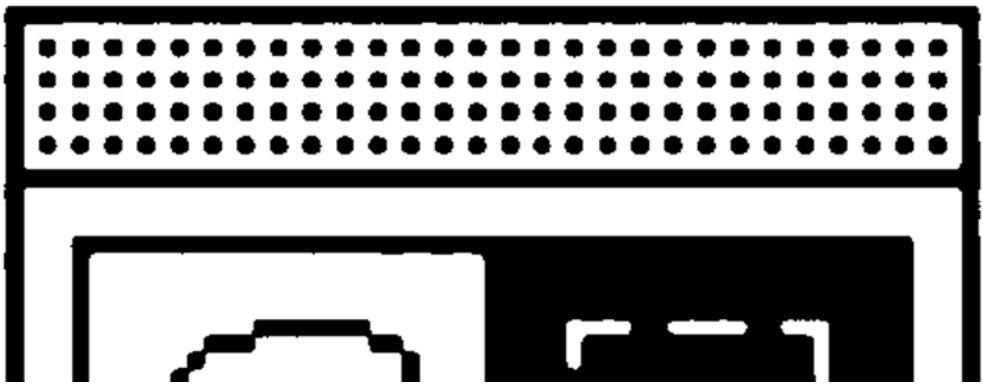


This bulletin was originally delivered as an iChat "lecture," from a studio in Manhattan to a library in the Canadian Rockies, on 11 August 2011 at 12:32 PM Mountain Time. The original formatting has been maintained.

Cover image: Toolbox from Adobe Photoshop 1 (cropped)

Good afternoon.

I am a handle,[1] writing you with the same software that is writing me.

When I carry one idea over to meet another, it's a metaphor I'm making.

(META means "over, across"; PHEREIN means "to carry, bear")

Most metaphors work like this—they're *comparisons plus distance,* the result of preparing one idea alongside another.

(COM means "with"; PARARE means "to make, prepare")

Usually a metaphor's not a perfect or direct comparison but something more diffuse, a kind of rough EQUIVALENCE, parts instead of wholes.

William Shakespeare's metaphors use this roughness to flatter, to heighten a sense of the singularly incomparable. "Shall I compare thee to a summer's day?" asks the "I" in Shakespeare's 18th sonnet, "Thou art more lovely and more temperate."

In that sonnet, the "I" only further woos his you with his inability to simulate her beauty. Then the "I" concludes, "So long as men can breathe or eyes can see, So long lives this, and this gives life to thee."

This is the sonnet as software: run it (or read it) and the avatar of one lover appears to fumble and flourish his way into the affections of another. This virtual pair, this you and this "I," these two need not have been real in life to live in our minds.

And though the "I" is trying to construct a sonnet lovely enough to get himself noticed by the you, the "I" that speaks is not Shakespeare himself —he is Shakespeare's construction, his program.

Rimbaud, another poet from another time, famously wrote that in writing "I is another." That's a second type of metaphor, a SUBSTITUTION, where we swap wholes instead of parts.

Again, from Shakespeare: "Juliet is the sun."

Here, Romeo exchanges a girl for a star in four simple words. Having replaced Juliet with the sun, we may reflect on how she guides Romeo, how (like the yous in the sonnets) her radiance is so singular and distinctive, and how she seems, at that moment in the play, so far out of Romeo's reach.

Reach, of course, is something that, as a handle, I know a thing or two about. Pick me up, pull me over, place me where you wish. I hold the tools for you to use. Grab and release. Drag and drop. Open and close. Repeat.

Even my own name comes with something attached: the "-le" suffix on the end denotes repeated actions (a brook babbles, a diamond sparkles) or things of diminutive scale (a thimble on a thumb, a shuttle on a loom).

Like a metaphor,

(metaphor)

we handles facilitate manipulation, asking the manipulator to operate at a distance.

A cook takes a pot off the stove by its handle. A trucker warns about police over his CB radio with a handle ("smokey") in case the police are also tuned in. In both cases the handle acts as a separator: pot from hand, word from meaning.

Word handles have a long history going back to the *Epic of Gilgamesh*. Some were meant to disguise or encode, while others were meant to differentiate and aid memory in an oral culture.

In *The Information: A History, A Theory, A Flood* (2011), James Gleick hears the recurrent epithets of Homer in the rhythms of African drums:

The formulations of the African drummers sometimes preserve archaic

words that have been forgotten in the everyday language. [...] The resemblance to Homeric formulas—not merely Zeus, but Zeus the cloud-gatherer; not just the sea, but the wine-dark sea—is no accident. In an oral culture, inspiration has to serve clarity and memory first. The Muses are the daughters of Mnemosyne.

Beyond these percussive and performative attributes, however, epithets represent a third kind of metaphorical situation, an INTERACTION.

Here, the modifier and modified mix to make something altogether new —not just a memorable sonic product, but also a twist of the natural and the supernatural, the actual and the imagined.

Homer's "rosy-fingered dawn" personifies the dawn as a goddess and adds a narrative veil to the then-unexplained machinations of daybreak and nightfall.

Some experts in metaphor have theorized that the earliest metaphors stemmed from the ancients' attempts to describe their dreams, which in *Gilgamesh* are as a soft mist or mystical vapor, a potent cocktail of earth and sky, easy to see as they block one's vision, possible to sense but impossible to touch.

It's a haze not unlike the virtual reality we're now in, a dreamy mix of bits and atoms from which all-new metaphors have sprung, including that of our data's presence in an unseen, ever-present cloud.

Did we distinguish between "real" and "virtual" things before the computer came along?

Much in the past was virtual (or at least metaphorical), even if it wasn't exactly digital. Skies, clouds, dreams, spells—all involved some sort of virtualization, some form of conjuring, some method of making a world where one was not.

In describing these pre-digital worlds-within-worlds, I'm reminded of the 'pataphor, a literary technique that extends Alfred Jarry's philosophy of 'pataphysics.

Just as 'pataphysics extends metaphysics into the realm of the imaginary, 'pataphors extend metaphors into a virtual space entirely their own.

So if there is thunder,

(fact)

and that thunder is like a bolt thrown by an angry god,

(metaphor)

then that god's whole world, his interactions with other gods, the power he draws from his celestial position, his bolt-throwing abilities—all of that persists on the level of the 'pataphysical

—a networked set of metaphors with minds of their own and implications for the world of the real.

And in this way, the gods in the sky are just like the ghosts in the machines we use everyday, machines whose function depends on an increasingly interconnected set of interoperable metaphors mapped onto the otherwise clinically persistent processing of zeros and ones.

Glancing down the list new features in Apple's recent OSX update

(whose power they liken, by way of its name, to that of a Lion)

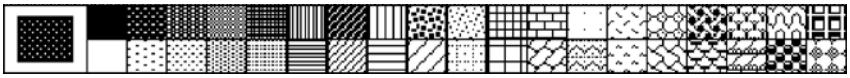
metaphors proliferate. You can easily call up Mission Control for a global view of your system or boot applications from a Launchpad; a robotic Automator helps with routine tasks while a Time Machine transports you to past versions of files.

Susan Kare, who designed handles like myself into the windows of the earliest version of MacPaint in 1984, has often referred to the creation of a new icon as a kind of "metaphor shopping."

Searching for a metaphor to describe the new job of the icon designer, Kare, who also holds a doctorate in art history, reaches for something ancient once more:

The tile mosaics of the Romans can be thought of as an early form of bit-mapped graphics [...] Similar techniques appear in medieval weavings and tapestries.

Here's a palette of infinite fills from Kare's original MacPaint design.



As the virtual appears, it acts like the magic mirror of the real, reflecting physical things into digital form through metaphors of use.

A virtual pencil relies on the use metaphor of a real pencil, though the virtual pencil's behaviors are quite different. For one thing, it can draw at a variety of widths with pixel-precision and make ruler-straight lines with a crosshair instead of a pencil lead. These abilities are beyond those of a real pencil in the physical world.

As graphical user interface (GUI) pioneer Alan Kay explains,

The screen as "paper to be marked on" is a metaphor that suggests pencils, brushes, typewriting. Fine, as far as it goes. But it is the magic —understandable magic—that really counts. Should we transfer the paper metaphor so perfectly that the screen is as hard as paper to erase and change? Clearly not. If it is to be like magical paper, then it is the magical part that is all-important and that must be most strongly attended to in the user interface design.

As magical new things arrive in a virtual space—the arrow pointer, the lasso, the type tool, crop tool, spinning pinwheel—others fall away, and still others persist even though we may no longer need them.

In Apple's Lion, Address Book, a contact management application, has gone from a simple GUI window to a hovering date planner complete

with a leather binding, bookmarks, and a gutter with visible sewing effects.

As archeologist and anthropologist Timothy Taylor explains in *The Artificial Ape* (2010),

The existence of objects, such as saucepans, not just allows actions but suggests them. The ability of objects to suggest things this way has allowed the development of special features of objects and special types of objects, where the function is more to suggest than to deliver.

An example would be a fake-fur leopard-skin coat, lacking the original insulating qualities of the fur, but imbued with other qualities, such as a capacity for social signaling. Such an object, in archeological parlance, is a SKEUOMORPH, a classic manifestation of technology as it leaves the realm of natural things.

We find skeuomorphs everywhere, from the nonessential rivets on a pair of denim jeans to the paperlike pages of a digital book. I once saw a fellow handle on a bottle of maple syrup whose design mimicked a jug three times its size. You could barely thread a needle through it.

Suggestive objects often reify the past in the present. The automobile, originally known as a "horseless carriage," retains many aspects of an antique carriage's form, including the unnecessary spokes on its wheels.

The New York Times reported this February that "electric cars, which can operate with unsettling silence, are being designed to make more noise, largely for safety reasons." But when trying to imagine the past from the present, we have the opposite problem.

In *The Information*, Gleick further recounts how English scholar Walter J. Ong plays the "horseless carriage" metaphor in reverse, in order to illuminate the fallacy of mapping the literate consciousness of the present onto the oral culture of the past. He writes,

Imagine writing a treatise on horses (for people who have never seen a horse) which starts with the concept not of "horse" but of "automobile,"

built on the readers' direct experience of automobiles. It proceeds to discourse on horses by always referring to them as "WHEELLESS AUTOMOBILES," explaining to highly automobilized readers all the points of difference.

Instead of wheels, the wheelless automobiles have enlarged toenails called hooves; instead of headlights, eyes; instead of a coat of lacquer, something called hair; instead of gasoline for fuel, hay, and so on. IN THE END, HORSES ARE ONLY WHAT THEY ARE NOT.

Metaphors of mobility pervade virtual space—from Homer's well-known epithet of the "swift-footed Achilles" to Steve Jobs's well-known metaphor that a computer is "a bicycle for our minds."

Jobs turned this phrase many times, but one of the most explicit comes as part of a video interview for the Library of Congress:

I think one of the things that really separates us from the high primates is that we're tool-builders. Now, I read a study that measured the efficiency of locomotion for various species on the planet. The condor used the least energy to move a kilometer, and humans came in with a rather unimpressive showing about a third of the way down the list—not too proud a showing for the crown of creation. So that didn't look so good, but then somebody at Scientific American had the insight to test the efficiency of locomotion for a man on a bicycle. And a man on a bicycle blew the condor away—completely off the top of the charts! [...] What a computer is to me is ... the most remarkable tool we've ever come up with. It's the equivalent of a bicycle for our minds.

Jobs's metaphor is a comparison that emphasizes the efficiency of the two technologies for human advancement—

recalling Taylor's idea that objects don't just allow actions but suggest them, the suggestive power of a bicycle is that of speed, progress, and the power of human beings to conquer boundaries.

And those actions are precisely what Marcel Duchamp's readymade *Bicycle Wheel* from 1913 critiques.

Consisting of a single bicycle wheel turned upside-down and mounted to stationary stool, it seems to celebrate—at least to some degree—a pointless, going-round-in-circles kind of motion.

Duchamp himself frequently compared the wheel's spinning to "flames dancing in a fireplace" or the back-and-forth of a game of chess.

Rather than efficiency and progress, Duchamp's wheel is a man-made object that is somewhat accidental yet thoroughly intentional in its design and offers no efficiency or practical use whatsoever.

However, in this refusal of efficiency, and in its willingness to break from then-contemporary notions of art, it offers, in place of efficiency, something akin to Kay's magic eraser: an object that touts its virtual delights over its real-world uses.

In this way, it is a different sort of bicycle for the mind—

one that it opens our collective imagination to new modes of aesthetic interpretation

—even as we're sitting absolutely still.

*

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