

# INTRODUCTION —DOMESTICATING SYMBOLS VERA BÜHLMANN, LUDGER HOVESTADT

Pursuant to the first colloquy, about “printed physics,” the second one takes off from the rather clinical observation that the substrate on which today’s data-processing machines operate has changed, not only quantitatively but also qualitatively, since we have learned how to deal technically with energy in electrical form; information-technological media and apparatuses no longer operate primarily based on the substrate of physical forces and their mechanical principles. Rather, their effectiveness deploys on a quasi-immaterial bed made of probabilistic signal horizons of symbolic codings, through which the erstwhile physical substrate is now formally getting rendered, as “data” in the sense of “informational constellation.” In this regard, it is important to stress that information technology today is no longer simply confined to elaborately controlling and investigating processes that may already be accessed through mechanical apparatus. Indeed, a movement is underway toward learning how to grant the energetic constitution of our world an own right, and form of address, amid its mechanical constraints. This form of right and this form of address ought to take into account that for the first time, photovoltaics succeeds in harvesting energy in electrical form *straight* from sunlight, and, to boot, completely without recourse to any of the ever-dwindling tangible energy resources that our planet (still) holds in store.

Let us therefore abandon closed inter-process relationships of physical forces and power as a basic reference frame for the symbolic substrate of today’s information technology—let’s do so at least hypothetically and for the length of this colloquy. *Information is not matter nor energy*, as Norbert Wiener put it more than half a century ago, although it is very likely that nothing further than transformation of energy-consuming appliances was yet foreseeable to him in terms of information technology. No later than with the latest such transformation, however, of

harnessing infrastructures to IT-related energy production and distribution, new, application-oriented, pragmatical questions are popping up about what is calculable.

#### POPULATION DYNAMICS: FROM QUANTITIES TO QUALITIES

Whereas the “symbols” handled by information technology are first taken in their formal-mathematical significance, i.e. no differently from the functional-equation systems of mechanical technics, the question of an adequate referential framework is arising with increasing intensity: of how to assess the capabilities and proficiencies that are acquirable in the potential-related spaces that are opening up pursuant to these information-technological transformations. Because symbolic coding allows the behavior of mechanical relations of forces *indeed also* to be rendered and controlled. But at the same time, other effects-relationships, especially genuinely social interrelations, can be symbolically represented and medially organized. Complete business models, of firms such as SAP or IBM, are based on it. Yet, a strictly formal-mathematical acceptance of said “symbols” suggests an approach to information technology that treats it as a continuation of mechanical technics—now however made analytically accessible, and therefore more powerful by magnitudes in relation to the possibilities, seemingly optimizable and automatizable, to be operationalized through the algebraic symbols. From this application-oriented angle one might, perhaps a tad provocatively, declare the computer, taken as a *universal Turing machine*, to be nothing more than just a geometrical machine, precisely because of the analytical notation standards, and at once in spite of them.

The Metalithikum colloquies start from the premise that the behavior of processes media-ized by a form of technics, the processing unit of which is information, may not adequately be described through the physical-mechanics referential framework that is traditional to our understanding of technics. With the fantastic-programmatic term “metalithicum” we are reaching out for an abstraction to it. This neologism seeks to apprehend the before-said qualitative change of our relationship with *stones* and their geo-index, *meta-* standing for abstraction and *-lithicum* pointing to the various eras of the so-called *stone* age, in particular the *Neolithic* age that denotes the Neolithic revolution and the incipient settled way of life: domestication of nature. Because subjacent to the incipient *operable availability* of our gradually acquired techniques of symbolizing and operationalizing the relations, the interplay of which makes up our world, there changes, along with the technical substratum, likewise the substrate of our existence. This substrate reveals itself today as some sort of “symbolized physics,” to which we can refer for the moment as *media-ized nature*—more for want of a better term than out of conviction.

The first *printed-physics* colloquy examined the technical-functional principles of current information technology *indirectly* and *projectively*, through studying the conditions of their production-related (re-)productibility and the resulting economic availability. For illustrative purposes, we suggested a similarity between the “print revolution” currently taking place in the production of information technology, and the situation surrounding the introduction of letterpress printing at the beginning of the modern age. Just as the then development contributed—in a manner probably unimaginable to Gutenberg’s contemporaries—to popularizing, and thereby secularizing, the so-far largely monastically administered knowledge of that time, we suspect, in function of the presently ongoing mutations, the advent of similarly momentous consequences. In this context, it is important to remember that the current “print revolution” is, as already emphasized in early reflections, e.g. by Marshall McLuhan, first of all concerned with the availability of *documents*, i.e. of representing products such as books, periodicals, newsletters or e-mails, as well as radio and TV programs. To be sure, on that level, too, drastic changes are underway. Much more fundamental appears, however, the said development where it concerns production of the appliances themselves that are operating on the physical level: from processors, storage media, aerials, amplifiers, LEDs in screens, lights, etc., up to photovoltaics: all of them functioning machines that are produced in the shape of printed foils, on an industrial scale, and for quite some time now.

At least since the modern era, energy processes pass as universally describable regarding their principles, but *locally situated* as to their occurrences, and in this very respect as geo-metrically *grounded*. The mechanical principles of dealing with fire, e.g., or wind, water, or stone, therefore seem “natural” to us, even where their processes are susceptible of being set off by mechanical apparatuses, engines, or even seemingly self-driven automata, and in this sense of being *caused*; nevertheless, they remain largely reliant upon the channeling and conducting of physical forces by means of cultural techniques—and in this respect *localized* and *grounded*, too—from the early forms of farming up to the most modern infrastructures of today’s power supply.

As we manage, however, to secure our power through electricity that we harvest straight from the currents of the sun, and make it available by means of information-technological networks, we convert these principles of localization and grounding of mechanical-geometrical cultural techniques into a principle of deterritorialization, such as is characteristic of digitalization in general. While we are familiar with modified accessibility and availability of digitized documents from the Internet, similar accessibility and availability might develop for the digitizing of apparatuses, and indeed for power production.

The second Metalithikum colloquy, this one treating “domesticating symbols,” addresses the question of our dealing with the near-ubiquitous

pervasion of our everyday life by these patches of machine-made, but intellectually symbolized *fabrics of effectiveness*. Those first, merely quantitative dispositions will not fail soon to lead to the appearance of other *qualities*, too. What then, if these developments reach a certain level of saturation across populations, so that they cause new structures to take shape, to the point where we might, dimly, make out the *conditio humana*? We shall attempt to reflect upon the specific potential-related spaces that are presently accessible to us, along with the modified conditions of our speaking of, and dealing with, them.

**CULTIVATION AND DOMESTICIZING STRATEGIES WITHIN THE SYMBOLIC**

Today we are both capable and in the process of generating textures of effectiveness of sorts, in the form of *printed foils*, the *physical-energetical behavior* of which we are able to *code symbolically*. We shall take this circumstance as a sort of model miniature for generating a thought draft of how to comprehend the generic-urban infrastructures from a distance, in their articulable symbolicalness instead of understanding them as a kind of scientific-secular nature.

The decisive turn in all this seems to us to lie in a strange self-referentiality that we experience between the technically formalizable and operationalizable, and a physically understood naturalness, such as taken, at least since the modern age, as the referential plane for algebraic-functionally perceived symbols. It is in such physically understood naturalness (the Cartesian *res extensa*) that we are used to rooting the relations facilitated by algebraic symbols, and into which we are used to placing our apparatuses, machines, engines, etc. Yet the locus proper to the Cartesian *res cogitans*, and especially the interrelation between both, has not ceased to puzzle the thinking of philosophers.

Kant still paraphrased a peculiar effectiveness not immediately derivable from that physical referential plane, as *Geistertreiben*, a ghosts' race. While he was not to argue away the phenomenon of some effectiveness that was not primarily physically motivated and, in this sense, *immaterial*, even if it may unfold its effectivity in material terms, he kept it outside the scope of his concept of reason. This way, positivity gets shifted to center stage of strictly scientific query and development; but its limits clearly come to light today, as this positivity is being externalized and logistically distributed in the by-now dominant electrical-power and information technologies.

The rational-grid-based projection planes applied in functionally *representing* relations of effectiveness, which Kant used as the basis for his reflections about the workings of nature—those planes today actually still provide the framework for all manner of fantastic projections. We call such projecting “fantastic” because such *projectional* space has turned into *topological* space on behalf of associative networks. Upon the technical substrate of “information,” and the global netting that

results, mechanical causality, as an explanatory principle for interrelations between territorial spaces, dissolves, within the logistical setup of the territories, into probabilistics. Such probabilistics not only is no longer referable to any universal measure or metrics, nor does it unfold on any foundation. It is at work outside of any geometrically delineable space. Along with the actuality of probabilistic relations goes a new primacy of operable discreteness before the proportionally conceived continuity of analogue recording and registering. To emphasize this aspect is important because the primacy of the discreet and articulable over the passively recordable also introduces a new power of expression into the formulation of problems—in both senses, mathematical and linguistic formulation. For not every possible solution is equivalent in its mightiness of accommodating complexity to other solutions that are equally possible. It seems we might perhaps best approach this situation by seeing in it the beginnings of a new “alphabetization.” Information science has already for long been speaking of “alphabets of coding,” yet this seems to be largely meant metaphorically. Still, are we not observing a new kind of sophistry, related to simulations and the techniques of imaging (*bildgebende Verfahren*) that are applied in computer-aided diagnostics and forecasting, as well as to techniques of data processing in general? If we take this observation seriously, and consider the birth of philosophy in ancient Greece out of the tension between alphabetization and sophism, we may hypothesize interesting symmetries to our own times. To explore these symmetries, fantastically-projectively, will certainly not hand us any prognosis of what to expect. But it might help to develop a literacy in coding that would be more adequate to the new alphabetization we seem to be experiencing.

**THE CONTENT OF THIS BOOK** All the texts in this book center upon the role of a coding and decoding practice that is capable of putting up such fantastic projection spaces. This practice is necessarily at work in all synthetic construction as well as in analytic deduction and integration—all notions of atoms, elements, characters, letters, numbers, etc., are necessarily symbolic in the form in which we deal with them. Otherwise we could have no systematic and precise concepts and ideas of them. Therefore it isn't by accident that the reflections about domesticating the symbolic converge upon the most fundamental cultural areas: religion, politics, and scientific secularization; space, geometry, and law; spirituality, communication, and learning. The first article, “Mechanical Justice,” by Alexander Niggli and Luis Muskens, reflects upon the relationship between law and logic. “Are dealings with justice mechanizable?” ask the authors. They hold the opinion that today this question urgently needs addressing. Because avoiding to engage in the problematic implications of possible jurisdictional mechanization and its inclusion within a critical framework results inexorably in

opening the door to the quasi-standardizing of verdicts. It is, therefore, a matter of grasping the connection between logic and decisions, and of examining ways for tenable delegation to appropriate infrastructures, exactly in order to successfully avoid creeping, implicit de-facto mechanization. The authors consider an analogy between the Turing test—about computers’ faculty of imitating the process of thinking—and the mechanization of justice to be false, the real question being how to find algorithmic ways by which computers may mimic jurisdiction in sufficiently complex manner, and be trainable to decide certain cases in an acceptable fashion.

The second article, “Toward a Fantastic Genealogy of the Articulate,” by Ludger Hovestadt, argues for understanding programming languages as a genuine and novel paradigm for language comprehension. He suggests to go beyond considering programming languages as merely encoded representations of formal (logical) languages, but to reformulate, on the strength of these languages’ performance, the question of the articulate—of what is at all sayable. Guided by considerations how this might be brought about, Hovestadt presents a fantastic genealogy of that which is articulable digitally, today. This will be followed, in a subsequent volume, by a schema by which we may learn how to comprehend the computable in light of the articulate, and the articulate in light of the computable.

The third contribution, Gregg Lambert’s “Two Images of Global Violence,” is about the linking up of technical terms with theology and religion, and addresses—in his words—a form of violence that is unparalleled in documented history, and of global dimensions. In the course of technically induced globalization, a governing reality has arisen that we do not know how to deal with: global violence cannot be comprehended as strictly human, nor as divine or natural. Therefore, our thinking needs specifying, in accordance with economic, technical, political, cultural, and ideological mechanisms.

Vera Bühlmann’s “Arché, Arcanum, Articulation: The Universal and Its Characteristics” takes up the same field, and discusses the stakes attached to the philosophical notion of the “universal.” Her text suggests comprehending the mathematical as a language in which the universal is characterizable for the very reason that nobody is native in it, i.e. at home in it as we are in our mother tongues. No one can learn to speak it without intellectual effort. To that end, it is important, as Bühlmann upholds, to situate the cultural technique of writing on a stage of abstract thought which can be set in different manners, in accordance with a particular technique’s algebraic-symbolical constitution. In pursuit of this movement, the finiteness of what is intellectually graspable grows richer in saturation as it is confronted by the inexhaustibility of that which could, virtually, be rendered lucid. The universal is no longer taken as a referential frame for that which is articulable, transmissible, and

communicable in writing, but, in its own right, as pre-specific genitivity and fertility proper to the thinkable, within the horizon of which a strict separation of natural and artificial things is no longer sustainable. Thus, Platonic dialectics are being virtualized and thereby put in a position of approaching a geo-philosophical idea of wisdom, in which technics no longer is the transparently set condition of the possibility of thinking, but might become thematic in its own right.

The fifth contribution, by Georg Christoph Tholen, “Displacement: The Impossible Interlude between Man and Machine,” discusses why, in an era of digitalization, the question about the locus of technics and media must be re-situated. He makes clear why anthropological and instrumental categories—of technics as a means and instrument of already existent purposes (telos)—are unable to grasp the scope of the symbolic in its specificity, i.e. in its oscillating between form-giving and form-withdrawing. Tholen’s text takes stock of the current media-scientific discourse in its most prominent positions, and proposes a media metaphorology in order to incorporate the unique performance of the digital into the horizon of critical-analytical philosophy.

The last contribution, “Media Code—Dialogues on Digital Society,” by Christian Doelker, brings in some friendly distance toward the apparently singular urgency of these questions today, and provides the ground for some good-humored self-irony. He advocates eluding, today more than ever, the ongoing demands for direct engagement, and the urgent prompts to which we are subjected by our continually being wired. As a means, he proposes recalling the wise men and women, and situations, that were, in the course of cultural history, already beset by questions similar to those that today are posturing as incomparably unique. His text comes in the form of the script of a fictitious radio-broadcast series, in which Ortega y Gasset, the philosopher, invites eminent figures of our intellectual history to a discussion about form, message, content, and code, and the alertness of mind that is anything but a matter of course. His guests are Marilyn Monroe, Berthe Morisot, Charles Darwin, John Amos Komenský a.k.a. Comenius, und Plato.