

WHAT IS INTERACTION DESIGN?

“IN THE SAME WAY THAT INDUSTRIAL DESIGNERS HAVE SHAPED OUR EVERYDAY LIFE THROUGH OBJECTS THAT THEY DESIGN FOR OUR OFFICES AND FOR OUR HOMES, INTERACTION DESIGN IS SHAPING OUR LIFE WITH INTERACTIVE TECHNOLOGIES, THAT IS COMPUTERS, TELECOMMUNICATIONS, MOBILE PHONES AND SO ON. IF I WERE TO SUM UP INTERACTION DESIGN IN A SENTENCE, I WOULD SAY THAT IT’S ABOUT SHAPING OUR EVERYDAY LIFE THROUGH DIGITAL ARTEFACTS, FOR WORK, FOR PLAY AND FOR ENTERTAINMENT”

GILLIAN CRAMPTON SMITH, JANUARY 2002



THIS IS INTERACTION DESIGN

Twenty years ago computers were expensive work tools for professionals or games machines for enthusiasts. But today they're turning up in all aspects of our daily life—from mobile phones to microwave ovens, exercise bikes to sewing machines—and there are already many more computer chips than humans on the planet. Increasingly, the quality of our life is shaped by digital artefacts. ↪

When machines were mechanical there was a direct, physical way to interact with them: you could make a mixer go slower or faster, turn a knob to choose a washing programme, flick a switch to sew in reverse. But a machine controlled by a computer chip is a rather different thing. ↪



It responds to us in different ways depending on what we do; the same controls do different things according to the mode we are in; it can be programmed to do things over time. The way it behaves is no longer fixed and predictable. In many cases it's downright mysterious. ↪

When we design a computer-based machine, we design how it behaves as well as how it looks. And we are designing the "quality" of our interaction with it—how we use it, programme it—as well as what it looks and feels like. This is interaction design. An object which is awkward to use, hard to understand, or difficult to remember how to use is not a successful design. Good interaction design makes sure the machines in our lives are graceful to use as well as beautiful to look at. It involves the "aesthetics of use" as well as the aesthetics of form. ↪

But interaction design does not just involve the interaction with complex machines. Our life is increasingly connected through telecommunications networks and filled with immaterial things: music, films, TV, information. These technologies make the services that companies provide as important as the machines they sell. And the experience of a service comes both from the design of the service itself and the way we interact with the machine—phone, pager, pda, set-top box. We use to access it. So interaction design involves the design of immaterial things as well as material ones: services and software as well as hardware. ↪



Sketches by Bill Verplank. ↪

Just as industrial designers developed and refined mechanical technology for home and work, so that mechanical artefacts could play both a practical and graceful part in homes and offices, interaction design shapes the way information and communications technologies fit into our everyday life and culture. ↪

USER-FRIENDLY IS NOT ENOUGH

There is a tendency to think of an interactive system in terms of the technology that makes it possible: the hardware and software, or input device, processor and display. But an essential part of an interactive system is the person or people who are interacting with it—no people, no interaction.

MODELS

USER CONCEPTUAL
"DESKTOP" MODEL



REPRESENTATION



So whether you are designing a fighter cockpit or an art installation, messy, unpredictable, capricious people are part of your system.

The birth of "human factors"—psychology and ergonomics—in the design of interactive systems was during the second world war, in the design of fighter cockpits. In the case of pilots you had an unusually homogenous and trainable group of users: male nineteen-year-olds with 20-20 vision and fast reflexes.

Today, however, computer-based systems are part of everybody's lives and the kinds of people who will use them are not all the same, don't necessarily want to be trained, and will use them in all kinds of different situations that their designers cannot possibly foresee. Moreover as computer-based systems are becoming a part of everyday life and culture, designers need to take into account not just people's physical and cognitive needs but also their social and cultural desires. Today the problem is not just to design something that will do a job but also to design something people will like and want to buy—it is a matter of style, fashion, culture, identity, as well as efficiency.



OBSERVATION



SCENARIO

Sketches by Bill Verplank.

DIGITAL ARTEFACTS: THE ARCHITECTURE OF THE FUTURE

All societies have a symbolic world, a world of myths (significant stories) and values—a world of meaning—which is the implicit backdrop of everyday life. This world is reflected in the things, the artefacts which people make and exchange. As designers, designing artefacts for the society of which we are part, we not only contribute to the practical convenience of life but also have the power to enrich—or impoverish—our culture, the symbolic life of society. ↵

The environment we make for ourselves, in which we live our lives, shapes our physical and our mental life—the life of the body and of the spirit. Take the example of architecture. A building is both a practical artefact—it protects us from the weather—and a symbolic artefact, having meaning for us beyond its immediate practical use, reflecting and reinforcing the shared norms and values of our culture. ↵

It is not enough for a building to stand up and keep out the rain—we expect more of it. It needs to resonate with our shared social, cultural and aesthetic ideas so we can interpret its meaning, we can ‘read’ it. For instance, a building speaks to us about its place in our culture—by its form we can tell if it is a church or a shopping mall. It speaks to us about social norms: which are the private rooms, which are the public. It speaks to us about how we use it: where we go in, how we orient ourselves within. And it speaks to us aesthetically: we may find it beautiful or calming, playful or exciting, we may be awed by its grandeur or amused by its wit. ↵

Digital technology is changing material culture: the tools we use, the way we live in our homes, the way we connect with family and friends. Digital artefacts are becoming the architecture of the future, shaping the life we live in practical, social and aesthetic terms. We need to start to think about designing them in terms of architecture as well as building, culture as well as engineering. ↵


ETHICS = THE HISTORY OF INTERACTION (DESIGN)

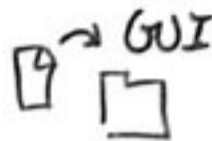
ANTHROPOLOGY

SOCIOLOGY

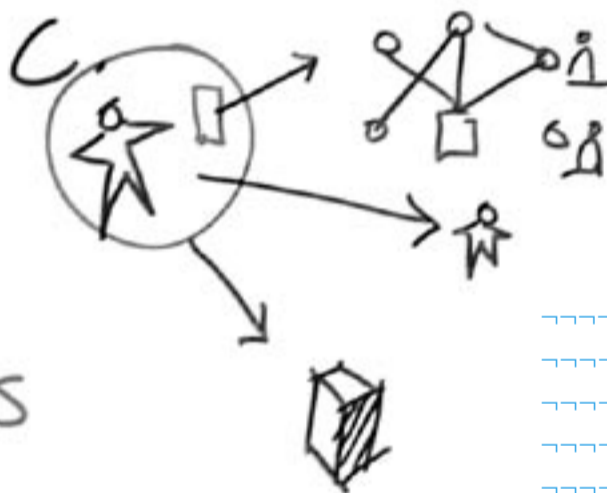
PSYCHOL ← SOCIAL
EMOTIONAL

PSYCHO-PHYSICS $\frac{\Delta I}{I} = k$

PHYSICS 



time ↓



Cognitive development ↑

ARTIFICIAL LINGUISTICS COG. SC.

AUGMENTED REALITY TASK-BASED

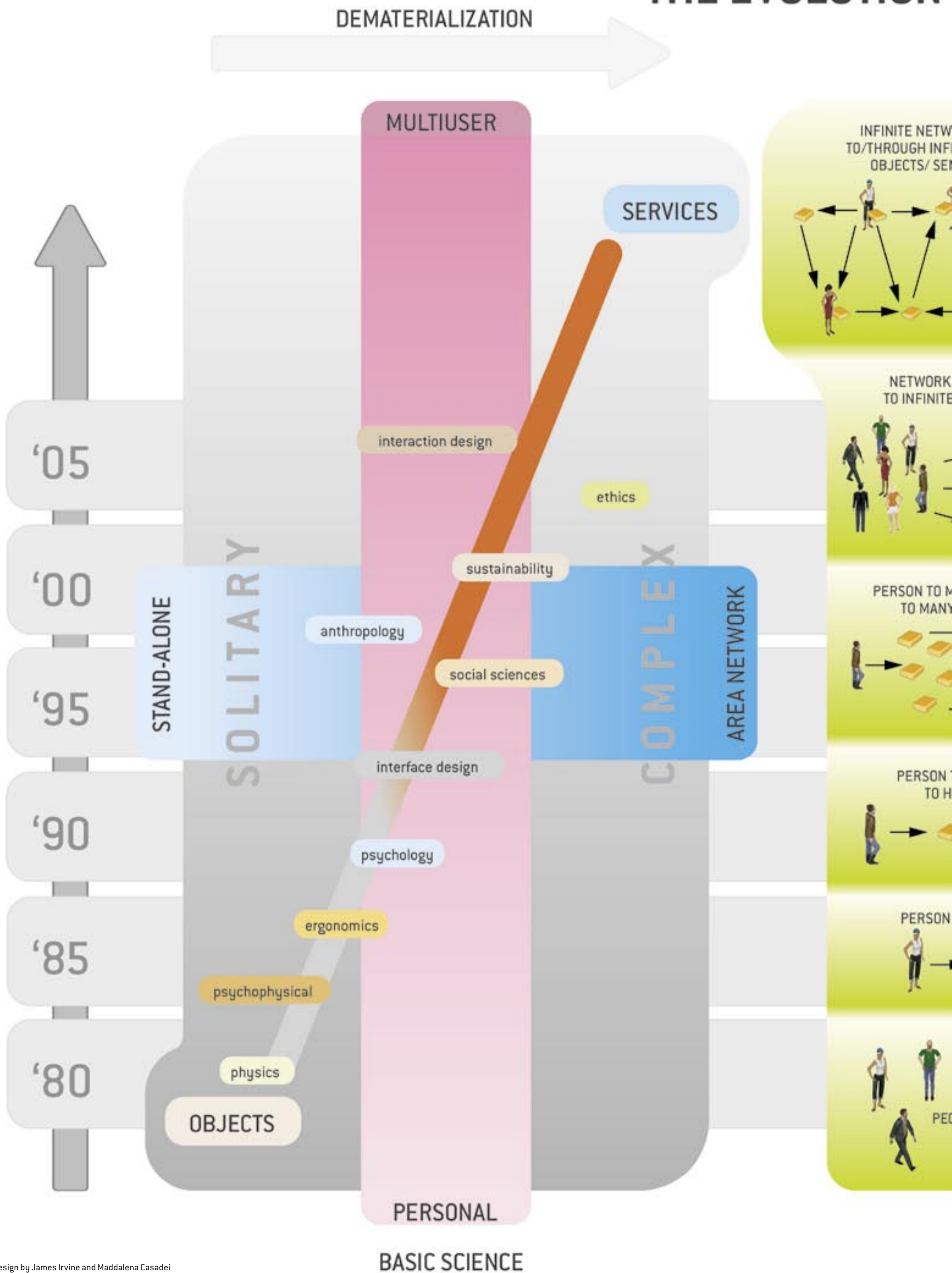
MEDIA COMMUNICATIONS FASHIONS

ALL!  BEHAVIORAL SETTINGS



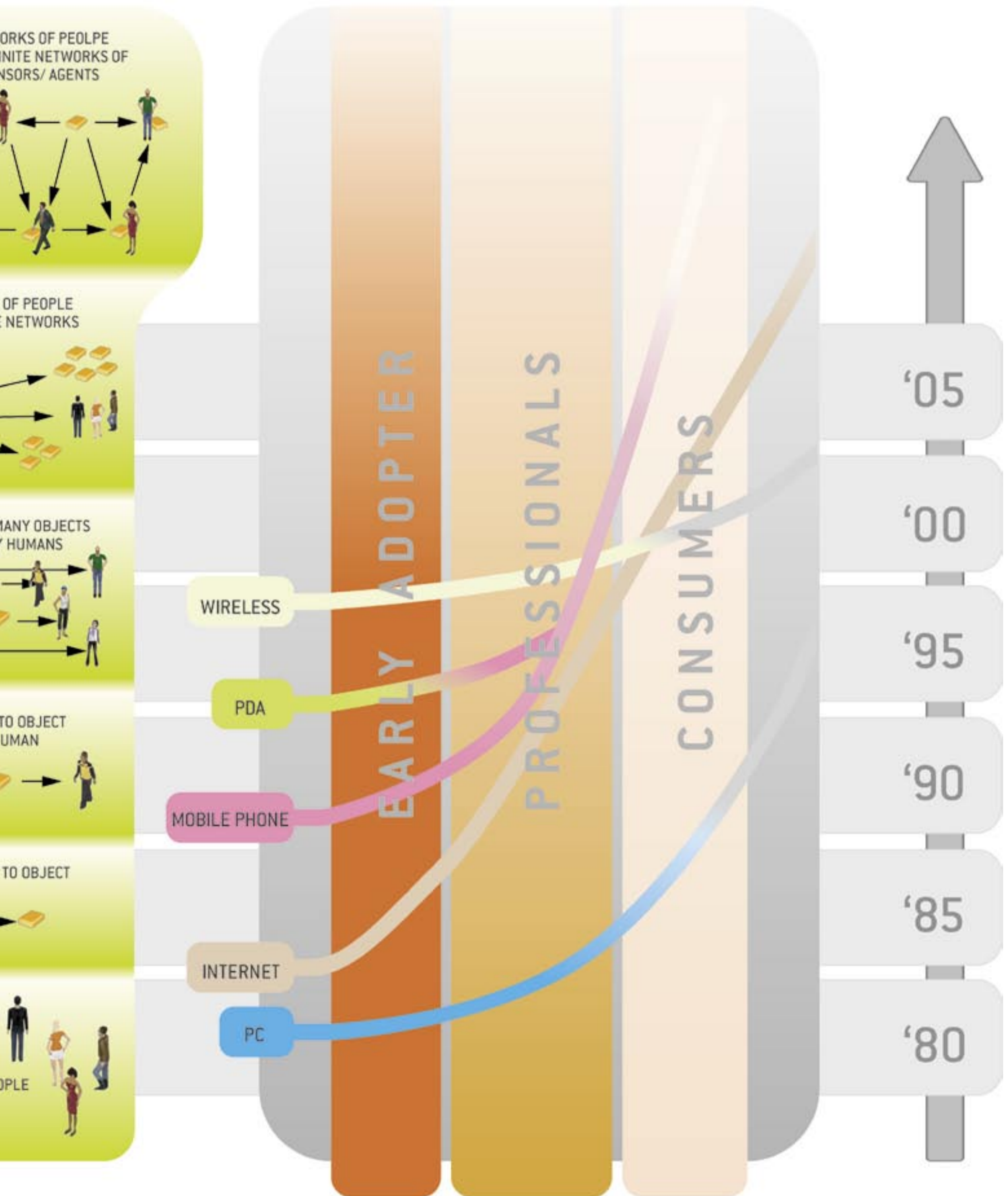
Sketch by Bill Verplank.

THE EVOLUTION



OF INTERACTION

LEVEL OF ADOPTION



PENETRATION & TECHNOLOGY
PENETRATION

AGENZIA DI PUBBLICITÀ

Corriere della Sera

Corriere della Sera



SE AVESSE POTUTO COMUNICARE COSÌ, OGGI CHE MONDO SAREBBE?

TELECOM
ITALIA
COMUNICARE E VIVERE