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**Face It: On the Art and Science of Caricature**

Standing over the shoulders of amusement park caricaturists always intrigued me more than the roller coasters around them. There would be a pen line on a page, then another would swish up from the bottom, then a third, and ultimately, something would erupt from the paper that hadn’t been there a mere second before: a resemblance of the seated subject—let us call them “the victim.” In just a matter of strokes, the artist would yield that magical moment when crude features suddenly turned into a person. In English, we do have a word for that magical artistic resemblance, or representation, of a person; we call it “likeness,” a quality portraitists strive to achieve and revel when they do. Any layman who has never held a pencil can identify whether or not likeness in a portrait or caricature has been achieved, yet even the greatest of artists cannot describe exactly where it resides. You know it when you see it. What it is you’re seeing is another story.

I transitioned years ago from caricature spectator to creator, fascinated not by the appeal of its artistic value (nor, certainly, its lucrative one), but rather by the endless psychological, philosophical value it presented to explore. Now a teacher of caricature science and inducted member of the International Society of Caricature Artists, I can say with humbled certainty that when I first took up the craft, I knew likeness only superficially, in the generic sense, a capturing of features on paper such that the rendered image bore a resemblance to its victim. It was this likeness that took no time to start behaving rather elusively with me.

I recall one hot, sticky summer fair where I started out doing live caricature work, and just after noon an old man sat down in my chair to be drawn. He had one of those grandfatherly faces with wizened, crinkly epicanthal folds and jowls that sort of sank into his droopy ears from smiling too much. By my standards, he was about as easily caricaturable as victims come. Later that evening I seated an eight-year-old girl with a smattering of quite average features that hadn’t been around long enough to make much of a reputation for themselves. I worked on that caricature far too long, and suffice it to say I was not proud of the piece I gave her when I did. I had trained in photorealistic portraiture; I was comfortable copying a face square by square on a sheet of grid paper. But once capturing character through exaggeration came in, suddenly I could represent some people easily, and others were nearly impossible.

Here, one might argue that as long as you can make an image look like its subject, the character is already embedded. True, it has been noted in physiognomy that more expressive people do tend to have more expressive faces, that our faces reflect our personalities. At the most basic, frown lines and forehead wrinkles develop where we endlessly furrow our skin, while bright eyes, a toothy grin, and smile lines—clinically called “expression lines”—express exuberance. As such, likeness should serve as a unique map of a person’s character as developed biologically throughout their life, and if it can be accurately represented, their character is inherent in the piece of art.

But naturally, caricature is not portraiture. Caricature pushes and pulls its victim’s features, creating an image that, for all intents and purposes, does not look like their face in the way a good portrait does. A good portrait should be indistinguishable from a mirror. A caricature, by contrast, illustrates a victim’s likeness*,* a victim’s essence, but must reside in something not altogether true to physical form. Caricaturable likeness could not be sought by merely drawing—even stylistically—a victim’s facial features; instead, I had somehow to tap into the victim’s essence. And rather than accurately reflect the way they looked, I had somehow to capture this essence, likeness, by making them look *less* like themselves then they did in life.

Likeness, defined by the *OED* as merely “the representation of an object,” was not as unidimensional, literal, or concrete, as I once thought; it takes vision, insight, creativity, knowledge of human nature, and, most of all, an appreciation for difference⎯a skillset completely separate from one’s capacity with a pencil. As a linguist, I deem it a worthwhile aside to consider that “likeness” has been eluding us since the 14th century, when the term referred to a statue of a person. Even then, artists sculpted away, whether with chisel into marble or pen on paper, to recreate animated people with inanimate media. Throughout history, statues made in the likeness of famous figures have literally set their personalities in stone, and their likenesses have preserved their characters. But long before the Renaissance, the word originated with Proto-Germanic roots “ga” (with) / “lik” (shape) / “nes” (quality), curiously etymologically analogous to the Latin derivative “conformity”⎯“con” (with) / “form” (shape) / “ity” (quality). So, while likeness has come to be an artistic quality and unique to any given subject, conformity now connotes the urge to blend in with the crowd, coincidentally what so many people do to mask their defining likeness. You’d think it might be refreshing not to compare ourselves with and try to conform to others but instead embrace our likeness for its statuesque singularity. And that’s because likeness, through the lens of caricature, is a relative science, not an absolute one.

On the scientific side, when we look at a chair, for example, we interpret it in absolute terms: the chiseled back, the spindly legs, the light cherry wood and weathered seat cushion. It has no character, just a form. It’s a chair. By contrast, when we look at a face, we reroute it to the fusiform gyrus, the brain’s resident authority of facial recognition, where we code likeness *not* in terms of how the face looks, but rather in terms of how it deviates from the mean of the running total of faces we’ve seen in our lives (before six years of age, we employ a piecemeal recognition system that works only with a limited bank of faces; the configural system storing deviations in overall distances is much more flexible). Anything bigger than the norm is a “big” nose, which we mentally project as even more massive and bulbous, and anything longer is a “long” philtrum, which, in our perception, we stretch out like an overused rubber band. This takes place in a perceptual node of the fusiform gyrus, which in neurotypical individuals is followed by a storage component in the fusiform’s mnestic node that maps these deviations onto a semantic representation of the specific individual in the anterior temporal cortex (ATC). Stored in my ATC under the tab for “Grandpa Ronnie,” for instance, is not an image of Grandpa Ronnie but a table of data, a set of of deviations such as “nose tip 1.18x the width of average,” “upper lip 0.77x the thickness of average,” etc. Add to this standard deviation the degree to which personality manifests itself in a person’s features and expressions over time, and the science of perception intersects with artistry profoundly.

To best identify and remember people, we have evolved to remember them as caricatures.

That’s why it is often said that the gauge of a good caricatured likeness is whether it’s quicker to recognize the victim by their caricature than by their photograph. Their likeness is our visual exaggeration of their differences from the average, exactly how we remember them. The job of the caricaturist is to assess how a face deviates from the mean and turn up the volume on all those deviations (from 1.18x nose tip width to 2x, for example), offering the truest and most efficient shortcut to the semantic representations of people we each store in our ATC. In this way, the *less* the caricature *physically* resembles the victim the more strongly it captures the victim’s likeness, assuming the caricature properly considers and exaggerates the sum of deviations.

I would be remiss to discuss caricature and not its infusion of humor, and it is here that this reaction is warranted; we laugh at good—and only at good—caricatures because of how true they are. They do not turn a mirror to the victim, they turn a mirror to the viewer and how the viewer stores the victim in semantic memory, by what makes them unique. It is a misconception that when a caricaturist purports to “emphasize what makes someone unique” that the caricaturist is identifying a few key features to either enlarge or shrink atop an otherwise anatomically accurate portrait of the victim. So frequently am I asked, “Oh, what feature(s) are you going to exaggerate?” when in truth, the successful caricaturist takes into account (a) in what way and (b) to what degree *each* *distance value* of the victim’s face differs from that of the average face. Nothing escapes the caricaturist.

So seeking likeness is seeking difference: not drawing what we see but instead how it differs from the average. Etymologically, sociologically, psychologically, however you choose to look at it, you must recognize people attempt to conceal their likeness with the smoke and mirrors of normalizing makeup, surgery, and illusions, or, perhaps, delusions. Maybe you have encountered it under the guise of eliminating one’s flaws. As people desire to appear normal, with no reflective features, they dilute not only their individuality but also their ability to be remembered. The ATC data for these individuals drift from 1.18 nose tip width to, say, 1.02 nose tip width (or in more extreme cases, 0.98), and with each step closer to average their likeness—their identity as we humans are capable of understanding it—fades away. In turn, the caricaturist struggles to identify how to “turn up the volume” on the face at all.

Herein lies perhaps the most extraordinary job of the caricaturist, that of arbiter of essence. Indeed, the expert caricaturist can assess a face for every distance, every direction, every degree in which it differs from the mean and translate these findings into a drawing that looks more like the victim than the victim does. Computer programs too have been developed to perform a rudimentary imitation of this process, scanning a face for its array of deviations and subsequently pushing and pulling the proportions of the face to give this impression, as that part is quite mathematical. But in computer-generated caricature something wholly human is still missing: the capacity to tap into one’s fusiform gyrus and fully understand how a particular face is semantically represented. The caricaturist knows how the face appears in memory, which is not identical to the way the face appears in matter. And if the face is so average that even the caricaturist cannot capture its likeness, then it follows the face cannot be encoded in memory of those who see it.

So, from the caricaturist’s perspective, it is silly to define facial beauty as perfectly proportioned, confirming to standards rather than introducing originalities. What made the old man so easy to caricature was that his features exhibited what I call a much higher “difference quotient,” or degree of difference from average in each region of his face over the total. The young girl had slightly less, more of a challenge for a novice caricaturist. By contrast, the average face would have difference quotient of zero, void of caricaturable likeness, void of originality. It also would be impossible to remember. In theory, if faced with the *average face*, a viewer’s fusiform gyrus would turn up values of 0.00 for any deviation, and with nothing to store, the ATC would fail altogether to register the face in memory.

The difference quotient I propose is a philosophical concept, as it does not yield absolute scores other than zero or the undefined value, in which the face is nonexistent, but it does offer a relative measure. After all, can’t you, without giving it too much thought, determine whose difference quotient is very high? These are the people who already look like caricatures of themselves walking down the street. And the very low? Those are the people who are frequently asked, “Do I know you?” to which they offer the well-worn reply, “No, I just have one of those faces.” As a mathematical approximation for someone’s likeness, does it not figure that the closer we come to this ideal normal face, the more we approach zero, the less memorable we make ourselves? Our differences define us because they are all we are capable of remembering— not your “perfect” chin, eyes, and forehead; our fusiform gyrus doesn’t care about irrelevant, common data like that.

A beautician came up to my chair once and requested a caricature that ignored her imperfections, namely a crooked nose and very long forehead. I tactfully answered that if all she left me were her “perfections,” then I would really have nothing to draw, not because she didn’t have some “perfect” normal features, but because there is nothing I can really do with those. That puzzled her a bit, but she was in the majority. Media bombard us with advertisements for cosmetic products and plastic surgery to help people conform, flee from the imperfections that establish them as human beings in the eyes of other human beings. I don’t pretend mobile applications don’t exist that instantaneously “normalize” your face. I also won’t pretend they’re not immensely popular. But I might challenge the need for illusory selfie techniques to make you look more “normal.” Society will still focus on your defining features, and not necessarily in a bad way; it’s just all we are neurologically programmed to see. To accept your face’s likeness is to expose yourself more healthily and honestly, rather than to toil over achieving perfect features that by definition will not, cannot, be remembered.

And next time you see a caricature booth, indulge yourself, take a seat, and bare your true colors. You might be surprised who you find you can be.

(I did the woman’s caricature anyway. She loved it.)