Reflections   # Three Essays and an Introduction

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On the Word *Design:* An Etymological Essay
Vilém Flusser

In the English language, the word "design" is both a noun and a verb, a situation that is particularly characteristic of that language. As a noun, it can mean, a "purpose," "plan," "intention," "goal," "malicious intent," "plot," "form," or "fundamental structure." These and other definitions are related to "cunning" and "craftiness." As a verb, "to design" means, among other things, "to concoct something," "to feign or simulate," "to draft," "to sketch," "to shape," or "to proceed strategically." The word is derived from the Latin word "signum" ["sign" in English and "Zeichen" in German]. "Signum" and "Zeichen" have the same ancient root. So, etymologically, "design" means to "draw a sign." The question is how did the word "design" receive its contemporary international meaning? This question isn't posed historically, since it can be determined in historical texts when and where the current meaning originated. Rather, the question is one of semantics, namely why this word came to have the meaning that it has in the title of this journal.

The word fits into a context involving cunning and craftiness. A designer is someone who is artful or wily, a plotter setting traps. Other very significant words fit into this same context, especially the words "mechanics" and "machine." The Greek "mechos" indicates a device meant to aid in deception—the Trojan Horse being a good example of this. Ulysses is called "polymechanikos," which is translated as "full of stratagems." The word "mechos" is derived from the ancient root "magh," which we can recognize in the German words "macht" [power] and "mögen" [will; desire].

Accordingly, a machine is a device for trickery. For example, the lever tricks gravity. "Mechanics" is the strategy to manipulate heavy bodies. Another word fitting into this context is "technique." The Greek "techne" means "art" and is related to "tekton," which means "cabinetmaker or joiner." The underlying concept here is that wood (in Greek "hyle") is an unshaped material that the technician shapes and thus causes form to become visible. Plato's fundamental objection to art and technique is that the theoretically intuited forms (ideas) are betrayed and distorted when they are embodied in matter. Artists and technicians are, for him, betrayers of the ideas and thus traitors because they artfully seduce mankind into contemplating distorted ideas.

The Latin equivalent of the Greek "techne" is "ars," which actually means "twist," as is still the case in German thieves' jargon. The diminutive of "ars" is "articulum"—"a little art,"—and refers to something twisting around something else; a wristjoint, for instance. Thus, "ars" points towards "flexibility" or "maneuverability," and "artifex" (artist) especially points toward "swindler or cheat." The true artist is the juggler or conjurer. That can be seen in such words as artifice, artificial, and especially in artillery. In German, an artist [Künstler] is a knower [Könner], since "Kunst" [art] is the noun from the verb können [to know], but artifice also is involved here.

Only these reflections can clarify how the word "design" can be used in all of the contexts in which it is found in contemporary discourse. The words "design," "machine," "technique," "ars," and "art" have a very close relationship to one another: one concept is unthinkable without the others, and they all arise from the same existential view of the world. This inner connection, nonetheless, has been denied for ages, at least since the Renaissance. Modern, bourgeois society rigidly separated the world of the arts from that of technology and of machines, and, in that way, culture was broken into two branches that were alienated from each other—the scientific, quantifiable "hard" and the aesthetic, qualitative "soft." This ruinous division began to be called into question around the end of the nineteenth century. The word "design" leaped into the breach and provided a bridge. It was able to do this because of the internal relationship between technique and art in the word and concept, itself. In this way, "design" currently indicates just about any situation in which art and technique (including evaluative and scientific thought) combine forces to smooth the way to a new culture.

That is a good but insufficient explanation. For what unites the concepts presented above is the fact that they all mean trickery and craftiness, among other things. The better culture, for which "design" should smooth the way, will be a culture that is consciously aware that it is treacherous. The question is whom and what do we betray when we involve ourselves in this culture—with art and technique, in short, design? The lever, a simple machine, is a good example. Its design mimics that of the human arm, but is an

artificial arm. Its technique is probably as old as the species. This machine, this design, this art, and this technique outsmarts gravity in craftily manipulating a law of nature to dupe a law of nature, thus freeing us from our natural condition. We can raise ourselves to the stars despite the mass of our bodies, thanks to the lever. Given a fulcrum, we could use a lever to tear the whole world off its moorings. That is the design that underlies all of our culture—to trick nature thanks to technique, to overcome the natural through the artificial; and to build machines, with ourselves as gods in the machine. In short, design lies behind all culture that craftily makes naturally conditioned mammals into free artists.

Isn't that a glorious explanation? The word "design" has won its current place in everyday discourse because we are beginning to be aware that being human is a design against nature. Unfortunately, this explanation still isn't good enough. If "design" is becoming the center of our interest, and if the question of design is taking the place of the question of the idea, then the ground is beginning to shift under our feet. For example, plastic pens are getting cheaper. The material is practically worthless, and the labor (according to Marx, the source of all value) will be carried out by fully automated machines, thanks to ingenious technology. The only thing that gives the plastic pen its value is its design, which enables us to write with it. This design is a coincidence of splendid ideas arising from science, art and business, which, overlapping creatively, have been mutually effective. And yet it is a design that we pay no attention to, so that pens are apt to be valued lowly—objects to carry advertising, for instance. The splendid ideas behind pens are scorned, as are the materials and the labor that went into making them.

How is this stripping away of all values to be explained? By the fact, thanks to the word "design," that we're beginning to realize that all culture is a deception, that we are deceived deceivers, and that each engagement with culture leads to self-deception. It is logical that, after overcoming the split between art and technique, a new horizon will open up, in which we can perfectly "design," freeing ourselves still further from our human condition, and living artistically (beautifully) evermore. But there is a price to pay, and it is the renunciation of truth and authenticity. The lever is there to remove all truth and authenticity from existence, and to replace it with the perfected, "designed" artwork. And therefore, all artwork becomes as valuable as plastic pens—throwaway gadgets. So it turns out at the end, when we die. For, in spite of all technological and artistic strategies (in spite of hospital architecture and deathbed design), we do die, as all mammals die. The word "design" has won its current central place in common discourse because we (seemingly correctly) are beginning to lose faith in art and technology as the source of values, and because we are beginning to look behind the word and concept of design.

That is a sobering explanation. But it is not final, either. Here a confession is required. This essay pursues a very specific goal: to bring to light the crafty and insidious aspects of the word "design." I did this because these aspects normally are never mentioned. If I were dealing with other aspects of design, I would have spoken of "design" in connection with signs, indications, patterns, and sketches; which perhaps offer another, equally plausible explanation for the word design's current standing. So it's all one—everything comes down to design.

The Designer's Glance
Vilém Flusser

There's a verse in Johann Scheffler's (aka Angelus Silesius) *Cherubinischen Wandersmann* [Angelic Wanderer] that I cite from memory: "The soul has two eyes: One looks into time, the other looks away, upwards into eternity." (Anyone who wants a precise translation may look it up and correct the citation.) Since the invention of the telescope and the microscope, the first eye has benefited from a number of technological improvements. Today, we can achieve a broader, deeper, more exact glimpse into time than Angelus Silesius ever envisioned. Recently, we've been able to draw all time together into a single instant and to see it all simultaneously on the television screen. As far as the second eye is concerned; the eye that looks into eternity; the first steps toward improving its glance have only been undertaken in the past few years. This essay will examine these developments.

The ability to see beyond time into eternity and to represent what is seen there has been explored for at least five thousand years. People stood on the hills of Mesopotamia, looking downstream, predicting floods and droughts. They drew lines in the clay, marking future sites for digging canals. At that time, these people were seen as prophets, but today we would call them designers. This difference in the estimation of "the soul's second eye" is pregnant with meaning. The ancient Mesopotamians (and most people today) thought that they were looking into the future. If people dug an irrigation canal, they did it because they could foresee the future course of bodies of water. Since the Greek philosophers, however, our more or less educated people hold that such activities predict, not the future, but eternity. Not the future course of the Euphrates, but rather the form of all paths taken by bodies having mass in a gravitational field: eternal forms. Contemporary educated people do not, however, have exactly the same opinion as the Greek philosophers.

Taking Plato, for whom the glance of the soul's second eye was called "Theory," as an example; we look beyond the fleeting

appearances to eternal, inalterable forms ("ideas") as they exist in heaven. But in Mesopotamia, things were managed this way—some people had glimpsed at theoretical forms behind the Euphrates and had drawn them, thus producing the first theoretical geometry. The forms they discovered; the triangle, for example; are "true forms" (the Greek for "truth" and "discovery" is the same word, "ale-theia"). But as they plotted the triangle with clay bricks, they drafted incorrectly. For example, the sum of the angles of a drawn triangle is not exactly 180 degrees, although it is for a theoretical triangle. The geometricians made errors in trying to carry theory over into practice. That is the reason that no system of canals (or of rocket flight) functions with absolute accuracy.

Today, we see things somewhat differently. We no longer believe that we discovered the triangle, but rather that we invented it. The ancient Mesopotamians rigged up structures such as triangles to control the flow of the Euphrates somehow or other. Then they based other ready-made structures on these so that, eventually, the river flowed into the channels. Galileo didn't discover the formula for free-falling bodies, but invented it; he tried out one formula after another until one fit the behavior of falling objects. Thus, theoretical geometry (and theoretical mechanics) is a design underlying physical appearances so that they fit our conceptions more firmly. That sounds more reasonable than the Platonic belief in heavenly ideas, but it is actually extraordinarily uncongenial.

If the so-called laws of nature are actually our invention, then why do the courses of the Euphrates and of rockets follow exactly these forms and formulas, and not others? Is whether the sun revolves around the earth or the earth around the sun just a design question? Is how a stone falls also a design question? In other words, if we no longer hold to the Platonic belief that the designer must theoretically discover the appearances in heaven, but rather that we, ourselves, design the appearances; why then do the appearances look the way they do instead of the way we want them to? Obviously, the discomfort described above can't be cleared up.

There is no doubt, however, that the forms; whether discovered or invented, and whether created by a heavenly or human designer; are eternal, that is, beyond space and time. The sum of the angles of a theoretical triangle is always and everywhere 180 degrees, whether we discovered it in heaven or invented it at the drawingboard. And if we warp the drawingboard and design non-Euclidean triangles whose angles have different sums, then such triangles also would be eternal. The designer's glance, the human as well as the divine, is certainly that of the soul's second eye. This gives rise to the following question: What does eternity really look like? Something like a triangle (as by the Euphrates) or like an equation (as with the falling stone), or something else altogether? The answer: whatever it looks like, it always can be reduced to an equation, thanks to analytical geometry.

The mechanization of the soul's second eye starts here. You can formulate all the eternal forms, and all the inalterable ideas as equations, transfer these equations into numerical codes, and feed them into the computer. For its part, the computer can transform these algorithms into lines, planes and, eventually, volumes on the screen, and even into flashing holograms. It can produce "numerically generated" synthetic images from these data. You can see there on the screen with the soul's first eye exactly what the soul's second eye wishes you to see. Eternal, inalterable forms appear on the computer screen; the triangle, for example; which are produced from eternally inalterable formulas, such as 1+1=2. Oddly enough, you can alter these inalterable forms: you can distort the triangle, twist it, shrink it, and enlarge it. And everything arising from this is equally an eternal, inalterable form. The soul's second eye is still looking into eternity, but now it can manipulate eternity. That is the designer's glance; he has a mystic third eye in the middle of his forehead (a computer), with which he sees and works with eternity. Then he can order a robot to transfer this seen and manipulated eternity into time, for instance, to dig canals or build rockets. In Mesopotamia, they called him a prophet. He more fittingly deserved the name of a god. Now he is unaware of this, thank heaven, and considers himself a technician or an artist. God keep him in this belief.

On Forms and Formulas
Vilém Flusser

The Eternal One (praised be His name) formed the world from chaos; from total confusion. Neurophysiologists (who shall remain nameless) claim to have the truth about Him, and now every self-respecting designer tries to imitate and even improve upon Him.

It's like this—for a long time, people thought that the forms, which God the Creator had filled with meaning, were hidden behind the material world and could be discovered. For instance, the Lord of Creation had created the form of the heavens, and had separated them from chaos on the first day. Thus, the heavens come into being. People such as Pythagoreans and Ptolemy discovered these divine forms behind the appearances, and recorded them as rings and epicycles: this was research—discovering the divine Forms behind the appearances.

Since the Renaissance, something startling and hard to stomach was found: while the heavens can indeed be formulated and formalized with Ptolemaic rings and epicycles, Copernican circles and Keplerian ellipses fit even better.

So what is the genuine situation? Did God the Creator on the first day employ rings, epicycles, or ellipses? Or was there no Lord God at all, but just the lordly astronomers who established these forms? Are the forms human rather than divine? Are they not eternally fixed beyond time, but plastic and malleable in the here and now? Are they not forms and ideas at all, but rather formulas and models? What is hard to accept here is not the removal of God and His replacement with designers as shapers of the world, but that the heavens (and all natural aspects) no longer can be formalized at will, as they can be if regarded as descending literally from the throne of God. Why do the planets follow either circular, or elliptical orbits, rather than quadratic or triangular orbits? Why is it that we can formulate the laws of nature repeatedly but not arbitrarily? Is there something out there that "swallows" some of our formulas but balks at others, and spits them back into our faces? Is there a "reality" out there, about which we can have some knowledge and make formulations, but which, nonetheless, requires a certain fit or accommodation from us?

The question is hard to answer since one cannot be designer and creator of the world and, at the same time, subject to the world. Fortunately, (not to say "Thank God!") we recently have found a solution for this aporia [difficulty in establishing truth in logic due to contradictory evidence]; a solution constantly turning in on itself like a Mobius strip. It is that our central nervous system—CNS—receives digitally coded impulses from its environment, which, obviously, includes our bodies. The system processes these impulses by way of a not entirely understood electromagnetic, chemical method into perceptions, feelings, desires, and thoughts. We perceive the world, experience it, and desire it as the CNS has processed it; and this process is programmed in advance by the CNS. It is the system that is inscribed in our genetic codes, manifested by the world since the beginning of life on earth. That is the reason why we cannot express the laws of nature through arbitrary forms. The world assumes only those forms which correspond to our genetic programs.

We have outwitted this genetic program in a variety of ways. We've invented methods and gadgets that achieve results similar to the nervous system, but in different ways. We can compute the impulses (atomic particles) coming in from all directions differently than the CNS does. We can engender other, alternative perceptions, feelings, desires, and thoughts. In addition to the world as perceived thanks to the CNS, we can also live in other worlds. We can exist [*dasein* or "be there"] repeatedly, and the word "there" can have many meanings. What I've just said is certainly hideous, even monstrous; but there are mollifying names for it: cyberspace and virtual reality are such extenuations. They point toward the following recipes:

Take a form, any form, some numeric algorithm. Feed this form into a computer. Fill up this visible form with as many atomic particles as possible, and there you have it: worlds are created! Each such world is just as "real" as that perceived through the CNS (that is, ours) insofar as it succeeds in filling out the forms as densely as does the CNS. This is a fine witches' brew; we concoct worlds in arbitrary forms and do at least as good a job as the Creator did in the famous six days. We're the warlocks, the designers; and that allows us, since we've outdone God, to make a clean sweep of our worktables (and of Kant's philosophical concerns, as well) concerning the question of reality. Reality is that which is properly, efficiently and scientifically computed into the forms; and the unreal (the dreamlike, the illusory) is that which is shoddily computed. For instance, the dream image of a beloved woman isn't truly real because we've done only shoddy work in our dreams. If we turn the project over to a designer, who shapes it as a holograph, then we are given a real image of the beloved woman and not just a shoddy dream. So it seems.

We've found out the secrets of the Everlasting (praised be His name), have filched his recipes, and have turned out to be better cooks. Is this really a new story? How was it with Prometheus and his stolen fire? Do we only think that we are sitting in front of our computers when we are really being nailed to the side of the Caucasus Mountains? Is some bird perhaps already sharpening its beak to start pecking at our livers?

Afterword
Fabian Wurm

Everyday life gave him his material. Vilém Flusser, the philosopher and artist of combinations and transformations, loved to direct his thought toward the incidental, on that which directly struck his eyes and ears or directly touched his body. Thus, he pondered the cut of trousers or umbrella handles. Telephones, typewriters, cameras and pots gave him the opportunity to make leaps between the future and the past with the help of his universal culture. Common everyday objects—but now we see them in a new light.

Objects move with starts; nothing remains in its assigned place. Flusser displays bewildering connections—strange metamorphoses. He can develop complex theories, cutting across all scientific disciplines, out of seemingly banal things. This caught the attention of his increasingly startled public. He wanted to highlight a net of new conditions with his phenomenology of the everyday, to demonstrate unsuspected connections.

Permutation was a principle for him. The things on which he deliberated became ever more independent of the intentions of those who constructed them. Not only was the computer a characteristic creation for him: "Who would ever have anticipated that the invention of the steam boiler would lead to the opening of the North American West by way of the locomotive, and would make the Pacific Ocean accessible to Western civilization?" And who, taking a razor into his hand, thinks about lawnmowers? "Barbers' tools are miniature versions of the gardener's tools, and their gestures can be compared to gardeners'," Flusser explained with playful seriousness.

Permutation as a principle: "Gardeners, city planners and ecologists are cosmeticians. They don't want a being-in-the-world for human beings, but rather a "cosmetic" existence; an aesthetic existence in the bad sense of the word. They are hairdressers." He regards the professional image of designers differently: he doesn't conceive of them as cosmeticians or as stylists. According to Flusser, the designer potentially makes plans not just with single objects, but with *relations*. The discipline offers virtually ideal predispositions for this. Design is the "coincidence of splendid ideas" from science, art and economics. It seems to effortlessly combine disparate elements into a new web of relations.

That had to interest Flusser. He took part in the design debate of the late 1980s, gave lectures, and pounded out notes and commentaries on his old typewriter—communications on the condition of things. With bewildering certainty, he felt the contradictions and named taboos. The war, Vilém Flusser wrote, made clear the condition of design when everlasting peace reigned. Obviously, extremely poor.

The Gulf War was in full swing then. A cynical comment? A macabre game? "It could be," qualified the assumed controversialist, "that war isn't the only source of good design," since, in the final analysis, one can't ignore fashion and gender. But armed conflict is definitely an essential driving force for all design. Even that wasn't enough—"There are people," Flusser continued, "who are against the war. They are very reluctant to kill with rockets even though, when questioned, they are unable to say what sort of death they prefer. Such people are prepared, in the interest of peace, to accept poor design! These good people are concerned with no other good than existence pure and simple. They are anti-designers."

That was bad—very wicked—provocative.

"Saying 'Make love not war' is never in the interest of good design," for "whoever decides to become a designer has decided against pure goodness. Disguise this as he may, such as by refusing to design bombs and limiting himself to designing dove peace symbols."

How easily such words can be misconstrued. Flusser wasn't going in for confessions—either for or against the war. Bulletins, pronounced self-legitimations and unshakeable positions were not his style. He wanted conflict—with a clear way out. And he often hit the bulls-eye. The everyday high-mindedness that his commentary attacked was a delicate theme—absurd as it may seem, especially for design. "One must decide," Flusser summed up, "to be either a saint or a designer." German designers often fooled themselves about their political involvement. In reality, their moral reactions were superficial and remained rooted in ideology.

Flusser certainly was political. A *public man*, a man of the periodicals. In Brazil, where he was the director of a transformer factory and, later, professor of communications philosophy; he wrote for various organs, cultural as well as the daily news, in the 1960s and '70s. His observations on the gestures and rhythms of subtropical lands, a girl's walk, a scamp's ambling gait, or the clacking of a typewriter were encompassed in short prose pieces that oscillated between journalism and philosophy. The form of notes and essays allowed him constantly to change perspectives and to yoke together seemingly disjointed points. He practiced the diagnosis of his times as an experiment. He also provided copy for European publications: the *Frankfurter Allgemeine Zeitung* published his phenomenological observations on everyday life in Brazil—for a while, at least. This collaboration ended abruptly in 1972, when Flusser took on German culture in a note on beef broth in which he said that "soups also are products of culture, from which one may make inferences about culture." That essay was just too much for many sourpusses.

In Brazil, Flusser was a star columnist. The *Folha de São Paulo*, one of the largest daily newspapers in the country, gave him his own column, "Posto Zero" ("Observation Point Zero") was its daily heading. During the dictatorship, he had to camouflage his observations, as remarks on traffic regulations, for instance. Thus, he asked his reading public why it was virtually impossible to go from the São Paulo suburb Freedom to the district Paradise. He wasn't shy of an answer—on those streets, one is not allowed to turn—left. That seemed innocuous enough. Camouflage. Permutation yet again. But the military got the message. In 1971 Flusser left the country on a Dutch freighter: "A plane ticket would have been too obvious."

A difficult farewell, for Brazil had seemed to Flusser the model of a potentially better society in which to find shelter, "A land in which the white world and the rest of mankind meet on many levels; a place in which every writer fumbles around in the language." For a thinker given to abrupt changes, a communications theoretician who wanted to transcend the concepts and

knowledge of various disciplines, who had mastered five languages perfectly; it was a challenge. The opportunity of a lifetime. Flusser was a translator in the literal sense of the word. For the greater part of his life he had been engaged, Flusser wrote a year before his death, "in a Brazilian culture assembled of Western, Levantine, African, Aboriginal, and Far Eastern elements."

In 1940, Flusser, who was born in 1920 in Prague, fled to South America by way of London. He had begun to study philosophy at the Karls Universität, and was able to continue his studies at the University of São Paulo. His father had been beaten to death by the Nazis at Buchenwald, and his mother and sister were killed at Auschwitz. Any return to Europe for Flusser was excluded for a long time. "How can you go on living in a culture," he asked, "after it has shown what it is capable of?"

And yet, in seclusion in Provence in the south of France; this "anti-Brazil" to which he moved in 1974; Flusser sought answers and alternatives, and became one of the contentious philosophers of our time. He saw a new world of electronic machines that think, due to telematic advances. Computer technology put paid to mismanaged and exhausted European humanism and its written culture with its linear historical thought. This was the thesis of a man who knew what stood to be lost; one who, hardly incidentally, declined to exchange his manual typewriter, from just after the war, for a word processor. Flusser, however, was no backward-looking cultural critic—melancholy was far from his style.

He saw a bit of cultural revolution in the computer. According to Flusser, the machines finally made possible "the politization of the word 'Polis' in a new sense," a huge network in which everyone could participate. The decentralization of power would come appreciably nearer in this way. The discourse of everyone with everyone could begin.

Flusser pointed the way, with great publicity, in a bold experiment in 1987. His book, *Das Schrift* [Writing], about the end of the alphanumeric code, is available on a computer diskette, accompanied by an invitation to the user to change the text, "to rewrite," and continue it. Flusser wished to open a new dimension of communications with this "first true no-longer-book"—the reader could enter into a dialog with Flusser as recipient, critic and author simultaneously.

The telematic society, the large conglomeration, contained a series of possibilities; an almost endless number of projects. This great enterprise was no naive Utopia for Flusser, but a possibility. Not least of all, part of design. He recognized the dangers, of course: "the cables could be structured as unconnected bundles rather than an intertwining network; 'fascistic' rather than 'dialogic.'" It is up to the designers to provide for the molecular bonding of reversible cables. Flusser was confidant that designers were "made for" such a task. Certainly, Flusser had an emphatic concept of design. In his

very last article, published in *Design Report*, he saw designers as creators of worlds and planners of virtual cultures. He was, therefore, sometimes angry when he noticed that designers didn't recognize this challenge.

Critics have accused him of trying to arouse and stimulate the *goût de provocation* ["taste for provocation"] with his audacious theories. Flusser knew this and reacted with a superior attitude: "I want to awaken doubt. Everything that I say sounds like a philosophical thesis, but like one that is not too well supported. That's because people never detect the irony behind the statements. I don't take myself completely seriously, and I also don't take the problems completely seriously. I intend to provoke, in the true sense of the word—to call forth." Thus, in the dialectical play of provocations and evocations, speculative theory and daily banality, there emerged Flusser's reflections on the condition of things—and on the art of design, whose status quo constantly shifts anew.