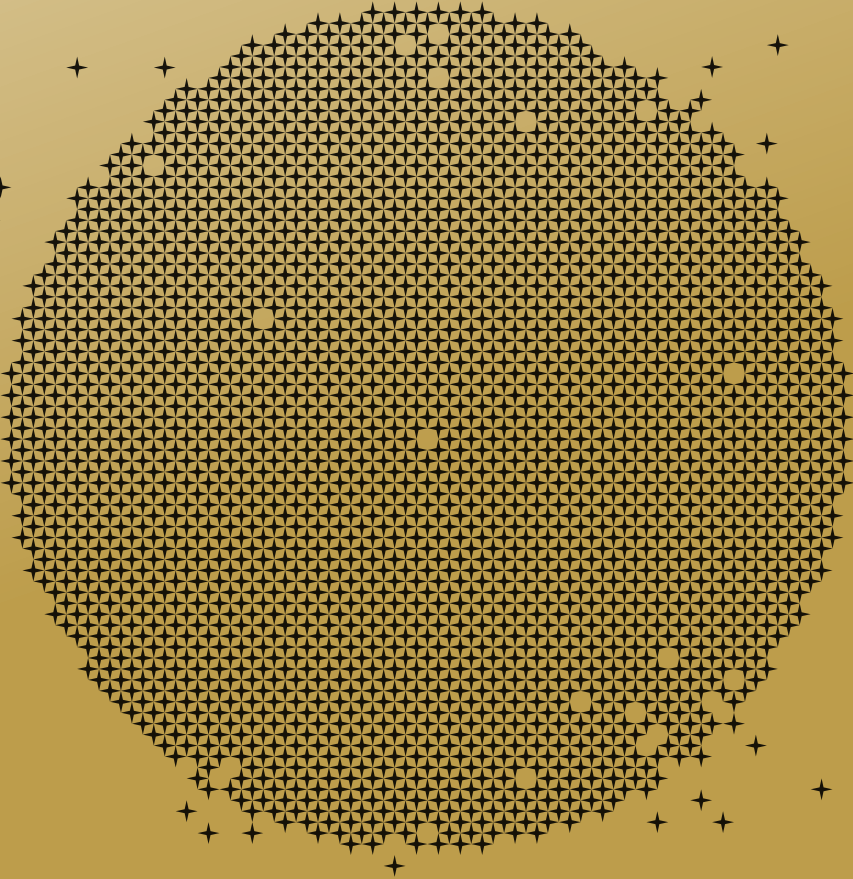
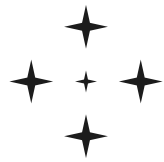


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journal of design culture
_Designing Digital Humanities





Disegno

JOURNAL OF DESIGN CULTURE

Double-blind peer-reviewed, open access scholarly journal

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Disegno publishes original research papers, essays, and reviews on all aspects of design cultures. We understand the notion of design culture as resolutely broad: our aim is to freely discuss the designed environment as mutually intertwined strands of sociocultural products, practices, and discourses. This attitude traverses the disciplinary boundaries between art, design, and visual culture and is therefore open to all themes related to sociocultural creativity and innovation. Our post-disciplinary endeavour welcomes intellectual contributions from all members of different design cultures. Besides providing a lively platform for debating issues of design culture, our specific aim is to consolidate and enhance the emerging field of design culture studies in the Central European academia by providing criticism of fundamental biases and misleading cultural imprinting with respect to the field of design.

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A Distant Reader

An Interview with Iván Horváth by Szilvia Maróthy and Márton Szentpéteri

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¹ See: <https://dia.hu/hirek/uj-tagokkal-bovul-dia>

² Franco Moretti. 2013. *Distant Reading*. London: Verso.

³ Iván Horváth. 1991. *A vers*. Budapest: Gondolat.

Iván Horváth (b. 1948), professor emeritus of ELTE is one of Hungary's leading literary scientists, an internationally pioneering scholar of digital humanities, engaged, as early as the seventies, in computer-aided literary studies—a field he would later call humanities informatics. He is a prominent researcher of Bálint Balassi and of early Hungarian literature and a major figure in the publication and interpretation of Attila József's oeuvre. Active as a public intellectual during the years of Hungary's democratic transition, he was a founding editor of the journal 2000. Professor Horváth is also a noted HiFi enthusiast and expert, and one of the initiators of the Wilhelm Furtwängler Society of Hungary.

Diseigno: One stimulus for this conversation is your “digital ascendance,” so to speak, your recent election as (first) honorary member of the Digital Academy of Literature (Digitális Irodalmi Akadémia, DIA).¹ The other is the book you and your son, Andor Horváth, are working on, and which, if we are not mistaken, can be read as a kind of design history. How did you initially discover digital humanities, or, how did you, in a sense, invent the field?

Iván Horváth: Me?! it was Franco Moretti, with his relatively recent book on distant reading, who invented digital humanities.² Although, in a sense, you could say I invented it too, given that my book *The Poem*³ is about looking at poems through different glasses. Putting on a certain pair of glasses, I see poems not as subjects of scientific inquiry but as messages from a world beyond direct experience. Putting on another pair, I see a specific mode of speech, the subject of literary studies. Putting on yet another pair—the book has three chapters—, I see an enormous array of poems which I process right away as a literary historian. World literature is, for the literary historian, a gigantic pile of texts. Without a computer one cannot even touch it. This modern literary science can be beautifully practiced without knowing languages.. I am being ironic here. And so is Moretti—which I like. So yes, I have something to do with digital humanities. The field of humanities came into being in the Middle Ages and

has worked perfectly well. I think we, humanities people, are dealing with the same kind of issues even today, nothing has changed, basically. There is a journal or yearbook called *Digital Humanities*, originally titled *Computers and the Humanities* in the sixties—I would stick with the old, more modest title. Computers are great, and as humanities students and scholars are expected to know everything, using computers is compulsory. But it is too strong to call this digital humanities. Moretti, who stirred up the whole storm, says he does not know what digital humanities means, either.

D: Even if everyone in the humanities must have some expertise with computers, we can basically say that humanities research that applies computer-based tools and methodologies is different from traditional research. For example, in creating and formalising a database it is necessary to diverge from traditional interpretations...

IH: My first book was on Balassi,⁴ and it read as if it was written using computers, even though when I finished the manuscript in the late seventies, the computerised inventory of old Hungarian literature was not yet available. I used the existing, mostly printed, bibliographies, and my handwritten cards. If needed, one can fulfil the role of the computer, only in a way that is mind-bogglingly slow and risky in terms of making scientific hypotheses. The three branches of the literary sciences are publishing texts (critical edition), registering texts (bibliography), and arranging texts into a meaningful narrative (literary history). Plus the fourth one of making such pompous claims (literary science). As is the case with any quantitative research, it is better to set up a database of the forms of versification with computers. This is how I and my students created my opus magnum, the RPHA database of medieval and early modern Hungarian poetry.⁵ But the first such database, on the metrics of troubadour poetry, a classic work by István Frank—a Hungarian!—, published in Paris, 1948, was created without using computers. Our inventory is much more multifaceted, suitable for much better queries, but Frank's work is still great to use and our approach is mostly the same.

D: But can we say that, beyond thing like expediting the making of databases and queries, computers also elicit revelations in literary research?

IH: Truly novel things are very, very rare. Once I managed to prove the “izo rule”⁶ about old Hungarian poetry in a fully inductive way—this would have been much more difficult to do before computers. But a lot of these things are trivialities. I think the first Hungarian publication in digital humanities was a statistics of phonemes in Endre Ady's oeuvre which helped me learn that Ady used the exact same speech sounds and with roughly the same occurrence as me

⁴ *Iván Horváth*. 1982. Balassi költészete történeti poétikai megközelítésben. Budapest: Akadémiai Kiadó.

⁵ Répertoire de la poésie hongroise ancienne, 1979–2023, <https://f-book.com/rpha/v7>

⁶ *A finding on the relative formal homogeneity of verse form and rhyming in sixteenth-century Hungarian poetry.*

⁷ John Peter. 1677. Artificial Versifying.

(or any Hungarian). A truly edifying read, right? Moreover, it is often the case that what we ask from the machine is not what we are really curious about but what we are technically able to formulate.

D: *It is often claimed—by Mario Carpo, among others—that by altering the medium of architecture, computer-aided design (CAD) has also altered the practice of architecture: perhaps a gigantic tower like Burj Khalifa could have been designed before too, but computers not only radically shorten such a process but effect every detail from structure to surface. Can we speak of analogies here?*

IH: Literary science has changed, no doubt about that. Humanities research has become much faster and more effective, ever since we have a world library. But I do not think that the research methods of the humanities have changed. Our advantage is comparable to the change the invention of glasses brought in the Middle Ages. I am also happy with our much derided symbiosis with computers and the net; very different from my times in the seventies, characterised by GDR and Soviet mainframes and Bulgarian discs.

D: *Getting back to the relation between planning – modelling and design: this is an important element of research in the humanities involving computers; for example, a text edition’s structure, the data model of a database and its design are interrelated aspects.*

IH: Interrelated they are! You are right, now I am getting your point. Yes, I can tell you about thorough changes underway in the literary sciences, thanks to computers. As I said, we mostly deal with registering works, publishing their critical editions, or organising them into a narrative. Now, the first two are merging. Databases and text editions fuse. The critical edition of the Balassi oeuvre and of the “Old Hungarian Lamentations of Mary”—in preparation—will be integrated into the RPHA, while the upcoming critical edition of the sacramentary that contains the twelfth century “Funeral Speech” has from the beginning been a collaboration with the *Usuarium* project, a monumental, international database of all medieval sacramentaries (lead by Miklós István Földváy). But our approach has not changed. Without the required tools we just couldn’t do these things before, but never stopped dreaming. There is an expression used by OULIPO, the Parisian literary circle I am loosely aligned with: anticipatory plagiarism. Take the case of Tibor Papp who was into producing automatic hexameters—he got so angry with me when I told him about a similar enterprise by the seventeenth century English poet, John Peter.⁷ So, it seems something was realised even before it was invented. Such a case of anticipatory plagiarism in the computer-aided humanities is the vogue for big data. Big data is a nightmare to work with without computers, nevertheless the Russian formalists, the first structuralist school, loved to work with

a lot of data. One can draw less scientific conclusions from a single utterance of a poet than from a hundred thousand poems, so they fell in love with this approach even before computers. The forefather of the formalists, Alexander Veselovsky was already conducting big data research at the end of the nineteenth century. Vladimir Propp was also thinking as if there were already computers when he created his folk tale morphology, inferring general rules from a certain corpus of tales. One more thing about modelling: our introduction to computer science happened parallel to the emergence of generative linguistics in the sixties. Chomsky's model can be interpreted as a computer before computers. It was a philosophical and mathematical model of man—at the university in the sixties, I was reading it conspicuously, and there were professors who even taught such things in secret. Everyone was a Chomskyite in those days. In his early period, Chomsky regarded language as defined by transformational rules: take S (sentence) and rewrite it as NP (noun phrase) and VP (verb phrase). And really that is how you create a sentence. As if you were commanding your servant, a robot, a computer. There is a sadistic, bossy aspect to it, which has its lure. Eased by a more humanistic and creative aspect: sentences no one ever heard before can be generated and understood. Anyway, for Chomsky, sentences in natural language are formed as if people were computers, and I would count his amazing popularity among the early computational inspirations in the humanities.

⁸ Noam Chomsky. 1966. *Cartesian Linguistics*. New York: Harper & Row

D: *There is another Chomsky though, the one who is sceptical about the earlier Chomsky in his book on Cartesian linguistics.⁸ There he compares cybernetics, machine translation, modern computers, and linguistics to automatons and Descartes. Chomsky writes that language cannot be made perfectly algorithmic, precisely due to the creative aspects of language you implied. How do you see this question in the age of artificial intelligence? Is it possible to formalise and algorithmise even the creative aspects of language usage? What does the computer know now it did not know back then?*

IH: I have not had the time yet to delve into artificial intelligence. As far as I can see, we have witnessed the creation of a semantics-based, passable machine translation program (that is, one that translates not directly to another language but to sememes, meanings). If that is indeed the case, that is a very big thing. Machine intelligence is perhaps not here yet. (Natural intelligence is often on leave too, for that matter.)

D: *Let us talk about your new book on photo cameras and HiFi systems. Can one find links here to digital humanities?*

IH: Yes, the end of the sixties—the time of Chomsky becoming the most cited author, the time of launching Computers and the Hu-

manities, the beginnings of digitisation—are quite interesting when looked at from the other side: *Analog* is the working title of the book Andor and I are working on. By the late sixties, analogue technology had reached very high peaks in the industry of high fidelity sound reproduction. No doubt that the inventions of the following decades yielded great results as well, everything got cheaper and more accessible—there was a giant leap in quantity but perhaps not so much in terms of peak quality. Something happened in design around 1968, certainly something to do with a major shift in mentality in the background. If you walk into a HiFi store, you will see some vacuum tube amplifiers. People are going back to sixties' technology. Vintage HiFi shops are selling huge, old-fashioned speaker cabinets with; equally staggering price tags. Museal pieces are being restored and kept going. But is there any reason for all this? I once bought a digital amplifier. It soon broke down, the motherboard had to be replaced, one year later it broke down again, the motherboard needed to be replaced again—it is just a faulty construction. I also have an English Quad amplifier, a model designed in 1953 and in production until around 1970. It has vacuum tubes, which—unlike transistors—have to be replaced every five to ten years, but with such care, it will endure for a long time to come. But what will happen to the digital amplifier, even if I am willing to pay for a new motherboard (at the cost of two sets of tubes for the Quad)? One feels there is not only progress but also decline in this field. We have a historical hypothesis about what happened in the sixties. Our book will contain aesthetic analyses on HiFi systems, plus a chapter on the construction of cameras, mostly about lenses. Not about the external but the internal design, the constructional aesthetics.

D: *You spoke about a historical construction: a turn at the end of the sixties is indeed established in traditional design historiography. It is usually about the end of design in a classical sense—about anti-design, radical design, and postmodernism—, discussed in the light of ideology and the events of '68. But these approaches rarely tackle mediality or the appearance of computers in design at that point in time. What do you think about this?*

IH: I am not familiar with this field, although I very much like Jony Ive's designs, which are in the spirit of the Braun HiFis, or the Leica IIIc, or M3 cameras, or the casing of my Quad amplifier. Which also remind me of the Bauhaus. But the great ambition of our book is to not focus on external design but on constructional design. Where did the designer set the load resistor of the beam power tubes? Is the output transformer's primary resistance attached to the anode, the cathode, or split between them, and if the latter, in what ratio?

Is there global negative feedback or only local? Is there no positive feedback? What is the amplifier's output impedance? What was the general effect of the transition to transistors? What decisions were made in terms of the weight of the membranes, their rigidity; size, width; the materials of speaker enclosures, the depth of reflex tubes? We will investigate these things by analysing famous HiFi systems. The historical sketch I am supposed to finish alone without Andor's contribution (making it the weak point of our enterprise), starts with Bach—the production of music preceding the reproduction of music. Haydn, Mozart, and Beethoven are also analysed in detail with regard to their relationship to the audience. The idea is to ponder music and its audience without separating one from the other. Bach got to the point of performing concerts in cafés for a paying audience. He always felt it important that he was not a church musician, preferring the title of court composer, bestowed upon him by the Prince of Köthen. He wanted it to be known that he belonged to an institution of music, not to a church institution. Haydn was the composer of an aristocrat but allowed himself some showboating as attested by the Farewell Symphony with the musicians leaving the stage. Mozart freed himself from the Cardinal of Salzburg, and tried to be an entrepreneur in Vienna, making a living from his operas. And Beethoven—he made the human personality his central theme; often, in the odd-numbered symphonies, the self-sacrificing hero. Running through these topics I have brought up some examples of the emergence of the self-conscious man. Before Bach there were only very embryonic cases of independent musical institutions. In an opera, music is not fully independent but stays within the literary institution: theatre. Performing a symphony or a piano concert for a paying audience is a very late development. Compared to painting, sculpture, or literature, music is a belated phenomenon with its roots in wars, pubs, and churches. Only from the eighteenth century can we speak of music as a sovereign domain, with live music reaching its peak of popularity in the 1930s. It was almost unfathomable that Attila József would miss a Bartók concert, despite his poverty. The intelligentsia considered such things important. Contemporary music is now the concern of the few... music, otherwise, has pretty much returned to the cinemas, pubs, and those shows where you're allowed to twist and shout. Beethoven's late string quartets, composed around the time of *The Ninth*, are pieces gone wild. They resemble Bartók, for example. It is very hard to understand and follow them. But on demand Beethoven had to transcribe some of them for piano four hands, as there were many families who could not form string quartets and had to settle for a piano. And they did play these pieces! And even these difficult pieces had audiences, although they really tax the attention and the devotion of the listener. There were some twenty thousand people at Beethoven's funeral! Where is this audi-

ence now? Where are the *citoyens*? In literature, you have Robinson as the first realist novel. In it, the world is taken into account rather literally: how much gunpowder I salvaged from the shipwreck, how many and what kind of weapons, tools, seeds—which I need to stay alive. In his diary, Robinson is occupied with recording what he possesses and what he produces. This is a civic attitude: reality is what I possess. I am socially independent with Providence alone above me. But a romantic aspect belongs to this proud, sovereign self just as much as the factual approach does to the world. I do not only own my wealth, I own my decisions. My free, independent person matters too (the romantic aspect), not only the external facts which I soberly register (the realist aspect). Usually—and perhaps correctly—these merits are associated with the ascendance and eventual political triumph of the bourgeoisie. Now, access to radio, to records was already widespread in the 1930s, then microgroove records appeared in 1948, stereo in 1958. When high fidelity sound reproduction started to get more and more popular, most of its consumers presumably belonged to the traditional bourgeoisie. The best speakers could only fit in properly spacious salons. Amplifiers consisted of two separate boxes already in the mono era. All this was crazily expensive. It is telling of the astonishing musical culture of this audience that some of the reviews in the early issues of *High Fidelity* were written by Glenn Gould himself. But artistic music lost a valuable part of its audience with the contemporaneous emergence of the television, and this whole world was starting to go under around 1968, I think. Vacuum tubes were getting replaced by semiconductors, the large speakers, huge cabinets were getting shrunken to the size of a shoebox. The HiFi industry of the USA and the UK, the camera industry of the two Germanies, the watch industry of Switzerland were in no small part replaced by Japanese products. Everything was becoming mass produced—and perhaps of a bit lower quality—so that everyone could buy them. This was the very substance of this change, I think. By that time all members of the middle class, even employees could buy anything that previously only the bourgeoisie could afford. One could buy colourful coffee table books on art and make imaginary visits to the best museums. Occasionally, one could afford a holiday abroad and make those visits reality. With some years of work, one could build a beautiful record collection; HiFi systems were not prohibitively expensive anymore. One could buy a car, a flat, a modest weekend house. Anything that previously only the bourgeoisie could afford, save for two things (being an employee): freedom and leisure time. György Lukács who never abandoned his enthusiasm for the masterpieces of traditional “Bürger” culture, often emphasized—with the French distinction—that we should keep its citizen side but throw away the bourgeois side. Does this alluring notion have some truth to it? Or anything to do with computers? Before there were home

computers and personal computers, using computers was a shared activity—time-sharing—where you were only allocated a short time to use computers personally. But IBM has spoken: “Personal Computer. The computer is all yours, working for you exclusively!” This was a bad principle—the UNIX operating system was the good one, for UNIX is based on one’s collaboration with one’s fellow citizen, “thy neighbour” as it were. The e-mail, the internet, the C programming language are all results and tools of multi-user cooperation. We took the other path. But perhaps in the rosy future, with robots having taken over all the toil of production, with universal basic income, with fully sensual broadcasting and electronic drugs via direct brain stimulation—perhaps then, computers will show their true colours.