Virality &

The word "virality," I would argue, has both a primary and a secondary meaning within American society. The primary meaning, of course, would be the first thing most people think of when they hear the word "viral": something widely known, whose popularity has seemingly come about overnight. The secondary and less-spoken meaning is "mystery." No one really talks about how something goes viral and what it means after it has reached a certain level of Internet fame. It seems society has an unspoken agreement that the hows and whys of virality are beyond us and it simply is what it is: unexplainable. I have ventured to dream of a mechanism through which the mystery of the viral is solved. Through this mechanism, the hows and whys of not only any Internet sensation, but also any successful consumable medium, could be explained. What exactly is it about a novel that makes it a *New York Times* best seller? What separates timeless paintings from high school art projects? What is the difference between an award-winning four-star dish at a restaurant, the kind you don't forget, and an ordinary dish you do forget? Why are some musical artists able to pump out number one hit after number one hit, while other artists with a similar talent level have a hard time even getting local gigs?

In order to begin to answer these questions, we must first revisit the way of thinking of one of history's most famous ancient philosophers. Socrates believed that in almost every major issue, humanity should strive for its ideal. He believed in ideals of justice, love, and even death. To Socrates, the ideal of anything was represented by its purest, most perfect form. Take the circle, for example. When I asked my peers whether they could imagine what the ideal of a circle looked like, there was a unanimously positive response. Almost everybody can close their eyes and, in their mind, see a perfect circle, despite the fact that a perfect circle does not actually exist. In contrast, when I asked my peers if they could imagine the ideal of virality, the response was unanimously negative. They couldn't imagine what it might look like; the very idea of being able to perfectly predict the level of popularity of anything on the Internet before it is published seemed preposterous.

However, I will argue that such a theory or approach is not preposterous, but could be applied to any consumable medium, whether on the Internet or in physical space. Because I am arguing that this process can work for any consumable medium, not just things on the Internet, I will cease to use the term "virality" and replace it with "consumption." The concept of an ideal of human consumption may seem foreign now, just as I'm sure the ideal of justice seemed foreign to the disciples of Socrates thousands of years ago. It is my hope, however, that by the end of this piece, despite the fact that this approach doesn't yet exist, when the ideal of consumption is mentioned, you and I will be able to close our eyes and imagine it the same way we can imagine a perfect circle.

Consumption

Zach Barlow

In his 2013 book *Contagious: Why Things Catch On*, Jonah Berger uses the acronym STEPPS to explain why he believes things gain popularity. STEPPS stands for: Social currency, Triggers, Emotion, Public, Practical value, and Stories. Berger argues that these categories can comprise a checklist, and if an item meets one or more of the checklist's requirements, then it has a higher chance of gaining popularity. Following this logic, any item that meets all the requirements on the checklist has the highest possible chance of gaining popularity in any specific market. I believe that while this list is not perfect, it has value and can serve as the basic framework of the ideal of consumption. Having said that, I will briefly summarize each item from Berger's STEPPS to emphasize the theme of moving away from pure Internet success and into the realm of the more general idea of consumption.

For **Social Currency**, the idea is that the sharing of specific things creates a type of currency. For example, if someone tells you a secret and asks you not to tell anyone, you may tell someone, and the reason you do is that your knowing that secret and telling it to those who do not makes them think more highly of you. Berger argues that one of the keys to any item's becoming viral is its containing a high level of social currency, which indirectly persuades people who discover it to share it because they believe sharing it with others will increase their own social standing. Put simply, sharing makes you cool.

Triggers are centered on the concept that sights, smells, and sounds can trigger related thoughts and ideas. Certain physical stimuli can lead to specific thoughts, like little environmental cues for related concepts. The thoughts and ideas that frequent our minds the most have a higher chance of leading to action, which in this case would be the buying or sharing of an item.

Emotion means that when we care, we share. If any piece of material can garner a strong enough emotional response, in any direction, it is more likely to be shared. Fear, anger, amusement, happiness, awe, disgust: It doesn't matter which emotion, as long as there is a strong emotional effect.

Public indicates that making something more observable makes it easier to imitate. If it's hard to see what others are doing, it's hard to imitate them, and thus a key factor in driving products to catch on is public visibility. If something is built to show, it's built to grow.

Practical value means that if something is useful for a large demographic, it is more likely to be consumed.

Stories are important because it is easy to reach people through narratives. If people get sucked in early, they'll stay for the conclusion. Stories carry lessons or information that is not so readily apparent on the surface. Stories provide proof through analogy. For example, Subway was able to build a successful advertising campaign through Jared Fogle's weight-loss story.

This list provides a good start in the quest to identify the ideal of consumption; however, as mentioned earlier, it is not perfect. By definition, anything that is flawed or incomplete cannot be considered an ideal. I don't think it would be possible to say that any item containing every aspect of Berger's STEPPS would be guaranteed to be highly consumed, and thus I would argue that the list is either flawed or incomplete. So, what is it that can be added to the list to close the gap or finish the circle? In interviewing a select group of peers who had already familiarized themselves with Berger's STEPPS, I asked them that question. The answer was that humans are unpredictable. In other words, there are too many moving parts and too much subjectivity to allow us to quantify the failure or success of any consumable using only Berger's STEPPS. For the sake of this argument, I will call that unpredictability or overwhelming subjectivity the "human X factor."

On the surface, the human X factor, represents the seeming unpredictability of human behavior, especially when measured on a macro level. Admittedly, the term "human X factor" is quite ambiguous; it has been argued that because of that ambiguity, even if the human X factor existed within Berger's STEPPS, it would be impossible to define, rendering it useless. However, if the human X factor could be quantified, then I would argue that along with the framework Berger's STEPPS provide, the ideal of consumption would be achieved. Surely, if any item contained every aspect of the STEPPS along with the human X factor, it would be widely consumed. But how in the world could we logistically define or predict human X factor? The answer lies in the existence of patterns.

In *The Bestseller Code*, Jodie Archer and Matthew L. Jockers have created an algorithm that they argue can accurately predict whether or not a novel will be a *New York Times* best seller. The way it works is quite simple. They have programmed a computer to "read" massive amounts of past literary works. By feeding in novels that have been *New York Times* best sellers, they have found that the computer has been able to pick up on seemingly inconsequential patterns within these works, consisting of obscure factors such as the frequency of the word "the" in every hundred pages or the use of an adverb in conjunction with a pronoun. For a human, these patterns would be impossible to pick up on, and they would seem meaningless at best. But using such patterns, this algorithm has been able to correctly indicate, 90% of the time, whether or not any manuscript has been a best seller, and it can predict with the same level of accuracy whether or not a manuscript that has not yet been published will be a best seller. It's worth noting that when a manuscript is "read" by this program, the program has no idea who wrote it, when it was written, or how much money the publishing company spent on marketing. This would suggest that there is a deeper logic to the manner in which people consume literature, in contrast to the belief that literature sells only because the author is popular or because commercials for the book appear on television. This algorithm of pattern recognition is an important step in defining the human X factor, but predicting whether a novel will be a best seller is not enough; for our understanding of the human X factor to be able to serve our purpose, we must expand this idea.

Because the technology to predict a best seller exists, I propose that to define the human X factor, we must apply that same technology to

everything. This is where my theory has met the most skepticism. For the best-seller algorithm to achieve its goal, it must first "read" through thousands and thousands of manuscripts to pick up on minute patterns, and even before that there must exist at least an idea of what the program should be looking for in the first place. This was an arduous task even when it encompassed only novels, so it could be argued that to apply this to every consumable medium would be impossible. However, there was a time when the idea of being able to predict a best seller seemed impossible.

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In the process of applying what I will now call the "consumption algorithm" to different media, history will serve as our best teacher. Take music, for example: Using songs that have spent time at the top of the charts in the past, scientists are able to analyze what these hit songs have in common through similar data-reading and pattern-recognition technology as used in Jockers and Archer's *The Best-seller Code*. The results have highlighted factors such as song length, danceability, beats per minute, key, and time signature that separate a number one hit from a GarageBand experiment. The truth is, the manner in which the best-seller algorithm can make its predictions so accurately is not through a new or groundbreaking technological method. Scientists and psychologists have already employed massive data analysis to pattern-recognition programs for various media, but applying this technology does not complete the circle on its own. There is still more work to be done.

Have you ever wondered why it is so easy to finish a bag of potato chips only moments after opening it? How can we lose ourselves in certain foods and struggle to eat others? Why are some companies able to generate millions of dollars a year while others struggle to stay in business? As you may have guessed by now, the answer has been determined through data mining and pattern recognition. At the Frito-Lay research facility in Dallas, a team of over 500 chemists, psychologists, and technicians have been looking for patterns in the consumption of their products for years, with an average annual research budget of $30 million. Paramount to a successful product, they have determined, are things that may have never crossed the mind of the general consumer: how people like a chip to snap at right around four pounds of pressure per square inch, or how if a food melts quickly in your mouth, it tricks your brain into thinking there is no caloric value in it, which keeps your body wanting more. Qualities like color, smell, and shape are also mentioned as important aspects of food items that can differentiate what flies off supermarket shelves from what ends up on clearance racks (Moss). As you can see, there

exist similarities to the method in which data is accrued in the three examples I have given; though the information requires years of preparation and teams of experts to produce, in each example, there exists the possibility of accurately predicting whether a product will be successful based on the patterns that exist for samples already proven to be successful.

So far I have been working to build a framework by which anyone can imagine the existence of the ideal of consumption. I have argued that through Berger's STEPPS and the human X factor, we can accurately predict whether any consumable item will be popular. The technology required to logistically define the human X factor, I have argued, already exists and has been used in several markets. The use of that technology in individual markets alone, however, will not be good enough to define the human X factor. To do that, I believe we must focus less on how people consume within categories and more on how humans consume in general.

This theory is centered on the idea of patterns. Technology has proven that there exist in any consumable market patterns intrinsically connected to human behavior. Almost all market titans have known this and have used this information to continually push the buttons they know humans need to have pushed in order to make them continue to buy specific products. However, there has never been a dedicated search for patterns that clarify the way humans consume in general.

This is the part where we close the circle and hone in on what we will need in order to accurately define what the human X factor is and, in doing so, fully elucidate the ideal of human consumption. The key is in the ability to cross-reference. Imagine a world, not too far from reality, in which there exist a plethora of recognizable patterns in every imaginable consumable market. These patterns, by definition, can tell us not only what has separated success from failures in the past, but also what will succeed or fail in the future. Now, imagine that we zoom out one layer and begin to look for patterns and overlaps amongst the patterns we've already found. In other words, we take the data we've cultivated in every imaginable consumable market and begin to run it through the same process we used to cultivate those patterns in the first place. Once running the patterns, we may be able to start to see similarities in what makes something popular that exist in different media. These cross-referenced patterns wouldn't simply tell a story of why a particular chip is everyone's favorite or why we can't stop talking about a certain book, but would tell the story of why we consume, period. At this point, it would not be about plot, or taste, or sound, or marketability, or public opinion. These patterns paint a picture of human behavior, of humanistic rhythm, and of how and why humans both create and destroy as we do; when cross-referenced, they would begin to scientifically answer the age-old question of what drives us.

In researching and working on clearly laying out the details of this theory, I have come across what could potentially be argued to be holes in my thinking. The first of these relates to the sheer scale of the project. It has been proven that we can use data mining and pattern-recognition technology to accurately predict the success or failure of a novel or a song, but the idea of applying that technology to every consumable medium is daunting, to say the least. It would mean we must first identify each category of consumable medium, a task made even more improbable with the emergence of the Internet, especially if we consider things like a physical book and a digital book or a physi-

cal photograph and a digital photograph as being in different categories. Grouping all items related to photography or literature into one category would itself pose a problem of scale, and although separating the physical and the digital would present its own issues, creating a separation between the physical and the digital may be a necessary step in order to produce accurate data.

The second and maybe most troubling issue with my theory is the fact that at its core, it is centered around a question of "if." There is truly no way of knowing beyond a shadow of a doubt that after we were able to mine an appropriate amount of data from every consumable medium, we would find any overlap in the patterns. In other words, if we did not find overlap or recurring themes in the patterns from each category of consumable medium, then we would have failed to discern anything that might hint at an existence of an ideal of consumption, which could prove devastating considering the money, time, and work it would take to reach the level of assessing overlap. Essentially, it would be similar to launching a spacecraft toward Mars without being completely sure that Mars existed.

Having said that, if this process was undertaken and we did reach the level of assessing overlap and we did find evidence of pattern overlap, I believe the world would be forever changed. Imagine what it would mean for a company to be able to use this method to know before it released a product that it would sell well, because not only did it hit all of Berger's STEPPS, but it was also proven to fall in line with why humans buy things. Imagine a young musical artist's having the power to know the song she just released on her blog would go viral. Imagine a restaurant's knowing that the new dish on its menu would change the way the business operated. This is the type of mechanism I have proposed. It may seem farfetched on the surface, but the technology does exist to make something like it entirely possible. There would be challenges, of course, and also quite a bit of risk if no overlapping patterns materialized, but if the patterns did appear, the impact on society would be significant. We're essentially talking about a mechanism that, through technology and data, offers the ability to accurately look into the future of any product and come away with a conclusion regarding its eventual success or failure in any given market.

Think back to what my peers agreed about the human X factor in the beginning: that it was too ambiguous, that there were too many moving parts, that there was too much subjectivity to make it possible to define. Using the method laid out here, I have worked to eliminate the ambiguity, I have attempted to define the most important moving parts, and I hope I have erased any notion of subjectivity. Now, close your eyes and try to imagine with me, if you will, what the ideal of human consumption might look like. Can you see it now?

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