Taking Risks!

Andri Gerber in Conversation with Werner Oechslin, March 19, 2019, Einsiedeln

> "Every Citty almost hath it's peculiar Walkes, Groves, Theaters, Pageants, Games, and fever all recreations, every country some peculiar Gymnicks to exhilarate their minds and exercise their bodies."
> Robert Burton, *Anatomy of Melancholy*, 1621[1]

Werner Oechslin: I would like to begin with an assumption and attempt to start a discussion about PLAY. If you search Google for the terms "play" and "game," then the first page of results will direct you to the "top online games of 2019"—to purchasable and downloadable games. This captures the fact that "gaming" has come to completely dominate our consciousness when it comes to play. But I object! Due to the sheer number of games available, our comprehension of play has become much too narrow, and should therefore be expanded. This is what I will try to do in our discussion.

To "game" seems to be synonymous with an instinct to play. But, even if there seems to be a theory or a "metatheory" for everything, play remains anchored to concrete "games." And it seems that these games, enabled by new advances in technology, have no limit; at least this is the impression that I get. But Johan Huizinga (1872-1945) and his *Homo Ludens* point at

1 | Robert Burton, *Anatomy of Melancholy* [1621] (Amsterdam: Theatrum Orbis Terrarum, 1971), p. 345.

completely different realities.[2] In this work, it is less about "games" than about the playful as a fundamental *condition humaine*, which therefore concerns our entire culture. We are playful in so many things we do on a daily basis. The flood of gratuitous gaming options we encounter, and their complexity, cannot disguise the fact that what we are talking here is a completely different form of play—and about two completely different perceptions of the world. The deception—and the illusion—of play with which we are confronted, and how appealing this can be, often ends in some sort of insight into, or an "understanding" of the mechanisms behind these kinds of games. They are finite and bound to a concrete case; their appeal is no more, once the game has been played. Obviously, there are also games that can still evoke surprise time and time again, particularly games in which the variations and possibilities are almost endless—chess, for example.

So let us begin here! In a recent interview, Garri Kasparow (*1963) agreed on the fact that "the machine" could win at any chess game, as long as the game is a "closed system," defined by its patterns of movements across the sixty-four fields—with two times sixteen figures—which can be captured in its entirety "mathematically." But why do we still play chess if we know this? Apparently, precisely because of our weakness as human beings: because we can, we must compensate for the endless computational power of the computer in the right moment with our memory, experience, intuition, and creative thinking. To put it more positively: because we can demonstrate our human "intelligence" in this encounter, literally, in "competition." Thus, human beings remain in playful competition according to the terms of their (restricted) capability; this is what triggers their enthusiasm and fascination for this game, despite unequal conditions—even if "the machine" could theoretically do it better. I would claim, therefore, that this is where the *culture* of gaming begins; where the game begins to frame and test our imagination, and our intelligence.

The question remains: To what extent can these observations be extended to other, or even all types of games? We would probably agree that this unfolds in different manners. While chess calls for high standards of mental acuity, recall, combination thinking, etc., playing more simple games can easily lead to boredom. And despite the demonstrated "supe-

2 | Johan Huizinga, *Homo Ludens: A Study of Play-Element in Culture* [1938] (London: Routledge & Kegan Paul, 1949).

riority" of the machine, chess has not disappeared. Apparently, it is about more than the optimization of data; man is playing against himself, and the likes of him with his different capacities—and also with his inevitable flaws. As such, it is fun to play under these conditions! And to the contrary, it is uninteresting to have machines play chess against one another.

In order to understand the high degree of speculation inherent to all forms of *praecognitio* of prior knowledge and anticipation in a janiform correspondence, it would serve us well to compare the game with sixteen figures and sixty-four fields with another—one which is even more spectacular. In his oft-quoted essay "La Biblioteca de Babel" (1941), Jorge Luis Borges (1899-1986) names two axioms that must be followed: first, "la Biblioteca existe ab aeterno," and second—building upon the first— "el número de símbolos ortográficos es veinticinco".[3] The essay is preceded by a quotation from Robert Burton's (1577-1640) *Anatomy of Melancholy*: "By this art, you may contemplate the variation of the twenty-three letters ...".[4] There has hardly ever been a book as chaotic as this one—but of all things, it is here that we find reference to the game and the endless possible variations based on only a few signs. Yet, we can also assume what most of us have already experienced—even without really thinking about it—that almost everything one can think about can be represented by a mere twenty-two or twenty-three or twenty-five signs.

The simultaneous advantage and risk of leaving the protected narrowness of the sixty-four fields behind, and instead dealing with the possibility of infinity, is the absence of a limited and precise system of rules that a set number of fields impose. Based on the fact that we only need twenty-three signs to code language, Burton has pointed to other numerical proportions—such as the possible amount of human beings on the planet—derived from calculating the area each person's footprint requires. Obviously, he soon arrives at the same conclusion as all those who have presented any form of calculations attempting to bring us closer to understanding our magical world, from Roger Bacon (c. 1214-1292) to Galileo Galilei (1564-1642). He puts spherical triangles in relation to melancholia, and is amazed by all the useful means and chin-ups human beings have created—epigrams, anagrams, chronograms, acrostics, etc.—

3 | Jorge Luis Borges, "La biblioteca de Babel" in *El Jardín de senderos que se bifurcan* (Buenos Aires: Editorial Sur, 1941).

4 | Burton, 1971.

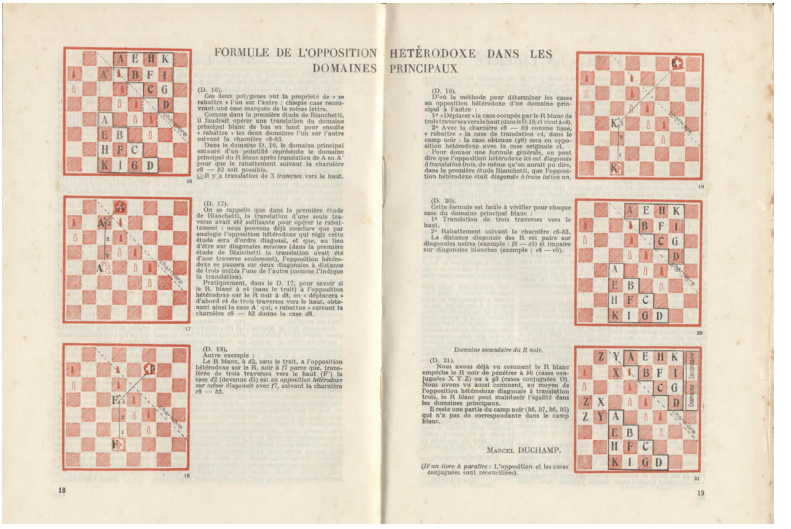
culminating in the riddle to beat all riddles, the *Aelia Laelia Cripsis* from Bologna. If any of this still sounds amusing, one could join Robert Burton and Plutarch—who is quoted by the former—in better understanding the "pulchritude": the beauty of mathematics. Referencing his own experience, Burton understood the appeal of card games, models, and sundials. Joseph Scaliger (1540-1609) specifies this idea of a *mathematum pulchritudo*, by further referring to *felicitas demonstrationum*: the moment of happiness inherent to mathematical insight and evidence. This happiness is reserved for those who know how to play this game and are willing to play it: "Cuius scientiae tam certa fides est, ut qui ea non abutatur, numquam opera ludat." It is fun, once you have understood it!

If all this is part of our understanding of play, we should pause a moment in order to realize that the pleasure of play is not due to the elegant rules of the game itself, but rather, in going along with them, in gaining insight and pleasure into them through their mastery. As should be clear by now, an open play arrangement is more fruitful than moving within narrowly framed conditions and predetermined solutions, up a classic standard model. For this reason, when I once had a teacher who assigned us problems with well-known solutions, I abandoned the study of mathematics; I had thought that this kind of teaching was over after competing gymnasium and lyceum, and that the horizon was now open. An illusion! There was no *pulchritude*, and most definitively no *felicitas demonstrationum*. I had looked for these things in the wrong place—although I heard about the combinatorics of Ramon Llull (c. 1232-c. 1315) very early on and had been fascinated by it, as it brings together both the endless possibilities and the economy of means. This idea was so well aligned with life, in all of its imponderability and order; or the other way around, with the life-realities to which *aenigmata* are attributed, mysteries that cannot be solved. Understood as a riddle, reality retreats further and further from the horizon and never ceases to challenge us. Albert Einstein (1879-1955) spoke about this pointedly in his lecture *Geometry and Experience* (1921), when attempting to radically separate mathematics and reality, he realized that, in spite of such a clear and convincing statement, these two, in real life are merged.[5] In his own words: "How is it possible that mathematics, which is a product of human thought and totally independent

5 | Albert Einstein, *Geometrie und Erfahrung* (Berlin: Verlag von Julius Springer, 1921), p. 2.

from experience, fits so well on objects from reality?" If we understand geometry as "purely formal"—meaning "detached from any axioms based on assumptions and experiential contents"—then we could reply that one should not bother with such riddles. And we could easily demonstrate how often mathematical concepts have turned to "mystic obscurity". Admittedly, these are considerations coming from outside mathematics that are mixed within them—just as with play, if you consider it to be more than a mere closed body of rules.

Fig. 5: Marcel Duchamp, Formules de l'opposition hétérodoxe dans les domaines principaux [1930]

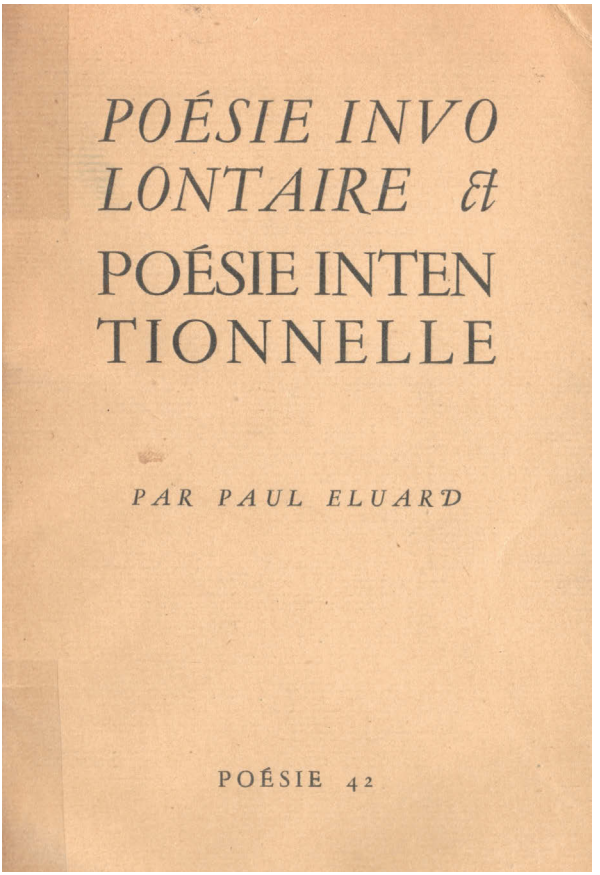


Marcel Duchamp (1887-1968) used the chessboard with its sixty-four fields in reference to the schemes of Llull, in order to present a "formule de l'opposition hetérodoxe". Other worlds? Why then is the "poetical" procedure described so accurately by Raymond Roussel (1877-1933) in his *Comment j'ai écrit certains de mes livres*[6] not "strictly scientific" in the same way as Edmund Husserl's (1859-1938) argues at the very end of his treatise "Philosophy as Rigorous Science" from 1910/11, where he pleads for a scientific

6 | Raymond Roussel, *Comment j'ai écrit certains de mes livres* (Paris: Alphonse Lemerre, 1935).

discourse "ohne alle indirekt symbolisierenden und mathematisierenden Methoden, ohne den Apparat der Schlüsse und Beweise."[7]

Fig. 6: Paul Éluard, Poésie involontaire & poésie intentionnelle, 1942



Thus, we quickly slide from the realm of science into the realm of poetry and poetics—the latter, as is well-known, meaning "creation." To this, there is a wonderful sentence by poet Paul Éluard (1895-1952): "Tout hom-

7 | Edmund Husserl, "Philosophy as Rigorous Science," in *Phenomenology and the Crisis of Philosophy*, ed. Quentin Lauer (New York: Harper & Row, 1965[1910]).

me est frère de Prométhée".[8] That's it! When I have the possibility of freedom, then I will be Prometheus; then I will be a creator, and I will have the world for myself, to play freely. That "apparatus of inferences," including footnotes and evidence, that Husserl ideally would have renounced to use, should not occlude the playful freedom of the scientist the same way as Prometheus, the "creator and artist."

It is a mistake to separate science and play—but also science and riddle, science and probability, they all belong together. And if this isn't proof enough, then we should consider Horace. He provides us with the most multifaceted variations on the topic of poetry and reality: "Ex noto fictum carmen sequar"[9] and also "Ficta voluptatis causa sint proxima veris" discussed extensivelsy by Alexander Gottlieb Baumgarten (1714-1762) in *Ästhetik*.[10] Fiction has not detached, it has not decoupled itself—and thus it has not been "formalized"—but yet, it remains bound and tied to reality, and enters into a relationship with it.

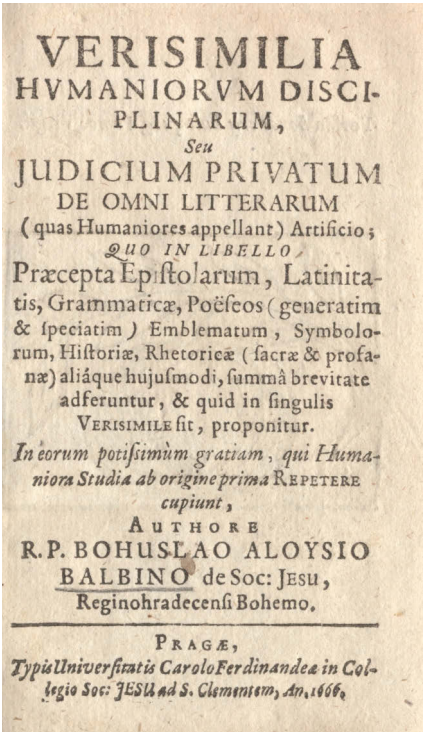
However, *induction*, a constantly moving and shifting open process, has been discredited by Karl Popper (1902-1994); everything that can be concluded, he argued, is necessarily a *deduction*. He fails to recognize the advantages of a process in which understanding gained step-by-step is developed further and transformed through new experiences and insights—and this obviously also includes oscillation and irritation. *De facto*, one always proceeds this way; one might describe the opposite of pure empiricism; a detached, pure deduction as the *idealiter* experimental arrangement ... yet, just as Einstein, one is nevertheless confronted with all possible riddles. This contains a glimpse of the world of *Verisimilia*. Reality does not automatically imply a secure tenure of knowledge; we deal with probability, start from assumptions, form an opinion on everything, and "speculate" in the manner familiar from the philosophical traditions. And finally everything is connected through poetry and play.

8 | Cf. Werner Oechslin, "'Poetando'; 'nous poétisons'. TEXTE - wissenschaftliche und andere: TEXTE!" *SCHOLION* Vol. 9 (2012), pp. 5–23.

9 | Quintus Horatius Flaccus, *His Art of Poetry*, trans. Ben Johnson (Amsterdam: Theatrum Orbis Terrarum, 1974).

10 | Alexander Gottlieb Baumgarten, *Aesthetica* (Traiecti cis Viadrum: Impens. Ioannis Christiani Kleyb, 1750).

Fig. 7: R. P. Bohuslao Aloysio Balbino, Verisimilia Humaniorum Disciplinarum, 1666


VERISIMILIA
HVMANIORVM DISCI-
PLINARUM,
Seu
JUDICIUM PRIVATUM
DE OMNI LITTERARUM
(quas Humaniores appellant) Artificio;
QUO IN LIBELLO,
Præcepta Epistolarum, Latinitatis, Grammaticæ, Poëseos (generatim & speciatim) Emblematum, Symbolorum, Historiæ, Rhetoricæ (sacræ & profanæ) aliáque hujusmodi, summâ brevitate adferuntur, & quid in singulis VERISIMILE sit, proponitur.
In eorum potissimùm gratiam, qui Humaniora Studia ab origine prima REPETERE *cupiunt,*
AUTHORE
R.P. BOHUSLAO ALOYSIO
BALBINO de Soc: JESU,
Reginohradecensi Bohemo.
PRAGÆ,
Typis Universitatis Carolo Ferdinandeæ in Collegio Soc: JESU ad S. Clementem, An. 1666.

To quote Éluard: "Tout homme est frère de Prométhée". Why should this not apply to "science"? It is from this point of view that we can, we must approach probability. At the beginning of his *Essai philosophique sur les probabilités*, Pierre-Simon Laplace (1749-1827) determined only a few conditions related to probability: namely that everything, whether known or unknown, in one way or another belongs to a "système de l'univers."[11]

There should always be reasons against "hasard aveugle"—blind coincidence—at least according to the "principe de la raison suffisante" (the direct difference between causality and accident, for which Laplace refers to Leibnitz; it was already specified at the beginning of Aristotle's *Metaphys-*

11 | Pierre-Simon Laplace, *Essai philosophique sur les probabilités* (Paris: Mme Ve Courcier, 1814).

ics). Laplace assigns his probabilities an "espérance mathématique"; the more the latter is given, the higher the probability. Such mathematically furnished assumption then read approximately like this: "La valeur relative d'une somme infiniment petite, est égale à sa valeur absolue divisée par le bien total de la personne intéressé." In the German posthumous translation by the ingenious Friedrich Wilhelm Tönnies (1855-1936), this tenth axiom reads like this "Der relative Werth einer unendlich kleinen Summe ist gleich ihrem absoluten Werthe, dividiert durch das Totalvermögen des dabei interessirten Individuums".[12] We therefore remain with a mathematical equation; this equation is the riddle. Science and play! And don't forget that game theory has become an important branch of mathematics, and not only as part of mathematics related to the insurance industry.

I hope you will forgive me for my long monologue, but I wanted to at least indicate the direction of my thoughts in regard to the topic of PLAY, as there is a risk that they spiral out of control.

Andri Gerber: Definitely! This was, so to speak, your "opening"—and now it is up to me to counter, even though this is not so easy. But let's start with Huizinga. Among many others, in his publication *Homo Ludens*, he references Giambattista Vico (1668-1744) and his *Scienzia Nuova* (1725), as he was among the first to acknowledge the importance of play as the origin of culture.[13] But what we find equally present in Vico is the idea of a universal language, which he describes as "[...] Lingua mentale, comune a tutte le Nazioni [...]".[14] The topic of a universal language obviously has a long tradition, and has primarily been discussed in relation to mathematics. Could we assume that play is also such a universal language?

---

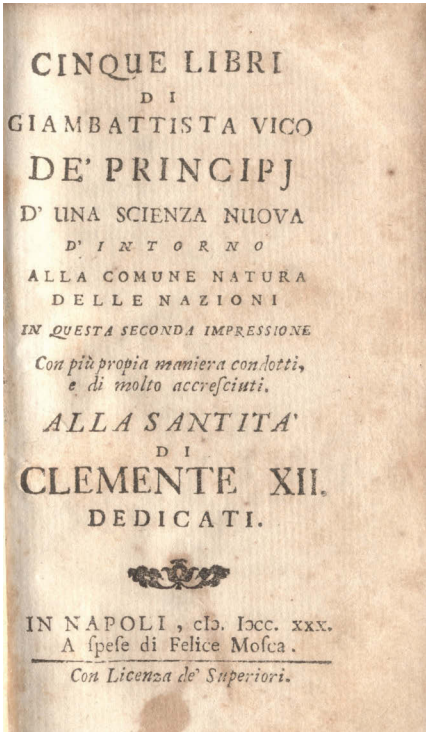
12 | "The relative value of an infinitely small sum is equal to its absolute value, divided by the total wealth of the concerned party." Friedrich Wilhelm Tönnies, *Des Grafen Laplace Philosophischer Versuch über Wahrscheinlichkeiten, nach der dritten Pariser Auflage* (Heidelberg: Neue akademische Buchhandlung von Karl Groos, 1819).

13 | "Nobody has grasped, or expressed, the primordial nature of poetry and its relation to pure play more clearly than Vico, more than two hundred years ago." Huizinga, 1948 [1938], p. 119.

14 | Giambattista Vico, *Cinque Libri de'Principj d'Una Scienza Nuova* (Napoli: Felice Mosca, 1730) pp. 97.

Oechslin: After "play vs. science," another equally significant topic! This question is unavoidable, and for once we can leave the question of communication by means of language vs. by non verbal means aside. There was and there will always be a kind of "linguistic turn." And why should this not also concern play? In recent times, architecture, too, has been considered a language—not in the sense of a superimposed inscription or the like, but as a specifically strong expression of an *architecture parlante*. In Italy, at a certain point in time, it was all about language: "linguaggio, linguaggio"!

Fig. 8: Giambattista Vico, Cinque Libri de'Principj d'Una Scienza Nuova [1725], 1730


CINQUE LIBRI
DI
GIAMBATTISTA VICO
DE' PRINCIPJ
D' UNA SCIENZA NUOVA
D' INTORNO
ALLA COMUNE NATURA
DELLE NAZIONI
IN QUESTA SECONDA IMPRESSIONE
Con più propia maniera condotti,
e di molto accresciuti.
ALLA SANTITA'
DI
CLEMENTE XII.
DEDICATI.
IN NAPOLI, cIↃ. IↃcc. xxx.
A spese di Felice Mosca.
Con Licenza de' Superiori.

I prefer the more generic term *auxilia*, as it was used, for example, by Francis Bacon (1561-1626). It has always been about instruments, or the various tools we need to assist our heads in the process of comprehension

and communication. And these typically possess a distinctly "medial" character, just as the *medietas* of mathematics were emphasized for a long period of time. As such, we have once again returned to play, and also to "play-things": to chess figures, and the sixty-four fields, and the manifold arrangements that result from it.

Our head remains an effective instrument, despite some defaults, such as lack of memory, distraction, etc. But we normally prefer these human weaknesses, the "humanity," rather than the total control of every situation. If one puts everything on a checklist and then systematically works through it, the freshness of ideas and thought suffers. A good game is similar to a good idea, and uses surprise and spontaneity; it surrenders to the illusion of absolute freedom and accepts the risks. Openness and risk are fundamental parts of play and come always together to formulate an open end. As a child, we played an endless amount of games, and they almost ever ended in disputes.

Gerber: Always!

Oechslin: These are what make a game, too. And then there is the corresponding analysis ... because maybe you realized that the other player did not stick to the rules, or did not understand them. The conditions and the system of rules, these are what make a game.

Gerber: I would like to come back to language. It is interesting because, in game theory, there are strong references to language. With Vico, we have this conception of a protolanguage, a language that still has an immediate connection to things. He describes this as "un parlare fantastico per sostanze animate".[15] There is always some degree of separation in the end, which, however, opens also the space for language to become.

Oechslin: This discussion has to be contextualized in the larger frame of the derivation of human culture from things such as the invention of writing. Vico's position, in regard to ideas about the "caratteri fantastici di sostanze humane" is about a "sapienza *poetica*." It is all about a world which is not abstract, but rather, sensed and vividly imagined. One has to "di meditarvi ben sopra" and learn to understand the "Principi di tutto l'umano, e divin saper".[16] The reference is then Aristotle's *Peri hermeneias*, as well as Plato and his *Kratylos*. As such, we are in the midst of questions about things and their representations, about signs and symbols, and of

15 | Ibid., p. 153

16 | Ibid., p. 162.

the idea in general that they could free themselves, becoming independent … risking separation and distance.

Gerber: … a distance, which in the context of game theory, when talking about the language of games, seems to be regrettable. Here, we have a missing link, because play is supposed to be a language, in a non-metaphorical sense.

Oechslin: Still, I think that the fact that language plays such an important role—at least in the formulation of a theory—is very positive. But are we talking about a theory of those making games, or about a meta-theory?

Gerber: It is kind of both. There is hardly a game theorist who does not design games for themselves. This is evidently a characteristic of this theory. In architecture, you are either a theorist or a designer—rarely both.

Oechslin: Yet there is an ancient tradition and the corresponding expectation, that only one who does things by themselves (as an architect does) can also talk about it competently. Everything lies in the *poiesis*, in the making.

Gerber: Vico too, said that you can only recognize what you yourself have created.

Oechslin: Well, this is how the old concept of culture is constructed—and we still consider it a desirable condition. Culture is that which we make out of our capacity and our determination, as Johann Gottfried Herder (1744-1803) specifies when talking about the "history of humanity": for example, "der Mensch ist zu feinern Sinnen, zur Kunst und zur Sprache organisiert" and "zu feinern Trieben mithin zur Freiheit".[17] And again, we are back to instruments (and thus also to play), which in Italian is described so nicely and precisely as *artificio*. We are the creators of these instruments, yet we have not come so far from this "Verum et factum convertuntur," in which the human being achieves *verum humanum*—having the background of divine knowledge—by agreeing to a pact, and bringing knowledge about things and insight together with doing ("quod homo dum novit, componit item ac facit"). In the marginalia, Vico remarks: "Scientia est cognitio modi, quo res fiat". And before he reveals the path one must follow: "intelligere, ac perfecte legere, & aperte cognoscere." Moreover, he then translates the *cogitare* for a better understanding

17 | Johann Gottfried Herder, *Ideen zur Philosophie der Geschichte der Menschheit* (Riga: Hartknoch, 1774), pp. 216-236.

of it into *volgare*: "pensare, & andar raccogliendo".[18] So close to reality, Vico describes this "intellectual" process: no intellectualism and chimaeras!

The architect should be flattered by the fact that architectural metaphors are used so often by the philosopher, to illustrate such correlations—probably because this relationship of thinking and doing seemed to be so evident in architecture. With Immanuel Kant (1724-1804), we find again and again architectural metaphors, in the *Prolegomena* (1783) for example, published between the first and the second edition of the *Critique of pure reason* (1781 and 1787). There he makes the distinction between primary buildings and secondary "much more ample" side buildings "welches er [=der Verstand] mit lauter Gedankenwesen anfüllt, ohne es einmal zu merken, daß er sich mit seinen sonst richtigen Begriffen über die Grenzen ihres Gebrauchs verstiegen habe." Here we have it again, the need—with Kant, the necessity—of connection and the increasing risk that comes with detachment …

Gerber: Let's talk about a very precise example, and about architecture, by using Le Corbusier (1887-1965). His writings contain many analogies between architecture and games, primarily in the sense of a combinatory system. This appears to me to be a novelty, as this kind of understanding of architecture as process has a long tradition indeed, however, mainly associated with language. This was the case, for example, with Jean-Nicolas-Louis Durand (1760-1834).

Oechslin: Combinatorics is the right reference, and I think it should be clear why this is once again closely related to play. In Le Corbusier's *Modulor,* there are pages containing all possible variations of the subdivision of a square.[19] As is well known, Durand was derogatorily labeled a "chessboard-provost" ["Schachbrettkanzler"] by Gottfried Semper (1803-1879). In reality, his game is much more refined, because it has a goal. He does not content himself with a simple position, nor with a simple geometrical figure-construction; at the end of his series, there are—sufficiently recognizable—schemes of concrete architectural floor plan-figures. I refer

18 | Giovanni Battista Vico, *De Antiquissima Italorum Sapientia, Ex Linguae Latinae Originibus eruenda Libri Tres* (Napoli; Felice Mosca, 1705), pp. 14–16.

19 | Le Corbusier, *Le Modulor [I], Essai sur une mesure harmonique à l'échelle humaine applicable universellement à l'architecture et à la mécanique* (Boulogne: Edition de l'Architecture [1950]).

to the corresponding table in the first edition (2e partie; planche 20) of his *Précis des leçons d'architecture données à l'École royale polytechnique* (1802).

Apparently, these images were (still) too abstract; in later editions, the corresponding geometrical forms are collated to newly added architectural bodies, in a way such that the whole "game"—or at least, the individual moves—are laid bare. Yet we miss out on the "joke" of the whole game dispositif, which proposes the all-encompassing, limitless combinatorics of architectural floor plans. In the first edition, this mechanism started with pure geometrical basic forms such as the square; or a square divided by two, three, and four; circles; circles divided by two, and the combination of circles and square-figures. This forms a kind of grammar, which could lead, according to the axiom of "few principles = as many applications as possible," to manifold concrete architectural solutions. It then suffices to specify few representative patterns. One introduces the artifice, typifies the first steps and adds "etc., etc." the same way as a mathematical series—and in a corresponding game.

When the discussion of "typology" came into fashion in the 1960s, one had to realize quickly that most architects preferred this playful approach to the more direct access to a suitable solution—with "their Neufert" at hand. To much risk?! We should be able to better convey the appeal of the game. This would widen their gaze on the allure of combination and variation, the control of which is indispensable to architects when encountering concrete—and often "irregular"—situations. To transform irregular situations into regular floor plans was, for example, part of Sebastiano Serlio's (1475-1554) standard task in composition. In Serlio, who was the first—still using the medium of woodcarving—to demonstrate the early design *all'antica*, we could find additional advices. This included, for example, the detailed analysis and representation of "a parte per parte" and "a membro per membro," in case of more complex situations.[20] Built upon few rules and conventions, one could deal with the most complex building program; combinatory, play! And obviously, this most simple form of combinatorics and systematics was perfectly coordinated with building and building technique: not only design, but also construction was based on this principle.

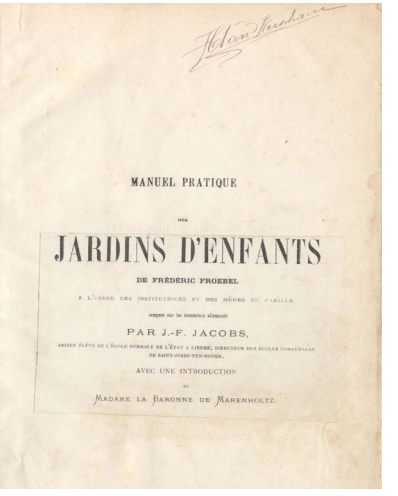
20 | Werner Oechslin, "'A parte per parte – a membro per membro'. Die Konkretisierung der architektonischen Form," *Archithese* Vol. 26, No. 2 (March/April 1996), pp. 15–18.

Gerber: Thus it was not only about a theory!

Let's return to modernism. Modernist architects had a specific relationship to play, through building sets and the influence of play-theorists such as Friedrich Fröbel (1782-1852). It is widely known that Frank Lloyd Wright (1867-1959) references the influence of "Fröbel gifts," when he was a child; with Le Corbusier this influence has been only assumed. Other architects, such as Bruno Taut (1880-1938), have designed building sets themselves. Is this symptomatic of the modernist attitude towards play?

Oechslin: I would say that Fröbel and Durand are not far from each other. These were times when didactical models and systematical pedagogies were particularly valued. Must we remind ourselves that, in this context, play was extremely important? "Fröbel-books," applying the theory of Fröbel, are often in effect building sets, as in this late copy of the second edition of the book *Manuel Pratique des Jardins d'Enfants*. Published in 1874 in Brussels, this book contains sentences such as: "Donnez à l'enfant n'importe quel joujou, confectionné, si vous voulez, avec art, cet objet ne l'amusera véritablement que lorsqu'il sera parvenu à la mettre en pièces."

Fig. 9: J. F. Jacobs, Manuel Pratique des jardins d'enfants de Fréderic Froebel, 1874


MANUEL PRATIQUE

DES

JARDINS D'ENFANTS

DE FRÉDÉRIC FROEBEL

PAR J.-F. JACOBS,

AVEC UNE INTRODUCTION

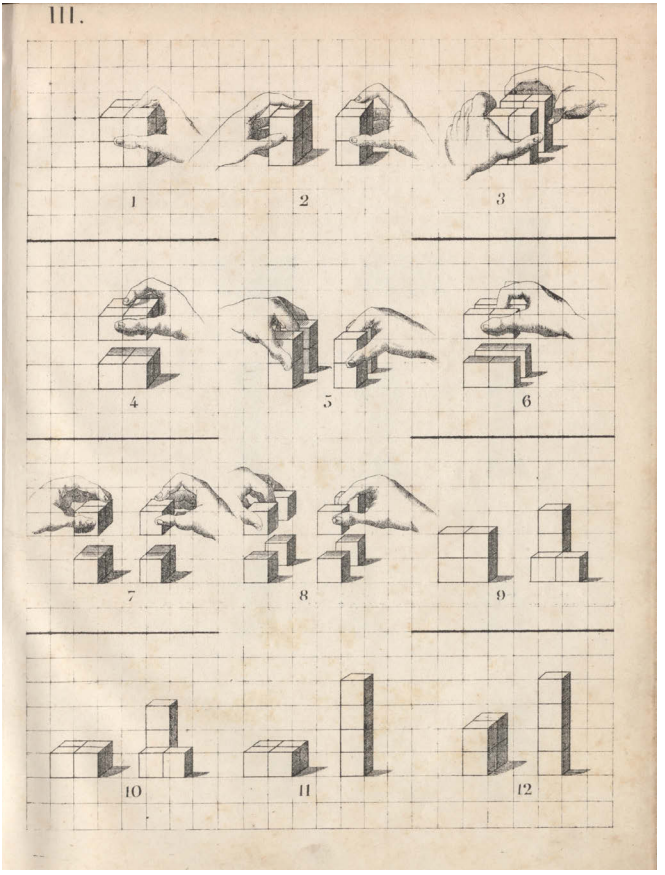
DE

MADAME LA BARONNE DE MARENHOLTZ.

This is then explained through Fröbels' "cube divisé," in the same way that the architect references and reconstructs his composition based on

basic forms and bodies. The *Jardins d'Enfants* follows the insight incisively: "L'enfant n'a pu voir ces propriétés à différentes grandeurs, que par la réunion de plusieurs cubes." We are already in the midst of block-play; we have disassembled, compared and set together again … Quasi the archetype of play! And architecture is defined by Leon Battista Alberti (1404-1472), in the prologue of his *De Re Aedificatoria*, using the concepts of *compactio* and *coagmentatio*.

Fig. 10: Fröbel Gifts, 1874



In this, there is not a big difference for architects in relation to the drawing, even though the line is more "abstract" and more difficult to "handle."

Le Corbusier talks about geometry "qui est le seul langage que nous sachions parler" and defines it as follows: "Géométrie: esprit clair et mystère infini des combinaisons." He, too, cites "Prométhée," in order to illustrate creativity and the creation of organisms that are lively because they are moving.[21] To him, it is crystal clear that architecture is founded in a competence with geometry, and that it is form-generating. More specifically, it is not about form, but about figure. In respect to figure, in principle, it is about the concretization of possible forms: Euclid defines them as "closed forms," and thus, it is comparable to the small blocks that result in the Fröbel cube. Thus, game, combination, variation—but all are contained "in rules."

Gerber: You are talking about variations; before, we were discussing instruments. This leads us to a fundamental metaphor: that of architecture as music, as music practice. In the past, it was common for architects to master a musical instrument. Theodor Fischer (1862-1938), for example, was an excellent cello player. We can find an application of this metaphor in the theory of proportions, when Le Corbusier compares proportions to a piano—which does not yet make a good player!

Oechslin: Yes, one has to master the piano, and only then one can play, play! Make music! I always had a weakness for variations. Goldberg, Diabelli, Paganini, and the variation movement of Mozart's *Sonata in D major*: these are all masterpieces, in which the richness of the composition inside a narrow boundary is demonstrated. Maximum freedom with maximal (musical and harmonic) order.

Gerber: At the same time, music can also stand for this nostalgia: for the theory and set of rules you previously mentioned. I would say that music is based on a very strong set of rules.

Oechslin: At least this is how architect Giacomo Barozzi da Vignola (1507-1573) saw it! In the short text preceding his bestseller *La Regola*, he describes how he would arrive at a rule through the comparison of the different perceptions of the "ornamenti" among them and with ancient works. He would then, beyond all observed differences, stop at the point where our eye judges something as beautiful, which is organized through "certa corrispondenza et proportione de numeri" between the whole and its parts, and complements and explains it by noting "come ben provano li

21 | Le Corbusier, *Une Maison – Un Palais* (Paris: G. Crès, [1928]), pp. 4, 12, 14.

Musici nella lor scienza".[22] He derives his "regola facile, et spedita" from this: not a complicated system of rules, but rather one which is as simple as possible, ready-at-hand, with the broadest possible applicability and, naturally an effect of perfect harmony.

Gerber: In principle, music appears—to me—to be less playful. Indeed, every interpretation is different, but it is created inside a very regulated world. This constraint is expressed very nicely in the metaphor of architecture as "frozen music." Friedrich Schelling (1775-1854) appears to be the first one to have used this metaphor in his *Vorlesungen über die Philosophie der Kunst* (1802-3) in his famous expression "Architektura ist erstarrte Musik."

Oechslin: These metaphors make me shiver! I'm also not enthusiastic about the "gravity" [Schwere], which Arthur Schopenhauer (1788-1860) attributes to architecture. Too many memorial statues! And the same can be said of the expression "Der Stein ist mehr Stein als früher" from Friedrich Nietzsche's (1844-1900) circle. The poetry of Éluard and his "tout homme est frère de Prométhée" seems more appropriate to me. Other cultures!

Gerber: *Kommende Baukunst* or *Vers une architecture*—that sounds completely different!

Oechslin: Yes indeed! And what should "come" here, what are we waiting for? Promises ...? No, we open ourselves up and walk towards something, with an open end; *vers* an architecture with a projected *durée*—and lot of hopes, a game!

Gerber: Since we are talking about time and the freezing of time, we could also talk about boredom. Beyond the game, time sometimes stands still, seems frozen. And talking about playing, we also play to overcome boredom ...

Oechslin: The game for all circumstances! It always helps—also in case of boredom! And, if we put it a bit more pointedly, the sublimation of boredom is the *Classical*! If something is boring to the point of being valid, then we have reached the Classical. It looks like we can endure certain forms, even if repeated a thousand times! And architecture strives for validity! Not everything has to be exciting; "boring"—because of uniformity—and repeating architecture is particularly apt for urban design.

---

22 | Giacomo Barozzi da Vignola, *I cinque ordini d'architettura* (Firenze: Giuseppe Molini, 1834 [1562]), p. 2.

Gerber: Boredom has also a positive reverse: we know how important boredom can be, since we no longer have the time to get bored these days.
Oechslin: … and one must fear that all the people constantly fixating on their cellphone and going hectically through the world could lose hold on reality entirely.
Andri: … and nobody would even realize it!
Oechslin: Nevertheless, I am still confident that human beings will always find a way back to reality. There is always the risk of exaggerating a game. Every game has a reverse; we are both supporter of the *ars oppositorum*, and also well-aware that if there is something thrilling, there will always also be boredom. What matters is to put everything in relation to one another. There will never be one thing without the other.
Gerber: You are talking about exceeding a game. Playing is often destructive, *per se*: you take something away, overcome obstacles, and try to defeat your opponent. Architecture always had a hard time reckoning with its own temporality. One of the few exceptions to this is Japanese architect Arata Isozaki (*1931), who, in the 1980s, would also show his projects as ruins.

Fig. 11: The knight's castle in Machern, Leipzig, ar. 1795-1796

Oechslin: Ruins are a sublimation and beautification of destruction. We should never forget that there is also real destruction. A destructive game

would be fatal. But when you start a game, you will never have a guarantee that everything will remain safe. Fear of risk? Today, we live in our privileged world, in a fearful society that would like to secure everything. And the outcome of this is rules upon rules. There is a permanent call for new regulations, committees, new procedural forms. This might be the most important message for our time: We should learn to accept risk and to understand again the deep meaning of play. The best rules are those with exceptions, not those that exclude all possibilities and dangers.

Gerber: Without risk, no play! But this calls for consequences, whatever they may be.

Oechslin: Yes, but in the end, we both still have a very positive stance towards play!