite-sized updates about your life and follow the updates of people that matter to you via the web. Yaay! Here's how it works.

Meet Carla. She's addicted to her mobile phone, reads blogs every day and has contacts all over the world. She heard about Twitter and was skeptical—she's already overloaded with information. After some of her friends couldn't stop talking about it, she gave it a try.

She signed up for free and saw that Twitter pages look a little like blogs with very short posts. Each page is personal and has updates from friends.

She got started by looking up her friends on Twitter.com. After finding a few, she clicked "follow" to start seeing their updates on her Twitter page. Within hours, she began to see a different side of people she chose to follow.

She didn't know that Steven in Seattle was a baseball fan, or that Julia in London was reading a new investment book. The little messages from Twitter painted a picture of her friends, family, and co-workers that she'd never seen before—it was the real world.

Soon she became a fan of Twitter and posted updates every day. Her friends followed her updates and learned that she recently discovered a passion for Van Halen. They could see Carla's life between blog posts and e-mails.

For Carla, Twitter worked because it was simple. The updates were always short — under 140 characters each. Plus, she could post updates and follow her friends using the Twitter website, software on her browser, a mobile phone, or instant messages. She wasn't tied to one device.

By asking members to answer the question "what are you doing?" Carla found that Twitter brought her closer to people that matter to her — 140 characters at a time.

Find out what your friends are doing at [Twitter.com](https://twitter.com).

By focusing on making people care about Twitter, we were able to help them see value and finally understand why Twitter is popular.

Explanations that make people care also have another benefit: people who care about an idea are often *more motivated to learn more*. That's what happened to Jay Rosen when an explanation prompted him to become a customer of news about the mortgage crisis. For example, think about how intimidating it is to start learning to program software. At first, it looks like an impossibly complex challenge; someone has to believe it is worth the time and effort to get through it. They must *care*. This is the case with almost any challenge. Caring is the first step: if an explanation can help that person start to care, the rest is much easier.

EXPLANATION AT WORK: TANIA LOMBROZO, COGNITIVE SCIENTIST

In researching this book, I began to wonder about the academic side of explanation and what I could learn from researchers in the fields of psychology and philosophy. Although some theories go back as far as Aristotle, more modern research attempts to show the structure and function of explanation. Like almost any academic research, the study of explanation is often presented through studies and research papers, a review of which I've cited in the following. It is a very broad field of study and one that applies across disciplines. It's important to note that I'm providing the information below for reference. It represents a different, more science-based approach to thinking about explanation; however, it's one that, in most cases, matches our own experience as explainers.

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Tania Lombrozo, PhD., is a cognitive psychologist and assistant professor of psychology at the University of California, Berkeley, where she directs the concepts and cognition lab. I spoke with her about her work on explanation, and she directed me to a review paper she wrote that brings together much of the current research.

Before diving in, I want to point out that Dr. Lombrozo made it clear that the study of explanation has yet to provide widely accepted definitions of what represents an explanation, or what makes one successful. This was both heartening and disappointing to hear. As an author of a book about explanation, an academic definition would be quite helpful. But at the same time, this lack of an academic definition goes to the heart of what makes an explanation an art versus a science. My hope is that this lack of definition may represent an opportunity to contribute my own perspective to the discussion.

Dr. Lombrozo's paper, titled "Explanation and Abductive Inference," appeared in the *Oxford Handbook of Thinking and Reasoning*.^{*} It outlines a review of current thinking about explanation. A few big points from the paper follow:

A first step toward precision, if not definition, is to distinguish explanation as a product from explanation as a process (see also Chin-Parker & Bradner, 2010). As a product, an explanation is a proposition or judgment, typically linguistic, that addresses an explicit or implicit request for an explanation. As a process, explanation is a cognitive activity that aims to generate one or more explanation "products" but need not succeed in order to be engaged.

In simple terms, we can view explanation as two different things: something you think about (*process*) and something that's shared (*product*). In terms of functions, we see that explanations can help us deal with how we understand and adapt to a changing environment. Dr. Lombrozo continues:

While many plausible functions for explanation have been proposed, both philosophers and psychologists have emphasized that explanations could be valuable because they scaffold the kind of learning that supports adaptive behavior. For example, Craik (1943) described explanation as "a kind of distance-receptor in time, which enables organisms to adapt themselves to situations that are about to arise." Heider (1958) suggested that we explain events in order to relate them to more general processes, allowing us

^{*}Tania Lombrozo. "Explanation and Abductive Inference," in *The Oxford Handbook of Thinking and Reasoning*, ed. Keith J. Holyoak, PhD, and Robert G. Morrison, PhD (2012); 530 words, 260–276.

“to attain a stable environment and have the possibility of controlling it.” In other words, explanations put us in a better position to predict and control the future. Gopnik (2000) provocatively compares explanation to orgasm, suggesting that the phenomenological satisfaction of explanation is our evolutionarily provided incentive to engage in theory formation, as orgasm is to reproduction.

Explanation as orgasm and way to predict and control the future—I can’t think of a more compelling way to look at it.

Explanation and Learning

This is a subject near and dear to our hearts, as our work has always been based on explanation as a learning tool. We see the potential for teachers and professionals of all types to include explanations as a specific part of their teaching. In most cases, this means showing a video explanation at the beginning of a training session to get everyone on the same page. As Dr. Lombrozo states:

Given the intimate relationship between explanation and understanding, it is no surprise that explanation has a profound impact in learning. There are at least three ways in which explanation can influence learning. First, there is the matter of which explanations are sought, which constrains what one learns about the environment. For example, upon first encountering an elephant you’re likely to wonder why it has a trunk, but less likely to wonder why the number of its legs is a perfect square. Second, processes involved in the evaluation of explanations can influence what is learned from provided explanations, be it in educational or everyday situations. And third, the very process of generating explanations, be it for oneself or others, can influence one’s own understanding and ability to generalize to novel contexts.

The third point really hits home for two reasons: First, I see evidence of it every time we make a Common Craft video. Ideas that seem disconnected at first often come together while writing a script for a video. My own understanding of the subject increases by working on the explanation. Second, more teachers have adopted “Common Craft Style” videos as classroom exercises. Often, the class is divided into groups and directed to create their own explanations of subjects such as world history, biology, and political science. They then film these explanations with paper cutouts, creating an experience like a Common Craft video. Dr. Lombrozo’s research supports the

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feedback we've heard from teachers that this exercise of generating explanations brings subjects to life for the students:

Perhaps surprisingly, generating explanations can be a more effective mechanism for learning than receiving explanation. This phenomenon has been demonstrated in the context of peer tutoring, where tutors often profit more than tutees (e.g., Hooper, 1992; Roscoe & Chi, 2008; Ross & Cousins, 1995). The learning benefit of engaging in explanation—be it to oneself or to others—is known as the self-explanation effect (Chi, Bassok, Lewis, Reimann, & Glaser, 1989; Chi, de Leeuw, Chiu, & LaVancher, 1994), and has been found for preschoolers through adults, for a range of educational materials, and for both declarative and procedural knowledge (for review, see Fonseca & Chi, 2010). In a typical experiment, one group of participants is prompted to explain to themselves as they study an expository text or worked examples, such as math problems. These participants are compared with those in one or more control groups who study the same material without the prompt to explain, often with an alternative task (e.g., thinking aloud) or matched for study time. The typical finding is that participants who explain outperform their nonexplaining peers on a posttest, with the greatest benefit for transfer problems that require going beyond the material presented.

Bottom line: The act of explaining helps us understand an idea more completely, a concept that's important to keep in mind when reading the rest of this book. Our focus throughout is the audience and how we can help them feel confident when learning a new idea. Although this is the priority, it's also helpful to remember that we, the explainers, achieve a positive side effect at the same time: we increase our own understanding of the subject.

It seems to me that this represents another kind of opportunity. If, having read this book, you are in a position to help others with explanations, you might find that asking them to create an explanation produces a product. However, it does even more than that; it helps them see the idea from a new, more informed perspective.

ABOUT THE AUTHOR

Lee LeFever is the founder and chief explainer of Common Craft, LLC, a company known around the world for making ideas easier to understand via video explanations. The company's videos have been viewed more than 50 million times online, and Lee has worked with companies such as LEGO, Intel, Ford Motors, Microsoft, and Google to explain their products. He lives with his wife and business partner Sachi in Seattle, Washington, where he is often seen with a bouncy, wet dog named Bosco. Follow Lee on Twitter (and other online services) [@leelefever](#) and [@commoncraft](#).



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LEE LeFEVER is the Chief Explainer, illustrator, and voice of Common Craft, and is widely credited for inspiring the video explanation industry. Since 2007, the company has won numerous awards and has created explanations for the world's most respected brands, including Intel, Google, Dropbox, and Ford. Its online videos have been viewed more than 50 million times. Today, Common Craft's mission is to make the world a more understandable place to live and work by inspiring and equipping professionals to become explanation specialists.

Lee can be found in Seattle, Washington, with his wife and business partner, Sachi, and their dog, Bosco, a fine swimmer.

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