

Knowledge Design: A Much Needed Discipline

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*«What do you think are we doing here at the
CIA?»*

«We collect information.»

*«No! Information is useless. It changes over-
night! Knowledge is important!»*

(Roger Donaldson,

The November Man, 2014).

«Information is not knowledge.»

*(Credited to Albert Einstein. Frank
Zappa said it, «Packard Goose» 1979).*

One of my graduate students does not
know who Albert Einstein is.
Forget about Frank Zappa.
(Information is important, too).

1. Beautiful, the Manager Said

In the early 1980s, shortly after I had received my college degree, I had a brief stint as a copy-editor in an advertising company that catered almost exclusively to direct-marketing firms specialized in the slow-growing sector of mail orders. Personal computers would arrive years later and the Internet was still called Arpanet. The mail order business lagged behind. Colorful, cleverly designed brochures slipped into mailboxes were the medium of choice to convince new clients to place an order, which was a difficult task in Italy, where the retail store ratio per inhabitant was, and perhaps still is, the highest in Europe. One day I had a conversation with the executive manager of a printing company who showed me the brochures his employees were producing. He vented his profound dissatisfaction, expressing how bad the brochures were – ugly, in fact, when compared to those brochures of a certain English company, which produced beautiful ones. Oh, so beautiful, those English brochures. He then proceeded to show me the prized English brochures. Unquestionably, they would prove how backward Italy was in the mail-order concept.

I was prompt to concur with him; after all, he was one of our biggest suppliers. However, when he set the fabled English brochures on the table it was difficult to hide my reaction, and I hoped my disappointment did not transpire excessively. Overall, those English brochures were cheap. The lettering was unsophisticated; the layout was old-fashioned: the characters were too small, the pages were crammed with too much information, and the pictures of merry housewives proudly handling brand-new kitchen tools seemed as if they had been cut and pasted from a *Reader's Digest* issue of the 1950s. In fact, with no intention of speaking based on loyalty only, the brochures my company was designing were much, much better. If the British standard was what I was seeing, then our brochures were works of art. Yet the manager was adamant; he insisted that the British brochures were much more beautiful than those produced in Italy. I nodded and proceeded to remain silent, but I simply could not understand what he was so intently trying to say. Until it dawned on me, we

were not speaking the same language: we were not using the same semantics. I sensed danger, anticipating a cognitive dissonance ahead, and I paid more attention to the way the manager placed adjectives in his speech.

The term ‘beautiful’ did not convey to him the same semantic spectrum that anyone could find in a dictionary. To me, biased as I was by my degree in philosophy, ‘the beautiful’ was the philosophical notion that Western culture had inherited from Plato to Hegel and beyond, but to the manager, and I was at fault for having understood it so slowly, beauty had nothing to do with beauty. His newsspeak, to quote Orwell, had totally de-semanticized beauty as an aesthetic category. To him, ‘beautiful’ meant ‘cheap & fast’, produced in a greater quantity and in a shorter amount of time. The British company had printing machines that were more powerful and therefore able to churn out more brochures at a lower cost than he could. And that was beautiful, and that was it.

I tried, albeit feebly, to make him see the issue from a different point of view, but I did not succeed; I was not able to make myself understood. I was trained to debate the fine points that distinguish and/or unite beauty and function, but I was not prepared to embrace beauty as pure military efficiency, and I realized that maybe it was time for me to search for another job (it was not the only time I had that foreboding).

The ideological reduction of beauty to a purely operational concept has now gone a long way. Not only «whatever pays my mortgage» may be beautiful; it is far more than that. There must be an amazon.com zealot manager somewhere who feels positively disgusted when he spies a bookstore that is still in business. «How ugly, how ugly», he must repeat to himself while he drives past one. How backward are we, as we still cannot get rid of walk-in stores and finally beam ourselves up to a perfectly beautiful world where anyone who does not buy everything by mail order is a potential threat to society?

Biologist Jared Diamond has analyzed the ecological catastrophe that contributed to the demise of the Easter Island civilization, whose only survivors are the ominous, great statues that still overlook the Pacific Ocean, representing nameless gods that no-one worships anymore¹. Savage deforestation seems to have been the main cause of the collapse, and Diamond, evoking the man who cut the last standing tree on the island, asks, «What was he thinking in that moment?» I believe I know the answer. He thought, «How beautiful». He thought, «At least we rid ourselves of those ugly trees».

It has been in the news recently that amazon.com has opened its first brick and mortar, walk-in bookstore in Seattle. It looks like my hypothesis about the disgusted amazon.com manager has been falsified after all, but I am not sure, at least not yet. It may be that our friend, the manager, has chosen another target. While it is true that large bookstore chains have found it hard to survive in the new-media environment, small bookstores located outside the neighborhoods that are most sought-after for rent increase have shown a strong inclination to survive, and an amazon.com bookstore chain may contribute to hasten their demise.

Perhaps, it is still too early to know. Right now, I want to stress that art and functionalism have joined forces ever since men and women started to

¹ J. Diamond, *Collapse: How Societies Choose to Fail or Succeed*, Penguin, New York 2011², p. 23.

mold their clay jars with decorations thousands of years ago, but the ideology that extols functionality as non-mediated beauty positively triumphed only in the twentieth century. Jacques Rancière has even investigated the possibility that French symbolist poetry and German functionalism, who at first sight look like strange bedfellows, have been moving in parallel for quite a while. To Peter Behrens an armchair is beautiful as it fulfills its function and as its lines are streamlined and purified of all ornaments; in John Ruskin and Stéphane Mallarmé the shared idea of «symbol» partakes of the same strict functionalism:

Between Mallarmé and Behrens, between the pure poet and the functionalist engineer, there therefore exists this singular link: the same idea of streamlined form and the same function attributed to these forms – to define a new texture of communal existence. No doubts these shared concerns are expressed in very different ways. The designer engineer intends to revert to a state prior to the difference between art and production, utility and culture; to return to the identity of a primordial form. He seeks this alphabet of types in the geometrical line and the productive act, in the primacy of production over consumption and exchange. For his part, Mallarmé doubles the natural world and the social world with a universe of specific artefacts that can be the fireworks of 14 July, the vanishing lines of the poem, or the knick-knacks with which the private life is imbued. And doubtless the designer engineer would situate Mallarmé's project in Symbolist iconography – that of the *Jugendstil* which he regards as the mere decoration of the commodity world, but whose concern for styling life by styling its furnishing he nevertheless shares².

We can extend Rancière's parallelism further in time. Let us assume that symbolism and functionalism secretly shared the same goal, in order to smooth out every asperity of determination, get rid of bumps, and streamline existence. If that were the case, then it would be even truer that Kandinsky's abstract painting, Malevich's suprematism, Mondrian's grids, Pollock's abstract expressionism, and even Warhol's pop art, by imposing the flat surface as the ultimate paradigm of modernity, anticipated the loss of the third dimension in the visual and written communication that we experience today in the age of the flat screen. True, Cubism, Futurism, Dadaism, ready-mades, and *Arte Povera* have repeatedly challenged the bi-dimensional painting by emphasizing stretched-in-time representation and tridimensional objects, yet the flat, bi-dimensional model has now come to dominate the design of the tools we use to distribute knowledge. A deep thread connects Kazimir Malevich's black squares, Barnett Newman's couplings of slabs separated by a straight line, Yves Klein's blue monochromes, and Mark Rothko's rectangles shaded with blue and green, to the soft, monochromatic, and thinner at the folds, polyurethane iPad cover. (In fact, as people seem to like bigger and bigger portable devices, one could look at the 15 feet by 11 feet Rothko Chapel fourteen canvases and foresee the iPhone99 to come).

² J. Rancière, *The Future of the Image*, Verso, London-New York 2007, p. 97.

The contrary does also apply: tridimensional objects glued or tied to a bi-dimensional surface «stick out», seem out of place, mainly because they make the viewer even more cognizant that the surrounding, empty space they emphasize has been voided by their presence. Ostensibly, a Duchamp's ready-made depends on the artist's decision to turn any given object into an art object. The question is not what but where. If a urinal is placed in a museum, it is a work of art. Which not only does presuppose that a museum is an empty place, but that specific places can be emptied by the artist's decision. As Slavoj Žižek has pointed out,

... what Malevich's minimalist disposition does is simply to render—to *isolate*—this place as such, the empty place (or frame) with the proto-magic property of transforming any object that finds itself within its scope into the work of art. In short, there is no Duchamp without Malevich: only after the art practice isolates the frame/place as such, emptied of all its content, can one indulge in the ready-made procedure. Before Malevich, a urinal would have remained just a urinal, even if it were to be displayed in the most distinguished gallery. The emergence of the excremental objects that are out of place is thus strictly correlative to the emergence of the place without any object in it, of the empty frame as such³.

According to Žižek's hegelo-lacanian three-part structuration of reality (imaginary, symbolic, real), the Real in contemporary art has three dimensions. It emerges 1) as a distortion of the direct image of reality; 2) as an empty place that can only be presupposed as such once it has been «filled in» with «artistic objects»; 3) as the obscene object itself, the fetish that is «really» out of place and whose disturbing presence masks the ideology of the direct, unproblematic image.

Let us now apply this triadic approach to the bi-dimensionality of writing and reading in the age of the flat surface.

As for writing, the computer screen flattens the tri-dimensionality of the old writing notepad, but only to a point, as writers do not look at the depth of the white pages below the one they are writing as an intrinsic dimension of what they are writing. Things look different, however, when we consider the act of reading.

Computers are not advertised as reading tools. Tablets are. Tablets purposely reduce the tri-dimensionality of the book to a perfectly flat, Malevich-esque, Klein-esque, bi-dimensional surface. Apparently, tablets leave no room to distortions or objects sticking out (a digital bookmark does not extend beyond the display surface). On a tablet, reading is an act with no beginning and no end: a groundless infinity. The page number at the bottom of the screen does not allow the «real» visualization of what one has already read and of what remains to be read. To the reader who grew up in the print-book environment, the fact that every page is floating in its own space is already a distur-

³ S. Žižek, *Enjoy Your Symptom! Jacques Lacan in Hollywood and Out*, Routledge, New York 2001, pp. 255-6.

tion—but a reductive distortion in which nothing sticks out. The tablet spatializes the text in the sense of the epistemological reduction familiar to the readers of Edwin A. Abbott's *Flatland*.

The tablet purifies the act of reading from all remainders of materiality. It disposes of the flesh of reading, the flesh of the book. It displays itself as an empty space that can be infinitely «filled in» with content, precisely because it is empty in the first place. As a product of Puritanical post-humanism, the tablet inhabits the flatland of the social media in which every surface is potentially shareable. Reading a printed book is a solitary endeavor, but reading the same book on a tablet is a shareable act, a fragment of social existence. No individual autonomy is allowed, no sandboxes where one can build one's own castles of sand, no more treehouses where one can shut oneself off from the world. An app allowing our social media friends to be instantly informed of the author and title of the book we are reading on our tablet would probably increase the number of downloads. So far, Barnes & Noble's Nook has presented the most serious attempt to reproduce the experience of the print book in electronic format. In McLuhan's parlance, however, the Nook is a blatant case of rearview mirror syndrome, and in fact it is struggling to survive the competition of multitask tablets. One cannot invent a new medium only to have it perform the task that an old medium performs better.

So, if the tablet surface is a tabula rasa waiting for meaning, which means any meaning or no meaning at all, how can something possibly stick out? Where is, in a tablet, the real intractable object that exudes reality?

One day a student showed me on his tablet the draft of the paper he was working on. His fingers ran very fast and every time he moved his tablet in a position that reflected the daylight coming in from my office window, I could see how his touch screen was all stained with grease and sweat. If placed straight before my eyes, the screen looked clean. In a slanted, anamorphic position, however, in which a gleam of external light would strike it, it looked as if oozed muck.

After he had handed me the tablet, and as soon as he was gone, I went to wash my hands, and I am not a compulsive hand-washer. Touching the student's tablet felt much worse than handling the used, worn-out, ear-dogged, heavily underlined books that one finds in those piles of old paperbacks that second-hand bookstores put out on outside carts at 50 cents each. My home is full of used books of the kind I just described, yet I never had the same sensation of filth in handling them as I had in touching the screen of my student's tablet. The paper absorbs animal secretion; liquid-crystal displays do not. All that animal secretion, though, akin to the one you find on the screen of your smartphone after you kept it pressed to your ear for a half-hour call, is the only real «Reab» that the experience of the tablet leaves you with. It is the only human trace that «sticks out», in fact the only «obscene» tri-dimensionality giving you the illusion that you are still dealing with an object, when in reality you are just skimming a surface like the one Edwin Abbott's Mr. A. Square did.

I am not lamenting the lost civilization of printed books. I have downloaded plenty of books myself, and my tablets are as they are for most of us an extension of ourselves: a prosthetics. I am merely pointing out that when screens become sophisticated enough to understand what you want them to do by stretching your finger without actually touching them, then nothing will be

sticking out to remind you that your mind operates through a body that has secretions and leaves traces. The transition to the Absolute Spirit will have been complete and this deserted island with no trees left standing will finally be «beautiful».

2. The Feud of the Century

«Form follows function» used to be a tenet of functionalism or *angewandte Kunst*—all instances of «applied art». Alfred Chandler Jr. in *The Visible Hand*, one of the most quoted handbooks of marketing ever, provided the operative corollary: «Structure follows strategy» (namely, a corporate structure is created, in order to implement a given corporate strategy). Both principles are marvelously devoid of human involvement and labor value. They shimmer, suspended in mid-air, magically free from toil and trouble.

Such formalistic fetishism – whether it is art or marketing embracing it – is nonetheless put into question when Ayn Rand-like titans rise up to engage in a billion dollar pillow fight while the world is anxiously watching. In the end, it may be that structure follows personal competition as much as market strategy. Bill Gates and Steve Jobs have been partners and rivals, enemies and friends, and then enemies again. They have acknowledged and despised each other. If Johannes Gutenberg, the son of a merchant, and Aldo Manuzio, the scion of a wealthy and intellectual family had met, they would have probably admired each other without reservations. But upper class Gates and working class Jobs did not fit the pattern of great minds who think alike. Bill Gates still reigns over a benign, social-democratic dictatorship of open products without too much concern for style (although Windows 10 has slightly changed the perception). Steve Jobs created a totalitarian, Maoist system of strictly integrated products whose designs purposely scream «art» from each one of their round corners. According to Andy Hertzfield, an early Macintosh employee,

Each one thought he was smarter than the other one, but Steve generally treated Bill as someone who was slightly inferior, especially in matters of taste and style [...] Bill looked down on Steve because he couldn't actually program⁴.

What they had to say of each other is likely to be the most revealing clue to the full understanding of the design of our knowledge, the architecture of data running through our life:

Gates: Steve Jobs was «fundamentally odd» and «weirdly flawed as a human being».

Jobs on Gates: «He'd be a broader guy if he had dropped acid once or gone off to an ashram when he was younger».

Gates on Jobs: «He really never knew much about technology, but he had an amazing instinct for what works».

⁴ J. Yarow, *What Steve Jobs and Bill Gates Really Thought about Each Other*, May 26, 2013 (www.businessinsider.com).

Jobs on Gates: «Bill is basically unimaginative and has never invented anything, which is why I think he's more comfortable now in philanthropy than technology».

Gates on Jobs: «Don't you understand that Steve doesn't know anything about technology? He's just a super salesman».

Jobs: «The only problem with Microsoft is they just have no taste, they have absolutely no taste. I don't mean that in a small way. I mean that in a big way, in the sense that they don't think of original ideas and they don't bring much culture into their product».

Gates on Jobs: «I'd give a lot to have Steve's taste».

Jobs on Gates: «Bill likes to portray himself as a man of the product, but he's really not. He's a businessperson. Winning business was more important [to him] than making great products. He ended up the wealthiest guy around, and if that was his goal, then he achieved it. But it's never been my goal, and I wonder, in the end, if it was his goal. I admire him for the company he built—it's impressive—and I enjoyed working with him. He's bright and actually has a good sense of humor».

Gates on Jobs: «I respect Steve, we got to work together. We spurred each other on, even as competitors. The way he does things is just different and I think it's magical. None of [what he said] bothers me at all»⁵.

They disagreed on style: business style and product style. More deeply than that, they disagreed on beauty. I am not saying that Bill Gates stands for the disappointed printed company manager I met in my prime who had no room for style in his mind. Yet no one can deny that the difficult balance between knowledge and design is the real point of contention here. I mean design as beauty, design as functionality, design as the frame of our knowledge, and design as knowledge itself. Everything is at stake, knowledge as information and information as knowledge. But without knowledge, information is bunk. And without information, knowledge is inert.

Logic, supposed to formalize and clarify every dead corner of language, has this to say about the connection between information and knowledge:

*All justified judgments represent assertions using the content of informational states to derive knowledge of the concepts involved, supported by elements or proofs actually possessed and therefore known. [...] The instances of categorical judgments are to be thought of as the explicit knowledge acquired in the process and referred to as the agent's knowledge state (**k-state**) ... A knowledge frame (**k-frame**) is the result of an entire knowledge process, executed by a rational agent on the basis of eventually many **i-states** from which several **k-states** are deduced. To be a proper **k-frame**, such a result needs to collect coherently the content of the different **k-states** [...] The notion of information used here is to be explained in terms of contentual (empirical) meanings furnished by the non-logical parts [of the proposition]⁶.*

⁵ *Ibidem*.

⁶ G. Primiero, *Information and Knowledge. A Constructive Type-Theoretical Approach*, Springer, Dordrecht 2008, p. 149.

The devil, I believe, is in the final statement. If the notion of information has to be explained in terms of empirical meanings provided by the non-logical parts of our propositions, then we are back to square one, as the non-logical parts of the propositions are precisely the ones that allow us to make the leap from information to knowledge. Old-fashioned Parmenides, Socrates, and Plato (P-S-P²) had the same trouble in dealing with information (the non-logical, empirical parts, proofs or data) and knowledge (the frame or deduction, executed by a rational agent, and based on the information states available)⁷. P-S-P² had to struggle to find a clear distinction between rumor (*dóxa*) and science (*epistéme*), opinion and research (*sképsis*), and information and knowledge (*pbrónesis*).

For Plato, each type of knowledge has a corresponding object of knowledge. Gradually, from shadows, reflections in mirrors, and mirages, we proceed to objects of sense we form an opinion about. Opinion (including observations derived from experience) will never reach a degree of certitude beyond induction (which reinforces my suspicion that deduction alone cannot easily bridge the gap between information-states and knowledge-states). Plato, in fact, seems less and less sure of information-or-experience-based knowledge in the span of time that separates *Meno* from the *Republic*. This is how, in *Meno*, knowledge is distinguished from opinion: I may have a true opinion of how to get to Larissa if I have heard and have believed a description of the route that will get me there (let us call it a reliable *i-state*). However, I will have knowledge of the route only if I actually take it myself (I will thus reach a *k-state*). In the *Republic*, however, this distinction melts away. No matter how many times I reach my chosen destination, I will still have an opinion of how to get there. Inductive success does not imply deductive causation. Whatever knowledge we may have of the road to Larissa, it will never be ideal knowledge, knowledge that proceeds from the eternal forms. That is Plato, but it might also be Hume, waiting for Kant's transcendental move.

I am not concerned with Kant now; my concern is the nature of Plato's dialectic, the art of refining our argument step by step until no doubt is left that we have done all that is in our power to approximate unconditional knowledge. But dialectic is not just the technique of narrowing down a specific topic until no contradiction remains, it is also a conversation among living persons. It is open to stops and starts, twists and turns, open roads, and impassable gaps. While Socrates wants to test every side of the argument, Meno is so shocked by Socrates's relentless pace that he thinks a torpedo has struck him (*Meno*, 80a). And Socrates will never be able to instruct Anytus, the wealthy business-owner, the mundane man who is impatient about intellectual challenges and the waste of time that goes on with them. Allow me the outrageous but functional comparison: in my conversation with the printing manager, I was Meno and he was Anytus, but there was no Socrates to figure us out. We could not agree on the basic terms we were using, and our dialectic exercise was doomed to fail. (I am afraid not even Socrates would have been capable of

⁷ Because not all states may be available to the same agent and at the same time, induction has a role too.

enlightening my friend the manager; suffice it to say, Anytus would later be Socrates' indomitable accuser).

Gates and Jobs' conversation was a failure too, as they could not decide whether information should be beautiful, or the extent to which beauty ought to incorporate knowledge or knowledge to incorporate beauty. We are left with the fragments of that unfinished confrontation. Must information have style? Must it be culturally relevant or strictly functional? Is information the way to knowledge (as in the logic theorems I have quoted) or does it lead to a false infinity of more information, and more, and more (as Plato would suggest)? Is hyperinformation the same as disinformation? Will we ever be sure that we «know» how to reach Larissa, instead of just reaching Larissa? And will that matter, if we are in Larissa anyhow?

But we aren't. At least not in Italy. A 2014 conversation between Eric Schmidt, CEO of Google, and Dario Franceschini, Italian Minister of «Heritage, Cultural Activities, and Tourism» at the College of Architecture of the University «La Sapienza» in Rome, is a sad reminder that Larissa is still far away.

Schmidt: «Young people in Italy lack a digital education».

Franceschini: «Every country is different. Maybe we have more young people who are competent in medieval history».

Schmidt: «The Italian school system does not prepare students to the new world. Every school in the USA teaches computer literacy».

Franceschini: «Our students may go the U.S. to teach medieval history. Americans will come to Italy to teach computer literacy»⁸.

(The obvious question here is not how many teachers of medieval history the world needs, and how many computer experts, but how many medieval scholars can secure their career today without a high level of computer literacy. The answer is obvious as well).

3. «I Am a DJ, I Am What I Play»

The perception that print environments and digital environments are sworn enemy is pervasive. I am aware of the profound differences between these two «ages of the world» and the changes implied in the loss of the third dimension of reading; in fact my criticism is not a preconceived refusal of those changes; it stems from the necessity to save what can still be useful. I share the anxiety of those who see the old beauty of the print world wither away, but I cannot bring myself to agree with the recurring surplus of resistance (so familiar in Italian culture) that transpires in this statement by none other than Roberto Calasso, sophisticated essayist and editor of the solemnly highbrow Adelphi publishing house:

The web is completely antithetical to the book. Deprived of individuality, and having been denied the deep, personal experience of reading alone, the reader is immersed in an immense, unstoppable,

⁸ C. Giua, *Tutta la cultura è digitale ma in Italia molti ancora non lo sanno*, «Il Sole 24 Ore», June 9, 2014 (also on www.huffingtonpost.it, posted on September 22, 2014). My translation.

invisible anthill that relentlessly edits, manipulates, connects, and puts a label on everything⁹.

The diagnosis is far from inaccurate. Yet I am surprised that Calasso seems to give editing and connecting a negative meaning. Does he dismiss E. M. Forster's well-known advice to aspiring novelists, «Connect, only connect»? Or is he implying (and I lean toward this second interpretation) that it is the web that connects and it is therefore the web that writes, and no longer the writer? Post-human theorists and cyberspace enthusiasts (combat troops of the Absolute Spirit), both anxious to disincarnate the body and turn our messy biology into a beaming ray of light (as their Gnostic ancestors had it planned in the second century A.C.), enthusiastically support the waning of whatever is left of our subjectivity. But not so fast, says analytic philosopher Roberto Casati, who argues (remarkably, with no nostalgia and no heroic resistance posturing) that the rush to the digital may turn into a dangerous fad. I have summarized his «theses against digital colonialism»¹⁰ in seven points:

- 1) The platform of our culture and communication system is digital, but digital media are not autonomous from print media.
- 2) The printed book has a perfect cognitive format that digital media are far from possessing.
- 3) Recent decisions at the level of ministries of education, urging schools to get rid of books and embrace a totalitarian approach to digital media, are misguided.
- 4) The digital media are not destroying print. Afraid of being left behind, education institutions are pushing the fast forward button to the detriment of a necessary balance between print environment and the digital environment.
- 5) Spurious concepts such as «native digital», referred to young boys and girls, are meaningless and do not stand up to science. Digital media do not create a neurological condition that did not exist before.
- 6) Books are ecological. They keep carbon for hundreds of years. People who have started reading on e-readers have already moved through three or four models, have thrown the old ones in the garbage bin, and have increased plastic waste.
- 7) The function of the teacher is to become a *designer of learning*, able to move with ease from print environment to the digital environment, because «what is new must not be destiny».

I agree with six points out of the seven exposed. About the last one, teachers becoming designers of learning, I am not so sure. What is new is, most of the time, destiny indeed. Writing as a communicative and political tool, as opposed to its sacred, ritualistic, or gnostic use, was still relatively new when Plato wrote *Phaedrus* and had Socrates complaining that writing for money as political speechwriters were doing would destroy the knowledge

⁹ Quoted in S. Lorusso, *Roberto Casati e il progetto della lettura*, posted June 18, 2013 [http://www.doppiozero.com/materiali/speciali/roberto-casati-e-il-progetto-della-lettura]. My translation.

¹⁰ See R. Casati, *Contro il colonialismo digitale. Istruzioni per continuare a leggere*, Laterza, Roma 2014.

acquired by means of free conversation and memory. Yet Socrates knew very well that writing was there to stay. He preferred not to write. In fact, he was the last cultivated man who could choose not to write¹¹. But Socrates did not underestimate the power of the new medium, and he preferred to have Phaedrus reading him Lysias's speech on love instead of looking for Lysias and hear the speech from him. Because, as he said, «Lysias is present» in his written speech¹².

The gifts of technology (and alphabetic writing is the most powerful technology ever invented) cannot be returned easily to the sender. They create their destiny and their destination the very moment they appear in the public square. Before Facebook came into existence, no one was desperate because there was no Facebook around. And no one my age thinks it was a shame that there was no Facebook when we were in high school (oh, the wonderful social interactions we missed!). Anticipations are as tricky as regrets. In comic books (*Dick Tracy*) and science fiction up to the 1980s (*Star Wars* included), portable phones are introduced as a function of advanced wristwatches, and people are seen having dialogues with their right arm raised halfway to their mouth. The same people who imagined spaceships going through black holes at ten zillion times the speed of light could not fathom portable phones pressed to our ears instead.

It would be a highly desirable outcome for teachers to become designers of learning. But it is advisable to be a little skeptical about it, because it won't happen until we dispel the aura hovering over the d-word. Recently, an Italian bookseller gave a very positive review of sociologist Alessandro Ludovico's *Post-digital print*. Booksellers of today, she wrote in her blog, must be architects and designers, and rethink the job of selling books in terms of relation between space and content¹³. I do agree, and I hope she is still in business, but why «post-digital»? Are we past the digital age already? I must have been asleep, or too busy reading downloaded books on my Kindle, Nook, and iPad to notice (yes, I have all three, I am hip, or I thought I was). Or is our knowledge so fully digitized that can we regard print products as post-digital? If that were the case (but it is not, not yet), print products would belong already to a combined universe in which print is the «past time» and «pastime» of the digital environment, a belated event that does not disturb the general trend toward full digitization. The McLuhan reference cannot be avoided:

The dominant technologies of one age become the games and pastimes of a later age. In the 20th century, the number of «past times» that are simultaneously available is so vast as to create cultural anarchy¹⁴.

It is hard to deny that we see some feeble intimations of the post-digital universe around us. Books printed today come into being as post-digital objects to the extent that the triumphant, beautiful, digital capitalism has creat-

¹¹ In John 8, 7 Jesus writes something in the sand with his finger when the teachers of the law are pestering him about how to punish the adulterous woman. This is the only time we see him writing. Or was he doodling, as we do when we listen to a boring speech?

¹² «*sparóntos dè kai Lysíoy*» (Plato, *Phaedrus*, 228e). See also Carrera 1995, p. 12.

¹³ D. Colombo, *Post-digital print*, September 29, 2014 (www.doppiozero.com).

¹⁴ M. McLuhan and W. Watson, *From Cliché to Archetype*, Viking, New York 1970, p. 99.

ed beautiful unemployment. My old friend, the printing company manager, would have definitely called it a thing of beauty (What happened to him? Is he happily retired? Is he still mourning the demise of the beautiful British brochures?). Think of all the beautiful unemployed workers of our digital age: educated, well-read, socially connected, with a good degree in their pocket, and yet out of job because an environment that runs without workers is better designed, cleaner and cheaper than an old, clunky human workshop. Digital capitalism shines, no doubt, to the extent that it got rid of flesh and blood. Most of all, it is *content-free* capitalism in both senses of the term: capitalism free of content (except capitalism itself) and capitalism where content is supposed to be free. Who needs content, when design reproduces itself?

A picture I found on the Internet shows a young man in worn-out jeans holding a sign that says, «I will design for food». Good luck. Yet unpaid content-producers, eager to design, teach, write, etc., in whatever profession Neo-Marxists such as Antonio Negri call *cognitariat*, may still be able to find a niche and survive, while workers who do not produce digitizable content and carry non-digital ware from point A to point B are even less likely to receive a compensation that saves their dignity. I have read papers after papers about the new market of information technology in which not a single word was said about the actual relations of production. But we do not eat information, we eat groceries. To deliver this article as a conference paper I need to take an airplane and a taxi. The pilot and the cab driver who carry me to my destination do not operate in the flexible time of information technology; they work according to rigorously spatialized time, no differently than a coachman on his *fiacre* in the nineteenth century.

Many books are being published today trying to reassure us that books will not go away. They will not, but the same fate of vinyl records may be in store for them. CDs replaced vinyl in the 1980s. The year 2003 was the peak of CDs sales all over the world. It looked like the new medium (made of plastic, and therefore much more pollutant than the biodegradable vinyl) was invincible. Few years after, the Mp3 file (whose first commercial release was in 1994) put an end to CD's rule. Recently, vinyl records have come back in style as a sophisticated alternative to the anonymity of Cd's and the inferior quality of Mp3 files. Overall, the vinyl market is only a few percentage points of the global music market, but it is growing (2013-2014 saw a sharp increase in sales) and it has saved the day for several small independent record shops. Today, a selection of elegant and expensive vinyl records are on display in every respectable media store. From cliché to archetype, indeed. Will it be the same with books? Is the new amazon.com bookstore in Seattle a sign pointing toward that direction? In Houston, where I live, there are now half the bookstores that there were ten years ago, but the second-hand bookstores do not seem to have suffered from the crisis that has affected the major bookstore chains. A used book still preserves use value. A used tablet has no value at all, and there is no such thing as a «signed by the author» epub or mobi file. If tablets take over, all future books will have to operate the same transition that vinyl records went through, from crummy paperback to art objects.

In his 1979 album, *Lodger*, David Bowie sang, «I am a dj, I am what I play». Now that the majority of radio stations that used to employ deejays are computer-sequenced, the mantle of deejay has been passed on to «humanities

professors» who spin reference after reference to Western and World cultures that their seraphic students find mildly interesting, yet rarely relevant to who they are and who they want to be. The fact is, in the era of social media nobody needs a teacher, you only need signposts to tell you «over here» and «over there» at the crossroads of the cultural maze. The digital media have made us self-sufficient, or so we believe. Who wants to be *taught* when the world is a digit away? If you are in hell with no GPS, mayhaps you will need Virgil's help. But if you live in the paradise of information you do not need Beatrice unless she is a Facebook friend. I have «designed» more courses than I can remember in my tenure at the University of Houston, but I do not feel like a «designer of learning» when I am in the classroom. Strictly speaking, I am not teaching; I am deejaying. When I teach Dante, I play Dante to my students. When I teach Fellini, Nietzsche, Wong-kar Wai, or the latest trend in critical theory, I play whatever remix is on my turntable. I am good at cutting-up, mashing-up, scratching, sampling, and sequencing. I set the pitch control. I am the master of crossfading C. G. Jung's account of his trip to Kenya into Peter Gabriel's «The Rhythm of the Heat». I can toast, rap, and MC over Mozart's *Don Giovanni* and James Whale's *Bride of Frankenstein* like a Caribbean griot. My students, by the way, are not ecstatic consumers. They never lose their cool. As «users of forms» (the next step after consumers), they look at me as the «subject supposed to know». I am supposed to know more than they are supposed to learn.

It is not their fault. In fact, there is no fault at all. The very structure of their institution puts them in the position of turning the classroom into a quiet afternoon club. I am supposed to know the music. They are there to do the dance. I can see the little dancing that goes on in their mind every time I play a particularly successful sequence. It may disappear the moment they leave the classroom, it may stay for a while, or it may come back to haunt them twenty years from now. No teacher ever knows that. Yet there was a time when teachers, supposedly, knew who they were and why they were in the classroom. Me? I am shaped by my internalized exteriority. Content providers are still in the business of interior design. *Exterior decorators* are now in demand, who design and furnish our externality. We do not need teachers of the soul; we want personal gadget counselors like the affluent buyers on Rodeo Drive who hire personal shoppers. After years of deejaying, the only thing I know is that I do not know anything anymore, I am what I play and nothing else is left of me. I am my syllabi, my textbooks, and my playlists, hoping that when I am dead and gone my «awesome mixes» will look as good as a stack of old 78 Rpm of Delta blues, found in an attic and quickly turned into readymade archetypes.

Yet, I cannot deny that I am having fun. I *like* being a culture dj. My guilty pleasure is that I like it more than I like teaching. For sure, I feel more attuned to my age, to the contemporary art-and-entertainment environment in which post-production carries more weight than production itself. In the words of Nicolas Bourriaud, former director of the École Nationale Supérieure des Beaux Arts in Paris,

DJ culture denies the binary opposition between the proposal of the *transmitter* and the participation of the *receiver* at the heart of many debates on modern art. The work of the DJ consists in conceiving linkag-

es through which the works flow into each other, representing at once a product, a tool, and a medium. The producer is only a *transmitter* for the following producer, and each artist from now on evolves in a network of contiguous forms that dovetail endlessly. The product may serve to make work, the work may once again become an object: a rotation is established, determined by the use that one makes of forms¹⁵.

But the powers to be are not happy that we are having so much fun. In 1979, the character in David Bowie's song could still be proud of being a dj. A few years later, as I said, major media corporations acquired a large number of radio frequencies and turned radio stations into computerized sequences of songs. Professional radio djs are now as a vanishing breed as humanities professors, only even more so. The appropriate sequel to David Bowie's hymn to deejaying is therefore Tom Petty's dirge, «The Last DJ», the leading track from his 2002 eponymous album. Ostensibly, the song is about a real-life dj in Jacksonville, Florida, who became so frustrated with his inability to play what he wanted that he moved to Mexico to get his freedom back («And there goes the last dj who plays what he wants to play and says what he wants to say»). Several stations then owned by Clear Channel Communications (now called iHeart Communications) banned the song for being «anti-radio». There may be a time in the future when teachers are banned from campuses for being anti-school. It won't matter. There will always be some underground club where we will bring our turntables and our light effects. And we will have fun.

4. Against All Odds, a Teaching Philosophy for the Third Millennium

I have no intention to end this piece of writing on a sarcastic note of cheerful desperation. Titles are promises, and I have made the promise to introduce «knowledge design» as a discipline, or a set of guidelines we educators definitely need. I propose therefore a three-legged stool that will loosely articulate the concept of knowledge design according to the three-part subdivision of classic rhetoric.

Knowledge Creation is, loosely speaking, the equivalent of rhetoric's *invention*, the area where the instructor supervises the creation of knowledge. In the current post-canonical and post Western-centered cultural landscape, narratives are technologies and theories are cognitive maps. In a world where global is the new local, the opposite is also true. The challenge is to inhabit a non-linear learning environment that constantly «de-territorializes» the teacher and the students, uprooting them both from their comfort zone every time the course components meet a cultural bias. An appreciation of non-linear learning models is the only way the humanities can be innovative and not only survive, but also thrive. Knowledge is being created, right now, in the gaps between the ruins of the past and the tyranny of the present.

Knowledge Design is how knowledge «looks like», how educators make it appear in the eye of the beholders. It is much more than packaging, and light-

¹⁵ N. Bourriaud, *Postproduction/Culture as a Screenplay: How Art Reprograms the World*, Lukas & Sternberg, New York 2002, p. 40.

years away from repackaging. It is the equivalent of ancient *disposition*. When knowledge moves from one support to the next, it changes content, and often dramatically so. An innovative humanities program must be based on the awareness that, as much as the fastest support replaces the slower one, the fastest cultural paradigm (the one that delivers its package faster than any other) will, as a rule, prevail. The cultural change in 5th century B.C. Greece (when Homer's poems were written down and alphabetic writing replaced orality) is being re-enacted today and every time the digitization of culture both saves the past and disposes of it. Academia cannot stop this movement, nor must it lament what is lost in the flood. On the contrary, it can provide the tools to guide us through it. To quote an example that was dear to McLuhan, E. A. Poe's sailor survived the Maelstrom by being able to observe carefully how it functioned instead of panicking. He noticed that the lighter objects were pushed up to the outer limit instead of being plunged down into obliviousness. In a similar fashion, humanities and the arts have the task to carry the existing cultural legacy into the future—on a smaller boat, if necessary, as long as it is fast and sleek enough to climb over the edge of the vortex.

Knowledge Management is the equivalent of rhetoric's *elocution*. The analogy is not as obvious as the analogical traits connecting creation and invention, design and disposition. Management and Eloquence seem to be on opposite sides, and I do not intend to reduce Management to Persuasion. This is my point instead: today's unquestioned assumption is that hard sciences and social sciences teach skills while the humanities teach content, which is supposed to be non-binding, and definitely less practical than a skill. Yet critical thinking and good writing, those old warhorses, are skills too. So are «soft skills» such as the art of discussion, of winning an argument without being condescending to your opponent, and of losing an argument without feeling resentful. Soft skills are, to cut it short, all the skills you do not learn by simply crunching numbers and comparing charts. Unless we want to be run by the computers we ourselves have designed (which is the not-so-secret desire of people who are afraid of human decisions), soft skills are essential to the education of future managers in every field, and the basics of knowledge management are, in a nutshell, the essentials of education pure and simple. Here is where a strong point must be made, namely, that the humanities are not a necessity; they are a *privilege*. Such privilege (embedded in the Greek term, *scholé*, and the Latin equivalent, *otium*, both meaning 'leisure') has always been restricted to the scions of the upper classes. Only in the last century, as it were, the privilege of leisure education was extended to the less-advantaged classes. In every ideological cry against the humanities' lack of practical use one can hear the attempt to take away –again!– a hard-won victory from the hands of the working class— which, apparently, has to be productive 24 hours a day and whose leisure time cannot move beyond plebeian entertainment. Knowledge management is the art to redress *the right to democratic leisure*—as well as the art to navigate the narrow straits of cultural relevance in our performance-obsessed world. Everything that once was «hot»—a hot topic, a hot issue—eventually becomes «cool». Knowledge management comes down to teaching content as a «cool» skill that students will eventually make «hot» again.

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