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Facing the Future, Facing the Screen

Kristóf Nyíri (ed.)

Budapest 2022

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Facing the Future, Facing the Screen

Perspectives on Visual Learning

Edited by Petra Aczél, András Benedek and Kristóf Nyíri

Volume 5

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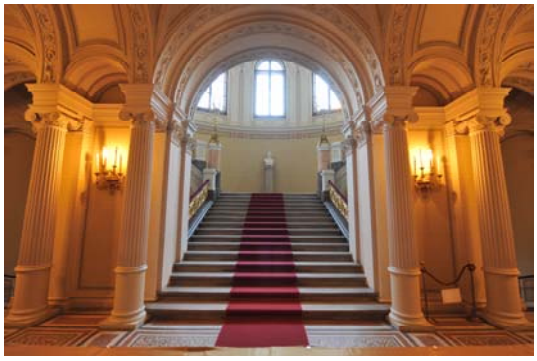
Kristóf Nyíri – Petra Aczél

Preface

The present online volume contains the papers prepared for the 10TH BUDAPEST VISUAL LEARNING CONFERENCE – FACING THE FUTURE, FACING THE SCREEN, held in a physical-online blended form on Nov. 17, 2022, organized by the Committee for Communication and Media Theory of the Hungarian Academy of Sciences. The conference site was the Hungarian Academy of Sciences main building, Budapest.

Main building of the Hungarian Academy of Sciences

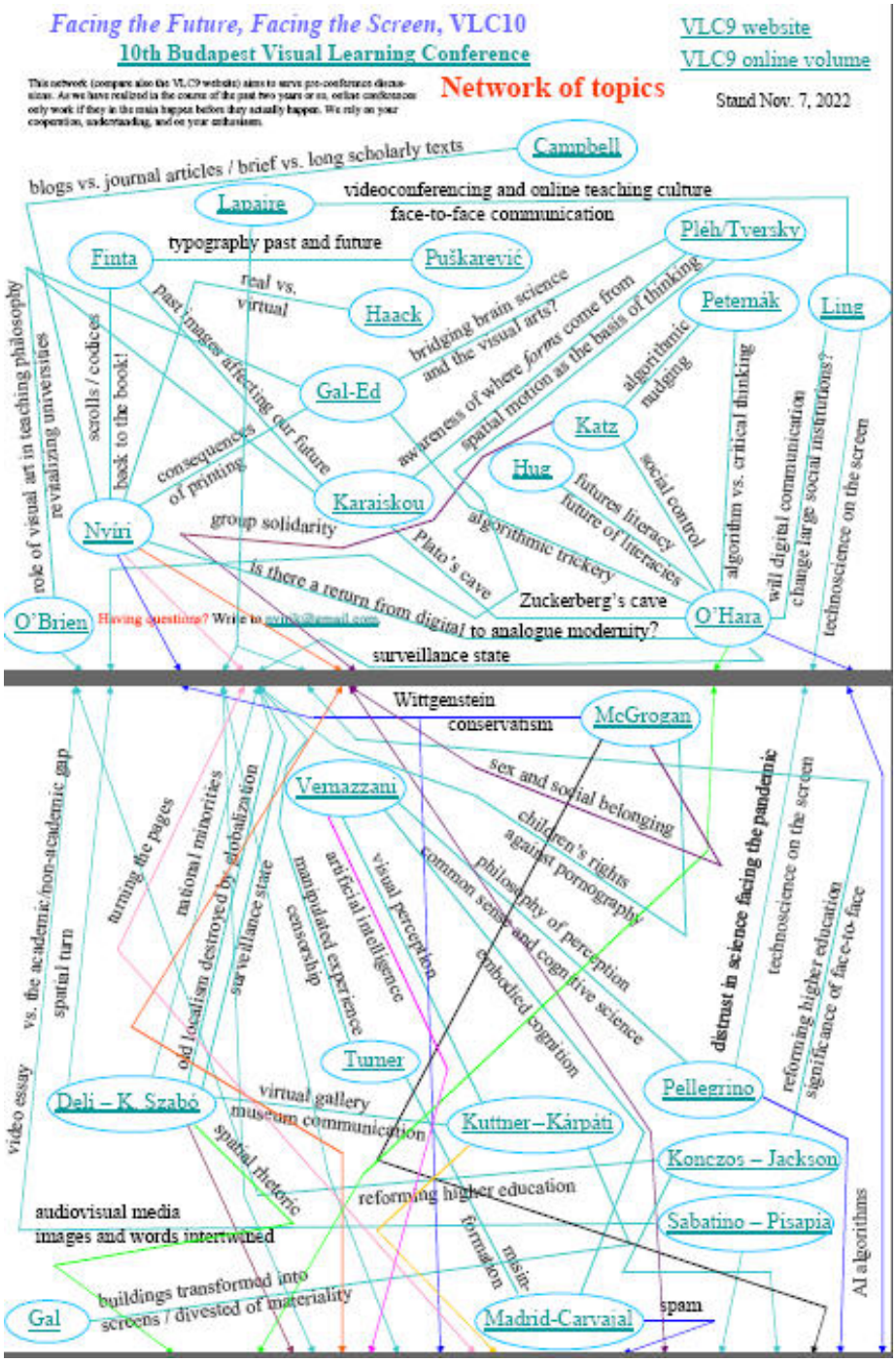


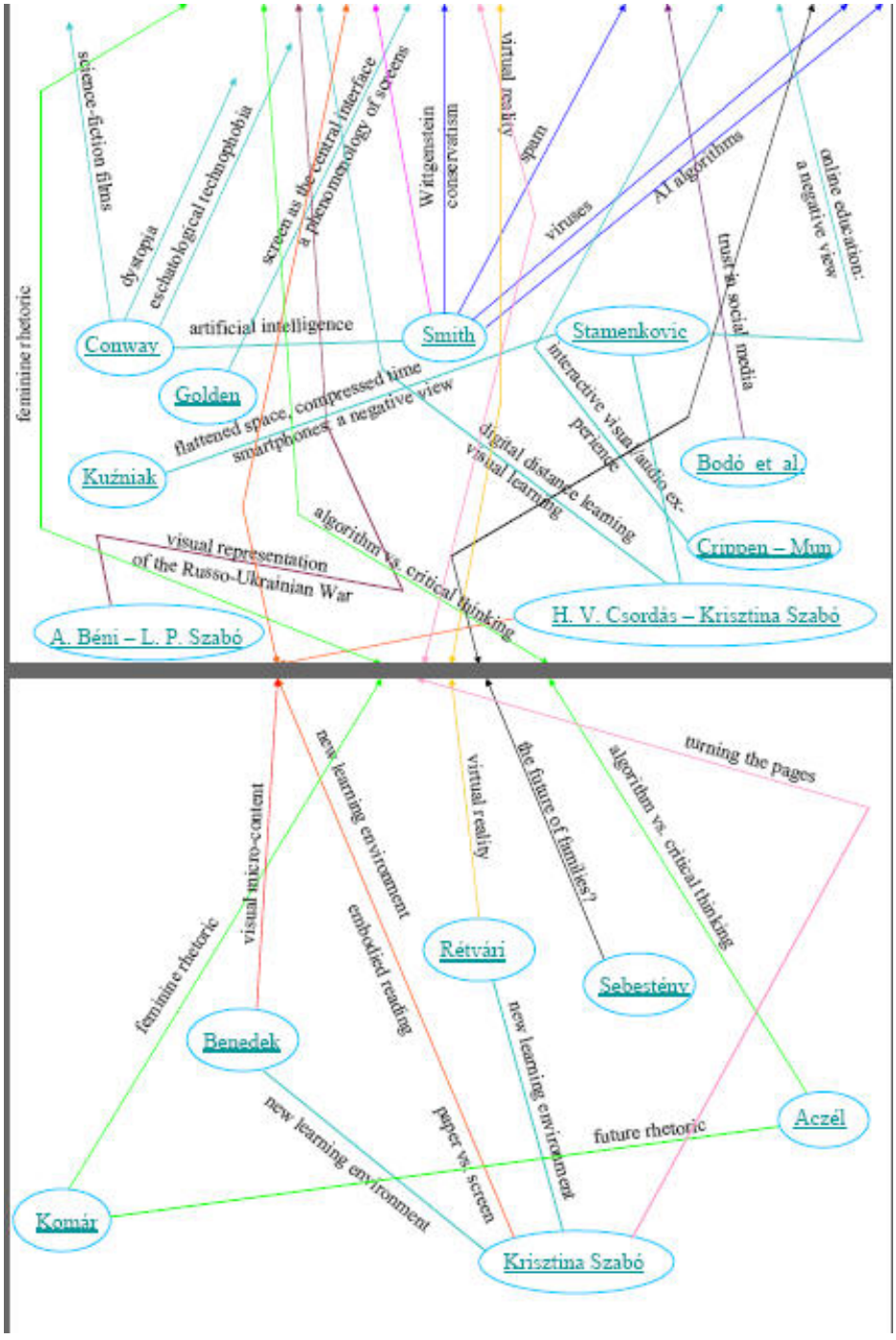
Hungarian Academy of Sciences, entrance stairway

The members of the Scientific Committee coordinating the conference were Prof. Dr. Petra Aczél, Committee for Communication and Media Theory, Hungarian Academy of Sciences, Prof. Dr. András Benedek, Budapest University of Technology and Economics, Prof. Dr. Kristóf Nyíri, Hungarian Academy of Sciences. The Nov. 17 event was directed by Petra Aczél and her impressive young team – Kincső Szabó and Márton Rétvári –, the building up of the conference homepage (http://www.hunfi.hu/nyiri/FFF/FFF.pdf) and the collecting and editing of the preliminary abstracts and the conference papers was the responsibility of Kristóf Nyíri.

As we indicated in the call for submissions, the conference was planned as an interdisciplinary encounter of communication and media theory, picture theory, psychology, philosophy, pedagogy, history, political science, and other specialties. We absolutely expected new scholarly results, aiming at an essential scientific step forward. The central question was: what image of the future can we conceive of in a world based ever more strongly and diversely on digital devices and online communication, what new patterns of life and in particular forms of education should we strive to create, what possible distortions in our way of life should we be prepared for? If on the one hand we assume that primordial thinking emerged not as a verbal but as a pictorial one, as well as of course do recognize the scientific value of today's image creation and image reproduction techniques, and in particular of visual simulation bringing together vast amounts of data in an easily understandable animation; but on the other hand clearly perceive the often destructive effects of phoney images disseminated via social media: in what direction should we then search, under such contradictory conditions, for the right pattern of a pictorial education for the future?

The conference homepage, continuously and dynamically developed in the course of many preparatory months, was meant to bear a substantial burden of the aims we wanted to achieve. Because of the time zone differences, an online international conference cannot last for many hours. So we attempted to provide a preliminary overview of how the papers hang together: see the network pictured here


Facing the Future, Facing the Screen, VLC10
10th Budapest Visual Learning Conference
VLC9 website
VLC9 online volume
Network of topics
Stand Nov. 7, 2022
Campbell
blogs vs. journal articles / brief vs. long scholarly texts
Lapaire
videoconferencing and online teaching culture
face-to-face communication
Pléh/Tversky
Finta
typography past and future
Puškarević
real vs. virtual
Haack
Petemák
Ling
bridging brain science and the visual arts?
awareness of where forms come from
spatial motion as the basis of thinking
algorithmic nudging
past images affecting our future
scrolls / codices
back to the book!
role of visual art in teaching philosophy
revitalizing universities
Gal-Ed
Katz
consequences of printing
Hug
futures literacy
future of literacies
social control
Karaiskou
Nviri
group solidarity
Plato's cave
algorithmic trickery
algorithm vs. critical thinking
will digital communication change large social institutions?
technoscience on the screen
Is there a return from digital to analogue modernity?
Zuckerberg's cave
O'Brien
Having questions? Write to
O'Hara
surveillance state
Wittgenstein
conservatism
McGrogan
sex and social belonging
Vernazzani
children's rights against pornography
philosophy of perception
common sense and cognitive science
embodied cognition
visual perception
artificial intelligence
manipulated experience
censorship
surveillance state
old localism destroyed by globalization
national minorities
turning the pages
vs. the academic/non-academic gap
spatial turn
video essay
distrust in science facing the pandemic
technoscience on the screen
reforming higher education
significance of face-to-face
Tuner
Pellegrino
Deli – K. Szabó
virtual gallery
museum communication
Kuttner–Kárpáti
Konczos – Jackson
spatial rhetoric
reforming higher education
audiovisual media
images and words intertwined
Sabatino – Pisapia
formation
misit
buildings transformed into screens / divested of materiality
Gal
Madrid-Carvajal
spam
AI algorithms


feminine rhetoric
science-fiction films
dystopia
eschatological technophobia
screen as the central interface
a phenomenology of screens
Wittgenstein
conservatism
virtual reality
spam
viruses
AI algorithms
online education:
a negative view
trust in social media
artificial intelligence
Conway
Smith
Stamenkovic
Golden
flattened space, compressed time
smartphones: a negative view
Kuźniak
interactive visual/audio experience
digital distance learning
visual learning
Bodó et al.
algorithm vs. critical thinking
visual representation
of the Russo-Ukrainian War
Crippen – Mun
A. Béni – L. P. Szabó
H. V. Csordás – Krisztina Szabó
new learning environment
visual micro-content
virtual reality
the future of families?
turning the pages
algorithm vs. critical thinking
feminine rhetoric
embodied reading
Rétvári
Sebestény
Benedek
new learning environment
paper vs. screen
future rhetoric
Aczél
Komár
Krisztina Szabó

on the foregoing two pages. Click on http://www.hunfi.hu/nyiri/FFF/NK.pdf, choose an author, and you will be led to her/his bio, abstract, paper, and often a video, too. This arrangement also enabled participants to conduct pre-conference discussions (http://www.hunfi.hu/nyiri/FFF/PCD.pdf) with each other; do read through them, you might learn a lot. Another overview of how the papers hang together is of course represented by the table of contents of the present online volume. We suggest you study this volume and the online homepage simultaneously. When reading the volume, it is best to use the Two-Up Continuous Page Display option.

The Nov. 17 event was opened by a welcoming video from Tamás Freund, world-renown neurobiologist, President of the Hungarian Academy of Sciences, you can watch it if looking at our Program page (http://www.hunfi.hu/nyiri/FFF/PR.pdf). Linked to the same page you find the plenary talk video by famous philosopher Susan Haack.

As said we expected this conference to provide new scholarly results, and we believe such results did in fact emerge. What the results show is that there are no straightforward answers when we ask what the way into the future, looking – or not looking – at the screen should be. At the same time, the divergence of scientific perspectives has also highlighted convergences. It pointed to the deeper reality of the process we call digital development, its impact on people and culture, and the challenges of its scholarly study and application. A synthesis is not yet in sight, but the tensions are becoming clearer.

Kristóf Nyíri

Opening address: Is There a Way Forward – Or Backward?

Dear Participants in the FACING THE FUTURE, FACING THE SCREEN conference, I am the one who was responsible for putting together the conference homepage and editing the submitted abstracts and papers. In dealing with that task I have received essential support from my co-organizer colleagues, especially from Prof. Petra Aczél and her team, I am grateful to them. But mainly I am grateful to you, the participants in this conference, for your hard work, your writing excellent abstracts and papers. Last but not least, I am very much indebted, as the organizers all are, to Tamás Freund, President of the Hungarian Academy of Sciences, for his welcoming video – if you have missed it, see the video link on our Program page. Tamás Freund brilliantly summarizes the main tensions characterizing our online versus offline world. I will come back to those tensions in a minute, but first let me point out that beyond and above striving to assemble new content, new approaches, new views and new results, we are here also experimenting with *a new conference paradigm*. Why is this experiment necessary?

As you are of course all aware of, and many of you nauseated by, COVID-19 has forced the scholarly world to withdraw from holding conferences the way we were used to them, that is by attending in person and meeting people at a given location. What then however happened was that we gradually discovered the relative advantages of online conferences, as well as of online teaching, so kept this practice, as Tamás Freund in his video also pointed out, even after the pandemic was over. But listen: COVID-19 might be over, but the next pandemic will certainly arrive. The reason is overpopulation and overglobalization. Scientific language has coined the term *zoonotic diseases* for those that spread from animals to people. Now it is the destruction of natural habitats, with settlements intruding into the ani-

mal world, forcing animals to move into settlements, that causes zoonotic diseases to emerge, while global travel and commerce then will further spread them. I am providing some links here on the topic in a footnote you can access[1] since, not quite incidentally, the present address, too, is linked to our program page.

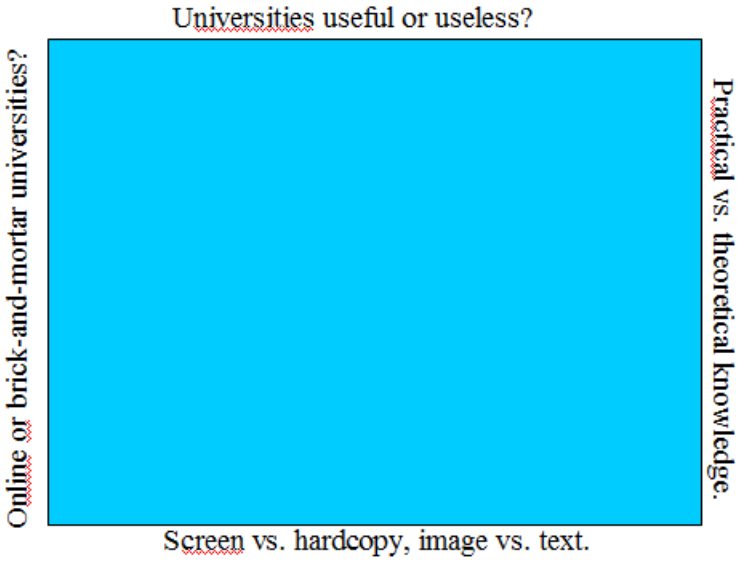
So online conferences will again and again not be a matter of choice, but an inevitable necessity. Now in our experience if you organize an international online conference with participants all over the globe, that conference has to fit, mainly because of time zone differences, into a limited time framework. You cannot expect people in New Zealand or Canada to stay up all night and watch the screen for twelve hours or more. This is why we repeatedly said in our preliminary messages that an online conference in the main has to happen before the actual event happens. Hence the need for a new paradigm. It is in service of such a paradigm we set up the "Network of topics" page, with all abstracts and papers accessible from there, and with links establishing connections between contributions so as to facilitate pre-conference orientation and discussions.

Coming now to the topics themselves: let me say that the tensions between the views of many of the participants, and indeed the tensions apparent in a number of the papers themselves,[2] will make it impossible to conclusively summarize the results of this conference. Attempting to do so would amount to try and square the circle. So instead I will circle the square. The square I have in mind has the following four sides. First, online or brick-and-mortar universities? Sec-

[1] Cf. https://iopscience.iop.org/article/10.1088/1748-9326/ac74d4; https://www.gavi.org/vaccineswork/what-are-zoonotic-diseases-and-how-dangerous-are-they?gclid=Cj0KCQiA37KbBhDgARIsAIzce15k75tOJ1pdgbHNTUB2V3uK2v1e2VoqexclCQ0baofDeqYzqQ_0AOcaAn3EEALw_wcB.

[2] What we see is techno-optimism and techno-pessimism contradicting each other in a number of ways. In the literature these contradictions are seldom clearly articulated, more often they are blurred, blurred, blurred, a notable recent example being Sherry Turkle's *The Empathy Diaries* (2021), see my "Introduction" in Kristóf Nyíri (ed.), *The Sherry Turkle Miracle* (papers prepared for a Hungarian Academy of Sciences online workshop held on May 27, 2021).

ond: universities useful or useless?[3] Third, practical vs. theoretical knowledge. Fourth, screen vs. hardcopy, and image vs. text.



Online or brick-and-mortar universities? As you are of course aware, there is a huge amount of literature, both older and recent, on what a university is or is not, how it should be organized, etc. My favourite is still Cardinal Newman's *The Idea of a University*, published in its first form in 1852. The author here stresses that the university should be a *place* of encounters and exchanges, bringing "a number of young men together for three or four years".[4] A similar view was formulated by Hastings Rashdall, in his *The Universities of Europe in the Middle Ages*, published in 1895. Let me here quote a passage from that work, a passage I have initially quoted in my 1999 paper "Towards a Philosophy of Virtual Education" (and I am embarrassed to refer here to my own past). For Rashdall

[3] "The Useful and the Useless: Newman Revisited" is a chapter title in Stafan Collini's *What Are Universities For*, Penguin Books, 2012. I am indebted to Petra Aczél for drawing my attention to this book.
[4] University of Notre Dame Press, 1982, p. 109.

> [t]he two most essential functions which a true university has to perform are to make possible the life of study, whether for a few years or during a whole career, and to bring together during that period, face to face in living intercourse, teacher and teacher, teacher and student, student and student. It would be a fatal error to imagine that either the multiplication of books or the increased facilities of communication can ever remove the need of institutions which permit of such personal intercourse. A university, therefore, must have a local habitation.[5]

I side, then, with the brick-and-mortar view, realizing of course that today it is inevitable, and appropriate, to complement the traditional university with an online dimension.

Let us turn to the second side of the square, "Universities useful or useless?". Today this question is mostly formulated by asking whether universities should aim at filling "perceived gaps in the workforce" – I am here quoting from O'Hara's 2011 book *Conservatism* – or rather "a basic intellectual training in the fundamental intellectual divisions that have developed in the academy over a period of centuries, independently of brief fluctuations of demand and supply in the job market".[6] Now the essential insight in the popular and political discussions pertaining to this topic of course ought to be that there is no real problem here: University studies should begin with providing some general education aimed at creating outlines of a universal knowledge, subsequently allowing for specialization, either in the direction of a scholarly/scientific career, or in the direction of practical professions.

We now come to the third topic in our list, "practical vs. theoretical knowledge". In 1988 Barry Smith and I published a collection under the title *Practical Knowledge: Outlines of a Theory of Traditions and Skills*.[7] The message of the volume was that *all* knowledge is, basically, practical knowledge. A related earlier approach was that of Dewey in 1938, pointing to the continuity which extends from

[5] Cf. https://www.academia.edu/84460459/Towards_a_Philosophy_of_Virtual Education.
[6] London: Reaction Books, p. 137.
[7] J. C. Nyíri – Barry Smith (eds.), Beckenham: Croom Helm.

"pure science" to "applied science" and from there to the knowledge of the engineer, the mechanic, the chauffeur, and the farmer.[8] I took up the topic again in my 1997 paper "Open and Distance Learning in an Historical Perspective" (and now I am once more embarrassed), explaining in detail that even humanities scholarship in its beginnings had "a markedly practical bent", and I wrote: "Theory is reflection on practice, and is itself practice; however, theories reflecting on theories, and again on theories, might in the event become quite remote from the concerns of everyday life." [9]

Lastly, the fourth side of the square: "screen vs. hardcopy, and image vs. text". These topics have for many years been a central concern of mine. The 1999 paper I referred to earlier has separate sections both on "Documents: paper vs screen" and on "Image and Text". The best way to dissolve the paper vs. screen dilemma, a way costly in time and often financially, too, but I believe absolutely rewarding, is to use blended reading and writing. Anything I possess only in hardcopy I scan in, so as to have a digital version; anything I only have in a digital version I print out, or indeed buy the book. Hardcopies help to have an overview of the whole; digital versions help when searching in the document, copying, editing, and ultimately writing a new text. As to the image vs. text issue, it is my conviction that thinking in images is the fundamental way we think, that the language of gestures is the primordial language of humankind, and that word meanings rest on mental images of the speaker. The Budapest Visual Learning Lab, which has organized the Budapest Visual Learning conferences from 2010 to 2020, was from the beginning in the forefront of the camp that argued for the timeliness of an iconic turn. I trust the present conference will constitute a major step forward in bringing about the victory of that turn. I wish you a great conference.

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[8] I am quoting Dewey in detail in my "From Texts to Pictures: The New Unity of Science", in Kristóf Nyíri (ed.), *Mobile Learning: Essays on Philosophy, Psychology and Education*, Vienna: Passagen Verlag, 2003, pp. 51 f.

[9] *European Journal of Education*, vol. 32, no. 4, pp. 348 f.

FACING THE PAST

Szilvia Finta

The Shadows of Things to Come: The Torahic Jewish Holidays as Milestones of the Future

The language of the heart is the use of images, which is why the Hebrew Scriptures and the New Testament primarily communicate in images, and by decoding them, they encourage men to change the direction of their life.[1] Even though the kind of pictorial thinking (*typology*, *figuralism*) that I want to write about became distorted and then forgotten in Christian theology over the centuries, it remained the same in Judaism, and is also being rediscovered by Christian trends trying to return to their Jewish roots. The Torahic holidays, which Jews celebrate year after year, are full of images experienced at individual, familial, communal, and national level. They speak not only of the past, but also of the future, providing a kind of vision of the future, and in this way strengthening one's identity. In order to take a look at these identity-strengthening pictures, first I would like to write briefly about typology and the Jewish Calendar.

The word typology comes from the Greek noun *typos*, which means: *a mark made as the result of a blow or pressure, mark, trace*; *embodiment of characteristics of function of a model, copy, image*; *an object formed to resemble some entity, image, statue*; *a kind,*

[1] Szilvia Finta, "Language of the Heart: The Role of Pictures in the Hebrew Scriptures and in Rabbinic Reasoning", in András Benedek – Kristóf Nyíri (eds.), *Vision Fulfilled: The Victory of the Pictorial Turn*, Budapest: Hungarian Academy of Sciences – Budapest University of Technology and Economics (*Perspectives on Visual Learning*, vol. 1), 2019, pp. 111–124; Szilvia Finta, "The Power of Vision: The Role of Pictures in Shaping Human Life and Destiny", in Petra Aczél – András Benedek – Kristóf Nyíri (eds.), *How Images Behave* (*Perspectives on Visual Learning*, vol. 4), Budapest: Hungarian Academy of Sciences – University of Technology and Economics, 2020, pp. 5–7.

class, or thing that suggests a model, form, figure, pattern; *the content of a document, text, content*; *an archetype serving as a model, type, pattern, model.*[2] *Typology* – with Latin terminology: *figuralism* – is a "foreshadowing" theory, a foreshadowing of a future person, event, or thing. A foreshadow is an event that happened in the past, a person that lived in the past, and points to the reality of a person or event that will live or happen in the future. Just as *typos*, as a sculptural technical term, meant the mold, which only receives content later, that is, when the thing is created in reality. In terms of the Scriptures, the Almighty is the molder who knows the reality of things, until they are fulfilled, only the molds can be found on Earth in persons, events, objects, that is, they outline what is to come, as if it were its sketches.[3] At the same time, *typos* means a kind of plan in the series of historical events even of Jewish holidays.

The Jewish Calendar begins with the Creation. In Genesis 1:3–5 we read that God created a day, which becomes the basic unit for counting time.[4] Moreover, both in the Hebrew Scriptures and in the New Testament we also find the principle that the unit of days can also denote millennia.[5] On the fourth day God created the Sun, the Moon, and the stars to "serve as signs to mark seasons and days and years".[6] In Hebrew, the word "season" is the word *moed*, which means: *a set time,* of *a point of time,* of *space of time*; *an assembly*; *a*

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[2] Walter Bauer et. al., *A Greek-English Lexicon of the New Testament and Other Early Christian Literature Series*, Chicago – London, The University of Chicago Press, 2021. The word in the New Testament for example: Rom 5:14, Acts 7:44, Mt 12:38–40, Judah 11., 1Cor 10:2–4a, 6, 11, Heb 4:3–5 etc. – *The Greek New Testament*, eds. Kurt Aland et al., Stuttgart: United Bible Societies, 1990.

[3] See typology in detail: Tibor Fabiny, *The Lion and the Lamb: Figuralism and Fulfilment in the Bible, Art and Literature*, New York: Palgrave Macmillan, 1992.

[4] In Hebrew we can read literally: "one day" and not "first day", altogether the first "one day" became the "first day". *Biblia Hebraica Stuttgartensia*, eds. K. Elliger – W. Rudolph, Stuttgart: Deutsche Bibelgesellschaft, 1990.

[5] Ps 90:4, 2Pt 3:8–9.

[6] Gen 1:14. *The Holy Bible* (NIV), Colorado Springs: International Bible Society, 1984.

place in which an assembly is held; *an appointed sign, a signal*.[7] The Torahic holidays are the "Festivals of the Lord" (*moadei Adonai*), so they are always in some form or another times of meeting the Eternal. The basic unit of this meeting is the seventh day, the Sabbath.[8] According to the concept of "one day is a thousand years", the world history also has a kind of Sabbath – Millennium, Messianic Era – after the six thousandth year. Both the rabbis and the early church fathers agreed on this.[9] The Torahic holidays are therefore not only annual meetings with the Eternal, but also have important past and future significance from a historical and salvation historical point of view.

The Torahic Jewish holidays were commanded to Moses to be celebrated by all the people of Israel.[10] These festivals can be divided into two main groups: spring festivals (Passover, Feast of Unleavened Bread, Feast of First Fruits, Pentecost) and autumn festivals (Feast of Trumpets, Day of Atonement, Feast of Tabernacles). At two spring festivals – Passover and Pentecost – and an autumn festival – Feast of Tabernacles – the Jewish people had to go on a pilgrimage to Jerusalem and make a sacrifice there.[11] All of these holidays have historical and agricultural aspects; however while they symbolize future events, they also have a heavenly perspective for Judaism[12] as well as for Christianity.[13] There are many symbols within each holi-

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[7] *Gesenius' Hebrew and Chaldee Lexicon to the Old Testament Scriptures*, Grand Rapids, Michigan: Baker Book House, 1993.

[8] Gen 2:1–3, Ex 20:8–11, 31:12–17, Dt 5:12–15 etc. There is also a kind of Sabbath in the order of the years, the Seventh year (Lev 25:1–7) and the year after seven times seven years, the fiftieth year, the Jubelee (Lev 25:8–34).

[9] *Babylonian Talmud,* Sanhedrin 97a–b, sefaria.org; Iraeneus, *Against Heresies* V., 28:3, 29:2, 30:4, in *Ante-Nicene Fathers* (ed. Alexander Roberts), vol. 1 http://www.prudencetrue.com/images/Irenaeus_Against_Heresies_Book_V.pdf.

[10] Lev 23, Num 28–29, Dt 16:1–17.

[11] Dt 16:16–17.

[12] Rabbi Jonathan Sacks, *Ceremony and Celebration: Introduction to the Holidays*, New Milford and Jerusalem: Maggid Books and the Orthodox Union, 2017.

[13] Cf. Kol 2:16–17. Kevin Howard – Marvin Rosenthal, *The Feasts of the Lord*, Orlando: Zion's Hope, 1997; Dr. Richard Booker, *Celebrating Jesus in the Bib-*

day, which also have an appropriate meaning, and which I cannot cover in this short paper. Also, all holidays are multidimensional, the table concluding the present paper however containing only the most basic characteristics.

Thus, we can see that the holidays given by the Eternal in the Torah – so to speak, dates – annually remind a Jewish person of the past as well as of the future, marking the directions of personal, national, and universal life, and strengthening their identity. From a Christian perspective, holidays are also milestones in salvation history, interventions of the Eternal in history. This type of typological, ancient, Judeo-Christian understanding of history and eschatological thinking kept the desire to return to the land of Israel alive in Judaism for thousands of years. Then it called religious Zionism into existence, and although it faded from Christianity for about 1500 years,[14] it began to revive a few hundred years ago. In its wake together with the return to the literal interpretations of prophecies, it led to a decrease in anti-Semitism in Christian communities, and the support for Jews and Israel grew, and established Christian Zionism.[15]

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lical Feasts, Shippensburg: Destiny Image Publishers, 2016; Darrell L. Bock – Mitch Glaser (eds.), *Messiah in the Passover*, New York: Choosen People Ministries, 2017; Mitch and Zahava Glaser, *The Fall Feasts of Israel*, Chicago: Moody Publishers, 1987.

[14] Cf. Jacob Taubes, *Occidental Eschatology*, Stanford: Stanford University Press, 2009.

[15] Cf. Lawrence J. Epstein, *Zion's Call: Christian Contributions to the Origins and Development of Israel*, Boston: University Press of America, 1984.

	Date	Name and the Torahic commandment	Historical, agricultural and symbolical aspects for Jews		Historical and symbolical aspects for Christians	
Spring	14th of the first month (Nisan)	**Passover** (*Pesach*) First Passover: Ex 12–13. Memorial dinner: Lev 23:4–5, Num 28:16., Dt 16:1–8	Particular redemption and revelation (people of Israel)	First Passover: in Egypt, when the firstborns of the Jews were saved from death by the blood of the Passover lamb. Exodus from Egypt / freedom began. Every later Passover is a memorial dinner. Now: the Jews are waiting for the coming of the prophet Elijah and the Messiah.	1st coming of the Messiah	"First Passover": crucifixion of Jesus as a "paschal lamb", that by his blood all men may be saved from death. (Mt 26:17–30, 1Cor 5:7–8) Memorial dinner: Communion (1Cor 11:23–27)
	15th of Nisan	**Feast of Unleavened Bread** (*Chag Hamatzot*) Lev 23:6–8, Num 28:17–25, Dt 16:1–8		They remembered that during the Exodus from Egypt, the Jews did not leaven the bread to be able to leave for the Promised Land as soon as possible.		This reminds that the body of Jesus Christ – who was the "Bread of Life" – in the tomb did not begin to decompose, because there was no sin in him. (Jn 6:47–51, Acts 2:29–32, 1Cor 5:7–8)
	16th of Nisan	**Feast of First Fruits** (*Chag Habikkurim*) Lev 23:9–14		When the Jews entered the Promised Land, they had to sacrifice to the Lord the first ear of the barley growing at that time.		Jesus Christ as "the first ear" resurrected from the death. (1Cor 15:20–23, James 1:18)
	50 days after 16th of Nisan	**Pentecost / Feast of Weeks** (*Shavuot*) Lev 23:15–22, Num 28:26–31, Dt 16:9–12		Day of Covenant and Giving of the Torah. Lord gave the Law to the people of Israel at Mount Sinai. (Ex 19:1–20:21) The wheat harvest begins.		The day of the coming of the Holy Spirit, the day of writing the Law in the heart of men. (Acts 1–2) The harvest of people (evangelization) begins.
Autumn	1st day of the seventh month (Tishri)	**Feast of Trumpets** (*Yom Terua, Rosh Hashanah*) Lev 23:23–25, Num 29:1–6	Universal redemption and revelation	A dark day because it is at New Moon (cf. Zeph 1:14–18). Anniversary of Creation. Kingship and judgement of God (Ps 98). Celebration of God not just as Creator of the world but its Ruler. Return, repentance, and renewal of the Jews (Neh 8:1–12).	2nd coming of the Messiah	The Messiah will return as King to deliver the righteous – rapture –, judge the wicked. (1Thess 4:13–18, 1Cor 15:51–52, Phil 3:20–21, Rev 4:1–6)
				Ten Days of Repentance, Days of Awe (*Yamim noraim*), on which it is possible to turn to God.		During the plagues of the apocalypse, it is still possible to turn to God. (Rev 6–14)
	10th of Tishri	**Day of Atonement** (*Yom Kippur*) Lev 23:26–32, Num 29:7–11		Once a year on this day, the High Priest entered the Holy of Holies to make atonement for the people of Israel. On this day God forgave Israel.		Israel recognizes that Jesus Christ is the Messiah. (Zech 12:10, 13:1, Mt 24:29–30, Lk 21:25–28, Rom 11:25–27, 2Thess 1:5–10, Rev 19:11–21)
	15–21st of Tishri	**Feast of Tabernacles** (*Sukkoth*) Lev 23:33–44, Num 2912–40, Dt 16:13–15		Season of Joy. It is a symbol of "immigration" into the Promised Land, settling into the Messianic Kingdom. (Is 65:17–25, Mic 4:1–4)		The Messiah will bring the Messianic Kingdom and pitch his tent among his people. (John 14:1–6, Rev 20:1–6, 21:1–22:5)

Vicky Karaiskou

Facing the Future through the Light of the Past

This chapter explores the past-future relation by commenting the consequences of the interpretative frameworks we apply in our daily lives and their interconnection to our perceptions, assumptions and anticipations.

Alicia Eggert's neon installation "All the light you see is from the past" (2017–2019) points out a basic law of physics we are rather unaware of: light takes time to travel, therefor we are able to see and acknowledge due to a gleaming that comes from the past. However, the fundamental premise that slips through the cracks of our awareness is that our interpretative frameworks come from past conditions, as well.

In the Cave's allegory, Plato[1] underlines the power of impression and the consequent mental stiffness as a result of the fixed point of view the chained prisoners have: the prisoners perceive as real the reflection of objects on the wall they stare. Both Eggert and Plato, regardless their points of departure,[2] examine the illusive nature of our awareness.

Unknowingly, we face the future carrying awareness from the past in the form of mental narratives and associations.[3] I stress attention on the future because it constitutes our overarching motivation that determines – and justifies – our existence and actions in the present. In its turn, our experience nourishes our interpretative filters

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[1] Plato, *Republic*, book VII (514a-520a).

[2] On the multitude of the Cave's interpretive approaches and its core focus on goodness, see Valerie V. Peterson, "Plato's Allegory of the Cave: Literacy and 'the good' ", *Review of Communication*, vol. 17, issue 4 (2017), pp. 273–287, DOI: 10.1080/15358593.2017.1367826.

[3] Hal Foster (ed.), *Vision and Visuality*, Seattle, WA: Bay Press, 1988. Also, Patrick H. Hutton, "The Art of Memory Reconceived: From Rhetoric to Psychoanalysis", *Journal of the History of Ideas*, vol. 48, no. 3 (1987), pp. 371–392.

and assumptions that create certainties, and populates our future in the form of expectations and affective dispositions, in a constant vicious circle.[4]

Our perceptive automatisms, anticipations and behaviours base their validity on the value and authority stemming from our cultural environment and the stereotypes it builds.[5] The latter are the invisible, yet omnipotent, narrators, the figures that dominate the space behind the prisoners' backs, populating their impressions and determining their perception of truth.[6] They are the identities and memories we think with, our own mediated lenses that cement the form of reality they experience. The reassuring stability and the sense of belonging they provide, objectify the perceptions of the myths that nourish us, while, at the same time, draw from them more reasons to exist.[7] To paraphrase Susan Sontag, in our digital and media dominated visual reality, images determine the "grammar" and the "ethics of seeing"[8] not only because they proliferate and manipulate reality, but also – mainly – because of their parallel sub-conscious, affective sub-narratives and the mental structures they provide behind their tangible forms and story-telling[9].

Regardless whether we face a two-dimensional reality – on a screen or printed materials – or we observe the three-dimensional world around us, our assumption that we experience the real nature and meaning of things and events, our conviction that our story is the only story, encourages the surrendering to our own myths and dom-

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[4] Wulf Kansteiner, "Finding Meaning in Memory: A Methodological Critique of Collective Memory Studies", *History and Theory*, vol. 41, no. 2 (2002), pp. 179–197.

[5] Jerome Bruner, "The Narrative Construction of Reality", *Critical Inquiry*, vol. 18, no. 1 (1991), pp. 1–21.

[6] Alex Cuc et al., "On the Formation of Collective Memories: The Role of a Dominant Narrator", *Memory and Cognition*, vol. 34, no. 4 (2006), pp. 752–762.

[7] Robert B. Zajonc, "Mere Exposure: A Gateway to the Subliminal", *Current Directions in Psychological Science*, vol. 10, no. 6 (2001), pp. 224–228.

[8] Susan Sontag, *On Photography*, New York: Anchor, 1990.

[9] Joseph LeDoux, *The Emotional Brain: The Mysterious Underpinnings of Emotional Life*, New York: Simon and Schuster, 1996.

inant narratives. Consequently, we participate into making these invisible narratives even more powerful, establishing ourselves as passive observers and relinquishing real freedom, potential and choice.

The role we allow our own cultural past to hold in our lives, impedes us from posing very much needed "what if" questions. At the same time, it makes it hard to associate with the real essence that lays behind the surface of political, environmental, social and other problems and challenges we experience.

Although we cannot escape having multiple filters and lenses that shape our thought patterns, we can certainly beware of the processes that take place below the threshold of our consciousness.[10] Awareness of where our mental forms come from and how we built them, carries the potential to reframe the manner we approach, interpret and react to challenges at all sectors of our lives, and to permit active choice, empowerment and agency. Being the source of every myth that nourishes us, culture has the transformative dynamic to corroborate to social, environmental and political well-being. As important as it is to know the effect that our cultural environment has on our interpretative frameworks, assumptions and anticipations, it is equally important to master our own power to transform the stereotypes in which we live. The ultimate question is whether we want to play the role of the host to our past in its quest to populate our future.

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[10] Marvin M. Chun & Yuhong Jiang, "Contextual Cueing: Implicit Learning and Memory of Visual Context Guides Spatial Attention", *Cognitive Psychology*, vol. 36, issue 1 (1998), pp. 28–71. Also, Martha S. Feldman et al., "Making Sense of Stories: A Rhetorical Approach to Narrative Analysis", *Journal of Public Administration Research and Theory*, vol. 14, no. 2 (2004), pp. 147–170. See also Ruth Leys, "The Turn to Affect: A Critique", *Critical Inquiry*, vol. 37, no. 3 (2011), pp. 434–472.

Irma Puškarević

Seeing through Letterforms – Typography Past and Future

In *Theory of Type Design*, Unger[1] observes that "of all designed objects letters are probably the most pervasive". Their omnipresence, however, as well as the typographic diversity enabled by nineteenth-century developments, Unger believes, seem to have been taken for granted. These remarks suggest that we got accustomed to thinking of letterforms as objects of "service" – visible or tangible marks that make communication possible. This perceivable effortlessness of letterform structures (e.g., written text) is attributed to a vast assembly of graphic conventions i.e. the "grammar of legibility" developed over a course of time. Even though the influences of the "grammar" development are varied (e.g., history of punch cutting or industrialisation of printing), a common understanding of the history behind typography is predominantly adhering to a timeline and to technological developments. The first suggests more or less a kind of straightforwardness, and the latter sometimes excludes cultural, political, economic, and/or religious influences. Aside from the attachment to a linear historical layout, the established canon in typography (and graphic design) also adopted a "center-periphery" model (see smarthistory.org) in pedagogy, research, and practice. As a result, predominantly Western/Eurocentric models of production and distribution of typographic knowledge are the ones most commonly highlighted. Furthermore, within the "center" itself there are peripheral communities and practices. These brief introductory notes have the objective to indicate that there is more to letterforms than what is commonly shared knowledge. In the current state of things – facing the future, facing the screen – typography is at a turn. In one

[1] Gerard Unger, *Theory of Type Design*, Rotterdam: nai010 publishers, 2018.

way, it is a discipline with deep foundations, yet in another way it is a discipline waiting to be reimagined. What this paper hopes to achieve is to consider the existing shifts in the broader scholarship and observe intersecting points with typography and attempt to situate typographic discipline in that fluid space with an objective to assist with the ongoing discoveries of the potential routes into the future typography.

With the advent of digital technology and a transition to a user-centered experience, an opening for other (undocumented, underdocumented, underrepresented) visions and extended narratives started an avalanche of "theoretical intervention". For example, posthumanism is one of the (in the last decade) recent theoretical interventions "critiquing the enlightenment, humanism, liberalism, scientism that still infuse racism"[2] and anthropocentrism. Described by Bradotti[3] as a navigational tool for illuminating a field, posthumanism is generating a space for "comparing notes" across disciplines and setting a stage for turning things around (e.g., making the cartographies the object of exchange; being metadiscursive). Leaning on to a premise, among other things, that "we are facing different histories in different countries", posthumanism is joined with other disciplines in an ontological turn that has generated a lot of contemporary rethinking. Situating typography in this space of emerging new thoughts and rethinking, we can hope to discover routes that lead up to expanding the scholarship of typography.

Leonidas's[4] recent reflections are one step in this direction. He underlines the historical and cultural complexity of typography, as opposed to a streamline of print industrialisation milestones, and also questions the positionality of typography within a broader

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[2] Deborah Thomas, *The Limits of the Counter Archive* (University of California, Humanities Research Institute), 2014, https://www.youtube.com/watch?v=XyFPsVzydgs.

[3] Rosi Braidotti*: Posthuman, All Too Human? A Cultural Political Cartography*, 02 Inhuman Symposium, https://www.youtube.com/watch?v=gNJPR78DptA.

[4] Gerry Leonidas, *The Role of Individuals and Institutions in Knowledge Production* (January 2022), https://www.youtube.com/watch?v=XYDtiHH8eco.

scholarship. The main questions he asks are *Is typography a separate discipline?* or *Is typography a part of applied art or even applied humanities?* He notes that typography is still a young discipline even though its foundational roots are deep. Because of this unusual level of maturity, typography's integrity, as a separate discipline, is questioned. To affirm typography's scholarly value, Leonidas "compares notes" with other disciplines, specifically focusing on the discipline of history. By comparing typography to such a well-established discipline, he observes the fact that history doesn't have to justify its "existance" but also notes that there was a time in history when mature disciplines needed to cross the "bridge of justification". Considering that typography is currently at one such crossing, the question we can pose is *How do we guide the discipline towards its maturity and, therefore, its expansion?* Leonidas believes that the key is in turning to the history of typography and applying methods of rethinking from more established disciplines, such as the discipline of history. History is constantly being rewritten as new ways of interpreting sources are discovered, he states, suggesting that the model of rethinking and asking questions about primary sources is something typography can borrow from history. Furthermore, Leonidas believes that visiting archives and returning to primary sources can endorse field expanding efforts in a way that we should observe typography as an entry point to understanding the complexity of cultures.

From the above, we understand that reimagining typography takes into account the model of rethinking the history which is different in every country or region. We also understand that complexities of cultures (and their identities) are another element in this narrative which are intrinsically embedded in histories. Moving forward, and in the light of "comparing notes" and being metadiscursive, we can attempt to search for other intersecting points of broader scholarship with typography and history. Let us zoom out for a moment and observe typography once again as a part of a broader ontological turn and let us "search" for typography and history at the intersection of other disciplines. In the efforts to search for relevant crosspoints, we can list previously discussed key features of this discipline as guiding threads: typography is more than a relation to technology; more than

a legibility of writing systems; more than an element for meaning production. Adding to this list two additional views – typography as a "historical object" endowed with multiple historical narratives and typography as an expression of cultural identity – presumably will help us navigate the search more relevantly. After this thought exercise several relevant crosspoints emerged as potential convergencies for consideration: the "archival turn", postdigital theory, and cultural identity. In the attempt to contribute a small perspective to the typographic scholarship, I am going to observe intersectionality between a postdigital condition, restructuring of archives, and typography as a culture-defining element.

Starting with the postdigital theory, we accept that digital is no longer a new construct but rather a given state which implies that we live in a postdigital condition.[5] What is assumed here is that physical and digital are fused together and that there is no favourability of one over another. In the postdigital condition, the role and the format of many disciplines and practices is altered. Zooming in on archives, we see that their format has been restructured and that their role now is much more open-ended. When we consider Jandrić's proposal:

> Whenever you have a concept, like "technology enhanced learning" or "network learning", etc., this concept is immediately burdened with tradition, with a certain set of canons, with a certain type of philosophy behind it[6] –

we understand that we are allowed, i.e. it is accessible for us now to adopt non-restrictive formats of archive structures. Moving past canons and moving past singularity, there is an opportunity to mobilise archives, think of them as critical tools, as "interruptions", as "subject". Not only does postdigital condition with its "blended materiality" allow more and varied access, it also allows one to think about archives (and other disciplines) in a structurally different way. What

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[5] Jandrić et al., "Postdigital science and education", tandfonline.com, 2018, https://doi.org/10.1080/00131857.2018.1454000.
[6] Compare note 9 below.

was once Derridian[7] impression:

> Have we ever been assured of the homogeneity, of the consistency, of the univocal relationship of any concept to a term or to such a word as "archive" –

is today a lived reality. At the intersection of postdigital and the studies on the archival turn, we can observe potential routes for the future of typography. For example, we can try to adopt the Jandrić[8] et al. approach and provide a "blank page" for reimagining the discipline not burdened with canons and allow a community to build on its parameters. This might seem like a radical step for typography as there are already deep foundations, and therefore existing canons. Nevertheless, it could be something we entertain as a possibility and develop a temporal framework for going down this particular "slide" at the postdigital playground. In considering other routes, our attention should turn to "moving away" from the canon. Striving for the expansion of scholarship and not replacement of one canon with another, we could put our efforts in understanding how to use "critical participatory cross-disciplinary space" of the postdigital condition and propose guidelines for "moving away" from the canon. In this respect, the main consideration could be *What does "moving away" from the typographic canon mean?* And *How can "moving away" from the typographic canon formally manifest?*

As a starting point in thinking about what constitutes decentering from the canon, we can consider Leonidas's proposal to,

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[7] J. Derrida, "Archive Fever: A Freudian Impression", transl. E. Prenowitz, *Diacritics*, vol. 25, no. 2 (1995).

[8] Jandrić et al., https://www.springer.com/journal/42438. In a conversation with Felicitas Macgilchrrist (see https://www.youtube.com/watch?v=1daxhqkhv7A&t=1175s) about postdigital theory, Jandrić shares his views on starting a *Postdigital Science and Education* journal and scholarly community: "It is not just what I make of the concept of postdigital or what Sarah (Hayes) makes of it or what anybody makes of the concept. It's about what the community makes of the concept together and how this concept will develop into the future."

first, consider typography as a complex subject matter and, secondly, when spotlighting the history of typography consider it as a network of influences. These thoughts also directly feed into the answers for the second question about the formal manifestation of a reimagined canon. Here, once more, we can turn to studies on the archival turn, specifically to postcolonial studies. Previously in the paper it was established that reimagining typography is contingent upon turning towards history and, by "nature", history is tied to archives. At the present time, archives are being restructured (which is influenced among other things by the "material turn"). At the intersection of these multiple "turns", we can observe that the scholarship is moving away from the concept of archives as "source" towards archives as "subject", as well as reorienting the focus from the archive (e.g., how documents are selected, catalogued, etc.) to their materiality and performativity. In a way, this particular archival shift toward a "site of constitution for the communities" is to be expected as it was already observed by Darrida who stressed that archives will not be a beacon of democracy just by making them accessible to the public but also through the level of participation of the public in their constitutions and interpretation. We can conclude that reimagining typography will not only be influenced by how we thread complex routes of history but also how the new (postdigital) materiality and community participation affects the new knowledge production.

At the core of all the intersections observed in this paper are digital tools i.e. technology. Apart from (re)thinking about conceptualisation of future scholarship, we are bound to observe the tools that are taking us there with a critical interest considering that a conventional stance on technology is an automatic "fix". Hayes[9] is addressing this tendency to normalise technology as a "super power". In her critique towards a belief that "technology will fix everything" she proposes a concept of "postdigital positionality" as an alternative perspective. Her perspective is advocating for humanity coexisting with technology. This perspective is translating to diversity of indi-

[9] Georg-Eckert-Institut, *Postdigital Lunch 01: Postdigital Theory* (2020).

viduals and their positionality which brings their unique experiences to the foreground. If we extend this reasoning to the reimagining of typography, we can consider the concept of positionality as bringing to the foreground a diversity of cultures and unique historiographies of their local/national/regional spaces. As the last concept in the set of considerations in this paper and their convergence, postdigital positionality also grants affirmation to future typography as a process, and more so, as a transnational process. In a globally linked and technologically mediated society typography has the opportunity to open pathways for a network of typographic narratives, multiple cultural perspectives, and multidimensional structures of archivisation with a hope of adding to the new ecology of belonging.

Kristóf Nyíri

Turn the Leaf

Scrolling down a text is not an entirely new experience in human history. In ancient Greece the earliest texts were written on clay or wax tablets, with parchment scrolls as the next development. Then came the codex, with pages one could turn, first in very crude forms, however much refined during the Middle Ages,[1] lastly becoming, in Gutenberg's time, the printed book as we today know it. In the past decades the typical layout of the printed book has changed. Footnotes became endnotes, then were often dropped entirely, with the (author, year) reference system becoming mainstream. Now you really have to turn the pages – going from the main text to the bibliography at the end of the chapter or the volume every time you encounter a reference, and than going back to the main text again.[2] Printed books, and printed journals, are today produced in previously unknown numbers – alas mostly by predatory publishers, terrorizing and financially exploiting authors. However, those books and journals are hardly read by anyone. The printed text has been supplanted by the digital document you read on your screen. This development is not an altogether felitious one, as by now pointed out in many scholarly contributions. My favourite is Andrew Piper's *Book Was There: Reading in Electronic Times*.[3] Piper's main message: "Reading isn't only a matter of

[1] By the 13th century there emerged codices with complex visual layouts, including specific images directing the reader's eye to the appropriate place in the text. See Anna Somfai's brilliant paper "Visual Thinking: A Cognitive Reading of Codex Layouts", in András Benedek – Kristóf Nyíri (eds.), *Visual Learning: A Year After*, Visual Learning Lab Papers no. 9, Budapest University of Technology and Economics, 2019.

[2] Cf. my paper "How to Cite: The Glory and Misery of the (author, year) Reference Style", 2020.

[3] The University of Chicago Press, 2012. I will quote from his online selection "Out of Touch: E-reading isn't reading".

our brains; it's something that we do with our bodies." He refers to those well-known lines in Augustine's *Confessions* telling about his conversion, picking up, reading and then closing the Bible, marking his place with his finger. "Augustine", Piper continues,

> was writing at the end of the fourth century, when the codex had largely superseded the scroll as the most prevalent form of reading material. We know Augustine was reading a book from the way he randomly accesses a page and uses his finger to mark his place. The conversion at the heart of *The Confessions* was an affirmation of the new technology of the book within the lives of individuals, indeed, as the technology that helped turn readers *into* individuals. Turning the page, not turning the handle of the scroll, was the new technical prelude to undergoing a major turn in one's own life.

As Piper then puts it, the "graspability of the book" is of enormous significance;[4] he points to Aristotle's view that touch is the most elementary sense. Thus in today's digital world touchscreens and handheld devices, Piper suggests, may amount to a way forward; still, digital documents should not supplant printed ones. Ideally, printed and digital texts might complement each other.[5]

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[4] See also Tim Challis, "5 Reasons Books Are Better Than E-Books": "Books are a tactile experience. An e-book reduces books to merely words; a printed book maintains that a book is far more than words – it is an experience and an object. Books can be touched, they can be held, they can be smelled (particularly if they are old!). A book includes a cover, a binding, a slip cover, the texture of words or images impressed upon that cover, the pages, the deckled edges, the weight of the paper, the feel of turning a page. All of these elements combine to make a book what it is."

[5] Cf. Andrew Piper et al., *Interacting with Print: Elements of Reading in the Era of Print* Saturation, Chicago: The University of Chicago Press, 2018, p. 16: "We think the fusion of print and digital media will prove in the end to offer a substantial contribution to how we as academics think and communicate."

Another line of reasoning is one initiated by Dimler in 1986,[6] analyzing the setbacks not just of reading on the screen, but also of composing texts on it. I have described in detail Dimler's argument, and similar ones following upon it, in my 1994 paper "Thinking with a Word Processor".[7] Let me quote somewhat longer from that paper:

> a text composed on screen tends to be less coherent than a text composed in handwriting or on the typewriter. The reason for this is obvious. Maintaining coherence is a matter of comparing texts with each other, as well as of comparing one bit of a text with other bits of the same text. On screen such comparisons can be executed to a very limited extent only. Depending on the system used and the kind of display available, one, two, or even more documents can be viewed simultaneously; but of each document only a small segment will be exposed at a time. Comparison of segments of texts – their juxtaposition – is of course becoming less awkward as programs allowing for a flexible use of so-called "windows" are increasingly available. Working with windows does indeed resemble working with sheets of paper – but the resemblance is confined to narrow limits. A synoptic view of all accessible and relevant documents, or even of a single extended document, is not possible to attain. Contradictions become difficult to spot; the unity of a text difficult to sustain. A decrease in logical rigor is the inevitable consequence.

And finally a third approach, that of Sven Birkerts in his *The Gutenberg Elegies: The Fate of Reading in an Electronic Age*, of which book I sense faint echoes in the Challis piece quoted above (see note 4). As Birkerts puts it: "our sense of the past ... is in some essential way represented by the book and the physical accumulation of books in library spaces. In the contemplation of the single volume,

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[6] G. Richard Dimler, S.J., "Word Processing and the New Electronic Language", *Thought*, vol.61, no.243 (Dec. 1986).

[7] In R. Casati (ed.), *Philosophy and the Cognitive Sciences*, Vienna: Hölder-Pichler-Tempsky, 1994, pp. 63–74.

or mass of volumes, we form a picture of time past as a growing deposit of sediment; we capture a sense of its depth and dimensionality."[8]

Now whatever arguments we might marshal in favour of the printed book, fact of the matter is that students today (as well as most people) do not read long texts, neither in print nor on the screen. Being brief is the new normal. Working with digital texts, using the rich resources of the internet, and indeed recognizing that brief documents, texts and images, in these days have their clear advantages, seems to be inevitable. How to achieve a balance between the printed and the digital? My impression is that such a balance can only emerge if we in a sense embark on a road leading back to earlier times in human cultural history, or to put it bluntly: to earlier times in human history. That means turning a leaf not just in a book.

[8] Boston: Faber and Faber, 1994, p. 129.

James Campbell

Say Less – Mean More

Our digital Gaia is one of near-limitless choice – our online "attention economy"[1] an unstable ecosystem of eyeballs and clicks. This is the "TLDR" Era: an age of memes, video shorts, and succinct text, as we cycle addictively through consumption and reaction from Tumblr to TikTok to Twitter. Although brief, and sometimes cryptic, such communication is also often explosively creative and densely layered in cultural and social semantics. Novel technologies, new (and social) medias, cater for – and to some extent fuel – this creation. In such a way they signify, and seek to address, our dissatisfaction with traditional medias. Much like "legacy media", legacy academic publishing now risks obsolescence as its institutional hegemony is steadily eroded by innovative digital platforms and their supporting technologies. What might the implications of this volatile techno-topography be for scholarship – both its creation and dissemination?

Here I argue for the academic blog as a medium that has yet to fulfil its potential but would be revolutionary if it did. This would not be an online imprint of a physical resource – some mere digital facsimile – but rather a new scholarship, one with both feet in the digital realm. It would mete the common complaints against traditional academic publishing: that it is slow, opaque, and expensive. Yet it would seek to retain the best of traditional forms, i.e., scholarly rigour and peer review, but do so in an original way.

"Weblogs", as blogs were initially known,[2] first appeared in earnest in 1996.[3] Hailed as a "disruptive tech" of "violently dis-

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[1] Herbert A. Simon, "Designing Organizations for an Information-rich World", in M. Greenberger (ed.), *Computers, Communications, and the Public Interest*, Baltimore, MD: Johns Hopkins University Press, 1971, pp. 40 f.

[2] Rebecca Blood, "Weblogs: A History and Perspective" (September 7, 2000), *Rebecca's Pocket*, http://www.rebeccablood.net/essays/weblog_history.html.

ruptive force",[4] the blogosphere quickly became a crowded market, and academics turned both to study and employ the medium.[5] From early individual forms – reflective journals, diaries, and explorations of private passions endlessly scrolling in reverse chronological order – the blog increasingly became professional and commercialised.[6] Some sought to show the quality of products or services, others served as marketing (and "SEO") tools for something other than the blog. However, some blogs are themselves the product, i.e., an academic blog that publishes high-quality research. And so, whilst long-mooted notions of the "death" of blogging have been debunked,[7] the form, function, and style of blogging has changed, and will continue to do so.

Much like the printing process of the visionary Blake,[8] the blog hands the keys of the kingdom to the creator: to imagine, and themselves make manifest, their own writing, typesetting, illustration, artwork, publishing and more. The "democratising"[9] power of

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[3] Geert Lovink, *Zero Comments: Blogging and Critical Internet Culture*, Abingdon: Routledge, 2008; Jill Walker Rettberg, *Blogging*, 2nd edition, Cambridge: Polity, 2014, chs. 1-2.

[4] John Hiler, "Blogs as Disruptive Tech: How Weblogs Are Flying under the Radar of the Content Management Giants" (20.06.2002), cited in Jeremy B. Williams and Joanne Jacobs, "Exploring the use of Blogs as Learning Spaces in the Higher Education Sector", *Australasian Journal of Educational Technology*, vol. 20, no. 2 (2004), see esp. p. 234.

[5] Laura Gurak, Smiljana Antonijevic, Laurie Johnson, Clancy Ratliff, and Jessica Reyman (eds.), *Into the Blogosphere: Rhetoric, Community, and Culture of Weblogs* (2004), https://hdl.handle.net/11299/172275.

[6] Cornelius Puschmann, "Blogging", in Susan C. Herring, Dieter Stein, and Tuija Virtanen (eds.), *Pragmatics of Computer-Mediated Communication*, Berlin: De Gruyter Mouton, 2013.

[7] Jodi Dean, *Blog Theory: Feedback and Capture in the Circuits of Drive*, Cambridge: Polity, 2010, pp. 33–60.

[8] Alexander Gilchrist, *The Life of William Blake* [1863], Mineola, N.Y.: Dover Publications, 1998.

[9] Jack M. Balkin, "Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society" (2004), *New York University Law Review*, vol.79, no. 1, p. 4.

the blog – its dissident, counter-hegemonic potential – is made clear in others' characterisations of bloggers as Publius-like figures,[10] or 21st century "pamphleteers", à la Thomas Paine.[11] For academic work, this deinstitutionalises and decentralises scholarship, from publishing houses to scholars – wherever they might be. Now for the cost of bandwidth and hosting, any intellectual can become a *public* intellectual.

In legacy academic publishing, law scholarship – particularly within journals – has long been criticised as bloated, interminable, and inaccessible (in all senses).[12] The prose may lack élan,[13] and its voluminous footnoting can be monstrous, self-referential, and epistemologically autopoietic.[14] The blog, in contrast, is fast and responsive,[15] allowing academics to engage effortlessly in instantaneous global dialogue. Indeed, the blog inherently fulfils many of the values most strived for in contemporary academia: impact, open access, and public engagement.

The scholar – digitally emancipated – may experiment with, or abandon, the formalities of academic writing: to write succinctly, creatively embrace multimedia, hyperlinks, and other digital resources,[16] and perhaps even to reach different or non-traditional

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[10] Gail Heriot, "Are Modern Bloggers Following in the Footsteps of Publius? (And Other Musings on Blogging by Legal Scholars)", *Washington University Law Review, vol.* 84, issue 5 (2006), p. 1113.

[11] Donald J. Kochan, "The Blogosphere and the New Pamphleteers", *Nexus – A Journal of Opinion* 11 (2006), pp. 99–109.

[12] Fred Rodell, "Goodbye to Law Reviews", *Virginia Law Review* , vol. 23, no. 1 (1936-7), pp. 38–45.

[13] Kenneth Lasson, "Scholarship Amok: Excesses in the Pursuit of Truth and Tenure", *Harvard Law Review*, vol. 103, no. 4 (1990), pp. 926–51.

[14] J. M. Balkin, "The Footnote", *Northwestern University Law Review*, vol. 83, nos. 1 & 2 (1989), pp. 275–320, see esp. p. 277.

[15] Eric J. Segall, "The Law Review Follies", *Loyola University Chicago Law Journal*, vol. 50, issue 2 (2018), pp. 385–94.

[16] Tim Hitchcock and Robert Shoemaker, "Making History Online: The Colin Matthews Lecture for the Public Understanding of History", *Transactions of the RHS* 25 (2015), pp. 75–93, see esp. p. 87; Greg Myers, *The Discourse of Blogs and Wikis*, London, Continuum, 2010, pp. 38-45.

audiences. Liberated from the commercial sensibilities of the neo-liberal university-library "industrial complex", and the fads and fashions of national and regional funders, academics may publish scholarship as niche or as provocative as they wish. Blogs can offer independence and new ways of commodifying academic work whilst nurturing emergent virtual communities. And yet, despite such promise, the blog retains a "stigma" of amateurism,[17] and perceived illegitimacy.[18]

In the war of new and old medias, the blog is still often viewed as a "pre-scholarship"[19] forum: a place for first drafts,[20] "micro-discoveries",[21] and fragments.[22] Of course, blogs can facilitate the "iterative process" of thinking by writing,[23] but I argue for the blog not as ancillary to "real" research – not as a second tier of scholarship, a marketing tool, or public engagement measure[24] – but instead as a medium for significant scholarship in its own right. The blog holds that brevity is the soul of wit. But it is hard to be precise, especially when poetical obscurantism is so easy. Indeed, I argue that when many (but not all) journal articles are truly pared back, their

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[17] Joanne Jacobs, "Publishing and Blogs", in Axel Bruns – Joanne Jacobs (eds.), *Uses of Blogs*, New York, N.Y.: Peter Lang, 2006, p. 34.
[18] Lyle Denniston, "Legal Blogs: The Search for Legitimacy", *Nexus – A Journal of Opinion* 11 (2006), pp. 17–22.
[19] D. Gordon Smith, "A Case Study in Bloggership", *Washington University Law Review*, vol. 84, issue 5 (2006), p. 1135.
[20] Hitchcock and Shoemaker, *op. cit.*, p. 88.
[21] Eugene Volokh, "Scholarship, Blogging, and Tradeoffs: On Discovering, Disseminating, and Doing", *Washington University Law Review*, vol. 84, issue 5 (2006), see esp. 1096-99.
[22] Mark Elliott, "Should academic lawyers blog?" (25 June, 2014), *Verfassungsblog*, https://verfassungsblog.de/academic-lawyers-blog/.
[23] *Ibid.*
[24] Peter W. Martin, "Possible Futures for the Legal Treatise in an Environment of Wikis, Blogs, and Myriad Online Primary Law Sources", *Law Library Journal*, vol. 108, no. 1 (2016). pp. 7–32, see esp. pp. 28 f.

original ideas and new analysis could be contained in a blog's length (c.1000 words). I envisage a more comprehensible, but not simplified, scholarship: brevity, but not at the expense of scholarly longevity, occasional levity, or beauty.

TOWARDS A NEW RHETORIC

Petra Aczél

Screening the Future Faces of Rhetoric

What do we have to do with the fact that in 2022, for the first time in the history of art, at the Colorado State Fair, in a competition for the creation of paintings the award was given to a picture – titled "Théâtre D'opéra Spatial" – created by an artificial intelligence program called Midjourney, based on the linguistic instructions and rhetoric of Jason Allen? We might think that this is a unique phenomenon of technocracy, a sensation that all the media are eager to report. But we could also argue that new technologies, from algorithms to deep programming, are recomposing our everyday lives, our spaces and our activities. We can assume that this era can be characterized by a form of rhetoric again, if we accept that rhetoric is a science based on procedures of persuasion and engagement.

Interestingly enough, we may not be prone to realize fundamental changes and act in accordance with them. Two years ago, when the pandemic almost unexpectedly rearranged formal and informal interactions, and ways of life overnight, we used to say: nothing would ever be the same again. Strangely enough, after the restrictions and the exclusivity of the online space were lifted our lives seemed to return to the same way they were. Or did they not? What challenges did and do such profound changes pose for rhetoric? Is it generally true that "One of the greatest challenges facing the discipline of rhetoric ... is its inability to theorize and deploy emerging technologies before they have already transformed the material conditions of rhetoric and writing"[1]?

My basic premise here is that the complex changes around us, the decisive turns (also known and named as *crises*), amplify the im-

[1] Scott Sundvall and Joseph Weakland, "Introduction", in Scott Sundvall (ed.), *Rhetorical Speculations: The Future of Rhetoric, Writing, and Technology*, Boulder, CO: University Press of Colorado, 2019, p. 3.

portance of rhetoric. Rhetoric arises where contingencies occur, where there are no easily applicable rules, norms or settled behaviours, where a new space opens up for necessary social inventions (see Lloyd Bitzer's piece on the rhetorical situation[2]). The 20th century was, indeed, a time of great rhetorical turns. These lines of turns also point to a change in the main foci, to the switches in the scholarly interests and expectations within and towards rhetoric. These turns mark not only the past but also the future of rhetoric.

I consider a shift in rhetorical scholarship a turn when it changes the course of the discipline, attracting several theoreticians and practicians to share new views and approaches. In the last century the first of such turns was that of I. A. Richards' (*The Philosophy of Rhetoric*, 1936) and Kenneth D. Burke's (*A Rhetoric of Motives*, 1945) who introduced a new kind of rhetoric: one that deals with misunderstandings and their remedies, one that is present in every human interaction to create consubstantiality, that is, the possibility to share our substantiality with another human being. This turn – lasting from the 1930's to the 1950's – can be labelled as the semantic turn of rhetoric, the focus of which was human understanding via the message; it concentrated on the "what" of the rhetorical practice.

The second turn is about argumentation and pragmatics. Authors as Stephen Toulmin (*The Uses of Argument*, 1958), Chaïm Perelman and Lucie Olbrechts-Tyteca (*La nouvelle rhétorique*: *traité de l'argumentation,* 1958) or Frans H. van Eemeren and Rob Grootendorst (*Fundamentals of Argumentation Theory: A Handbook of Historical Backgrounds and Contemporary Developments,* 1996) were the ones who reformulated argumentation and offered new socially embedded, pragmatically contextualized models of debating. Providing alternatives to formal logical formulas they outlined new structures and ways to create claims and come to commonly shared conclusions: they again offered a new rhetoric. We may call this turn –

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[2] "The Rhetorical Situation", *Philosophy and Rhetoric*, vol. 1, no. 1 (1968), pp. 1–14.

stretching from the 1950's to the 1990's – the argumentative one, which highlighted the "why" in human communication.

The third turn, starting in the 1990's, brought the mode of communication back in sight, grasping on the "how" of rhetorical discourse. It was, and it still is, about the visual turn in rhetoric, hallmarked by works of George Kennedy, Debra Hawhee, Karen Foss or Charles Hill. These authors have rediscovered the non-verbal in the rhetorical tradition and have set out on a new path to recognize the totality of interaction, realizing the utmost importance of visuality-sensuality in articulating the world. It is by this turn that we arrive at the 21st century, where digital technologies became ubiquitous.

The digital revolution brings with it a fourth turn in rhetorical theory, that of the technological, starting in the 1990's and leading to the 2010's. As media becomes persuasive by algorithmic design (see the science of captology invented by B. J. Fogg) and webpage layouts, platform architectures serve as motivators of communication while video and virtual games immerse users, rhetoric develops into a technology itself. Digital rhetoric – a term coined by Richard Lanham – is about the communication within the digital sphere, between humans, screens and technology. Douglas Eyman's *Digital Rhetoric* (2015) clearly marks this turn, highlighting the "means" by which the new communicative culture is being built.

After enumerating these four seminal shifts and turns in the recent past of rhetorical theory, we should be brave enough to foresight the future of rhetoric. What will come next after the "what", the "why", the "how" and the "by what means"? Rhetoric is definitely capable of analyzing itself and pointing ahead, into the future. The study of rhetorical circumstances was a device by which a social situation could be better understood and more effectively planned. These circumstances were the "quis, quid, ubi, quibus auxiliis, cur, quomodo, quando", that is, the "who, what, where, by what aids, why, how, and when". If we look at the four shifts (which are all rooted in their respective "where"-s and "when"-s), we can find out which is the sole circumstance that has not been focused by rhetorical theory so far. It is the "who". Therefore, my second main premise here is that the close future of rhetoric is going to be about the

rhetoric of the person. In this probable fifth rhetorical shift the "who" has to be re-invented and structured. Who is the creator of the award-winning picture mentioned in the introduction above? Who is the person in manipulated or synthetic audio-visual media created by machine learning and deep learning AI that appears to be authentic, and, in which the persons appearing say or do what they did not say/do in reality? Who are deepfakes? How do and will new methods of persuasion create human-like figures to move, amuse and lead us? This is the challenge that lies ahead of us, this is what awaits beyond screens.

This is what we need to face when we screen the future of rhetoric.

Zita Komár

Facing Future Leaders
Genial Rhetoric as the Operating System of Responsible Leadership Communication in the Context of Higher Education

The study of persuasiveness as a complex phenomenon has now secured a high social relevance, therefore a broadened and deepening understanding of the nature of persuasion is required, backed up by the recognition that entirely new expectations ground the field of interpersonal communication in the postmodern age. The conceptualization and foundation of *Genial Rhetoric* – a phenomenon that introduces an alternative strategy of doing rhetoric in contrast to classical persuasive methods – is very much needed in general and most importantly, in the context of education as well. The aim of this study is then to broaden the field of leadership communication practices by re-thinking and extending the conventional idea of communication skills development in higher education. For this reason, the paper aims to introduce the concept of Genial Rhetoric and its strategic method of *non-persuasive persuasion* grounded in the rhetorical situation and built upon interdisciplinary foundations in order to re-frame the goals and possibilities for the professional development of the next generation of leaders.

The *non-persuasive persuasion* method is surrounded by the idea of the *powerful powerless communication* that describes persuasiveness as a dialectical, dialogical, democratic, non-violent, and content-oriented appeal, which has its focus on the understanding of the partner, instead of "winning a deal". Traditional rhetoric has always been characterized by the persuasive attempt to win an argument (mostly imagined as a zero-end game) and is associated with powerful persuasive communication (or masculine type of communication). In contrast, the concept of Genial Rhetoric depends on the idea of powerless communication (often described as the feminine

type of doing rhetoric), which regards the argument as an invitation for the exchange of views. It aims to get a deeper understanding of the topic and the partner's ideas in order to reach mutually accepted and fruitful outcomes. In summary, Genial Rhetoric is a concept which is involving in its attitude, dialogical in its form, non-persuasive in its intentions (yet still persuasive in its results), non-violent in its procedure and co-operative in its strategy – which is closely related to the development of *soft skills*, especially in leadership communication.

The phenomena of democratic communication approach, creativity, openness and empathy in leadership communication have already been examined in academic literature, to which the concept rhetorical sensitivity and even the novel idea of co-operation and co-creation based designcommunication method can add new perspectives and additional significance in the case of higher education development practices. Rhetorical sensitivity in the sense of preparedness, expertise, and social understanding is becoming increasingly important in education – at every level. The same demand for personalized, story and experience-based, audience-oriented and most importantly inclusive communication can be found in modern leadership studies investigating the features of charismatic leaders. Furthermore, the examination of leaders' communication style has supported the application of powerless language to become more effective than powerful language. Therefore, previously hidden connections between leadership skill development, rhetorical sensitivity and *powerless powerful persuasion* are now disclosing by opening new spaces for further investigations under the aegis of Genial Rhetoric.

Thanks to this approach, this type of professional leadership skills development method in higher education offers a more effective, attention-centered and co-operative understanding of persuasion in order to prepare successful leaders of the future. Therefore, this paper aims to draw attention to the significance of leadership skills development, empathic and non-violent communication methods, the differences between manipulation and persuasion, and the importance of rhetorical sensitivity, emotional intelligence, charisma and other practical implications of the topic.

Eszter Deli – Kincső Szabó

Separated, but Not Torn Apart – The Spatial Rhetorical Analysis of the Hungarian Trianon Tragedy

"The great obsession of the nineteenth century was, as we know, history... The present epoch will perhaps be above all the epoch of space."
Michel Foucault

Events are places and vice versa - as Philip J. Ethington's basic claim sounds in his essay "Placing the Past", provoking the idea that historically reorganising events undeniably determine space and the people living in it.[1] When boundaries are redrawn and nations amalgamate, a triangular relationship comes into existence between national minorities, the external "homelands" to which they belong, and the new state in which they live. Agreeing with Ethington's proposition, events and places clash and revive together in the Trianon Peace Treaty – signed on the 4th of July in 1920 causing Hungary to lose 71% of its territory and 64% of its nation[2] – being one of those national traumas that deconstructed national consciousness, cultural togetherness and most importantly, a nation-state.

The present paper highly builds on the notions of Richardson,[3] suggesting that our sense of self, our view of others, our interpretations of historical events, and the way we determine our sense of belonging are all situated in visual and spatial contexts. However,

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[1] Philip J. Ethington, "Placing the Past: 'Groundwork' for a Spatial Theory of History", *Rethinking History*, vol. 11, issue 4 (2007), pp. 465–493.
[2] Balázs Ablonczy, *Ismeretlen Trianon: Az összeomlás és a békeszerződés története, 1918–1921*, Budapest: Jaffa Kiadó és Kereskedelmi Kft., 2020.
[3] Bill Richardson, *Spatiality and Symbolic Expressions: On the Links Between Place and Culture,* New York: Palgrave Macmillan, 2015.

despite the much vaunted "spatial turn" witnessed in humanities research in recent decades, there is still a tendency to disregard academic conversation about the significance of this element of symbolic expression. We believe that a focus on the spatial may bring forward important facets of symbolic expression as well as new approaches to rhetoric itself, considering Hungarian minorities. Hence, the following research questions have arisen: 1. How do national minorities describe their past experiences? 2. How would they describe their spatial attachment? 3. How could we best present this spatial attachment both in a spatial and a visual way?

Even though we enjoy exploring discursive "sites" of interaction, "locations" for communication, discursive "structures" or ideological "formations", as well as "navigating" or "gaining access" to situations and "expanding theories", we do not always notice that rhetoric has the function of a "symbolic landscape", which is inherently visual and spatial.[4]

By the end of the 1930s, space had become a key concept in the writings of Carl Schmitt who linked the concept to a rhetorical strategy and a mode of argumentation. Schmitt believes that the spatial revolution is closely linked to the fundamental forces of history, which bring "new lands and new seas into the visual field of human awareness".[5]

While the contemporary theoretician, Darcy Mullen[6] defines spatial rhetoric as the dynamic use of space as well as a rhetorical device, DeKoven believes that space is not a static essence, but rather a location of historical overdetermination.[7] It seems like the way we

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[4] Mary Jo Reiff, "The Spatial Turn in Rhetorical Genre Studies: Intersections of Metaphor and Materiality"*, JAC: A Journal of Rhetoric, Culture and Politics*, vol. 31, nos. 1/2 (2011), pp. 207–224.

[5] Oliver Simons, "Carl Schmitt's Spatial Rhetoric", in Jens Meierhenrich – Oliver Simons (eds.), *The Oxford Handbook of Carl Schmitt,* Oxford Academic, 2017.

[6] Darcy Mullen*,* "Cartographic Communities of Locavores: Local Ideographs & Spatial Rhetoric", *Graduate Journal of Food Studies*, vol. 3, no. 1 (2016).

[7] Marianne DeKoven, *Feminist Locations: Global and Local, Theory and Practice*, New Jersey: Rutgers University Press, 2001.

think about space matters. As Massey argues, it shapes our understanding of the world, our attitudes towards others, and the way we develop both as an individual and a member of a community.[8] Hence, the present research implements a visual and spatial approach to the attachment of Hungarian national minorities influenced by the bitter consequences of Trianon.

The corpus of the research consists of 20 interviews that were conducted with national minorities (8 Transylvanian, 7 Slovakian, 2 Ukrainian, 2 Serbian, and 1 Croatian subjects) between 2019–2022. The interviews incorporating 13 questions took place both in an online and an offline form, however not all questions and answers have been considered relevant for the present analysis. In addition, a historian and Trianon expert, Balázs Ablonczy, associate professor of Eötvös Loránd University and former director of the Hungarian Institute of Paris was interviewed with the aim of illuminating the key events and expanding our historical knowledge on the effects of the Trianon Peace Treaty.

We applied Terry et al.'s thematic analysis (hereinafter TA)[9] of interviews, which helped us gain new information from traditional, face-to-face interviews. A key aspect of the TA method is that of enabling inductive coding, meaning that first themes, and then categories have been developed. Nevertheless, a latent coding method was used, which refers to the implicit analysis of the data helping uncover the deeper meaning of the words.

Our findings (cf. Figure 1) indicate that even though themes such as *difficult self-identification*, *feeling deviant as a minority*, or *difficult past* had a relatively high score, *spatial attachment* as a category scored the highest throughout the interviews, followed by the *acceptance* category. With other words, although national minorities experienced a vast amount of exclusion, tragedies and traumas related to their identity, even today they would choose their land that

[8] Doreen Massey, *For Space*, London: SAGE Publications, 2008.
[9] Gareth Terry, Nikki Hayfield, Victoria Clarke, Virginia Braun, "Thematic Analysis", *The Sage Handbook of Qualitative Research in Psychology*, 2006.

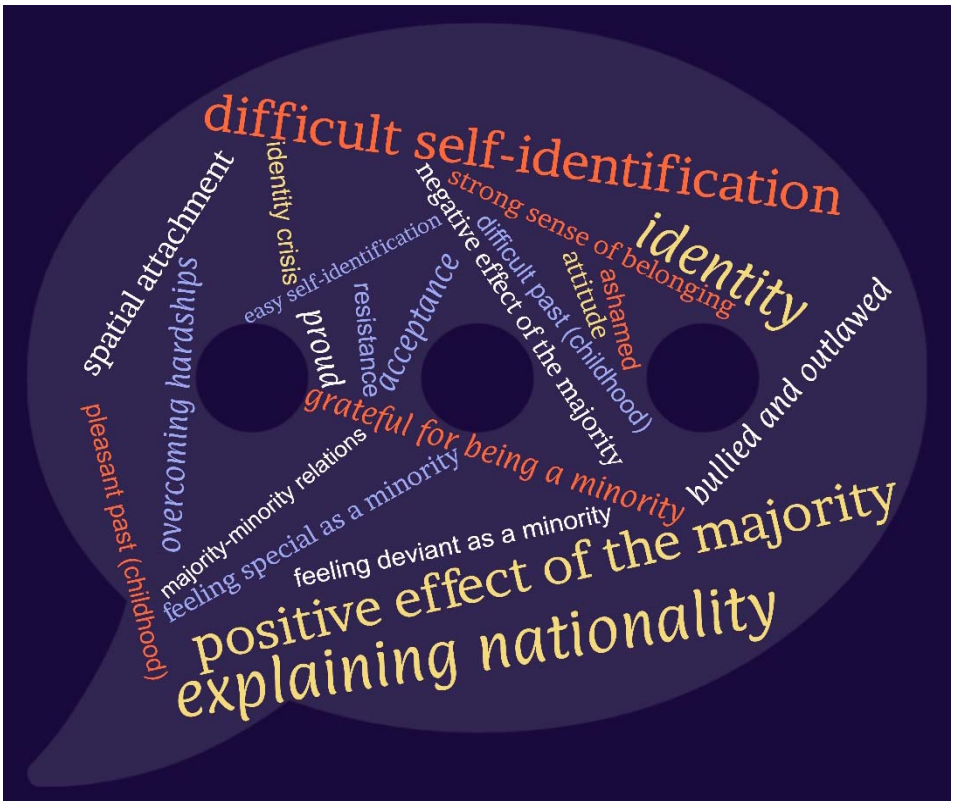

Figure 1: The themes and categories identified in the interviews (own editing).

has been separated. Minorities are undoubtedly aware of the hardships and challenges they live with, yet, accepting to be different and constantly questioned remains a culturally shaped spatial labyrinth to them. Hence, they spatially remain separated, but spatial rhetorically definitely not torn apart.

Lastly, besides encapsulating life stories on the level of words, a virtual gallery has been created to present the spatial attachment of minorities both spatially and visually, and to enrich the vision of the reader about Hungarian minorities:

https://www.artsteps.com/view/5f9567014cfb451fa7cbc83e?fbclid=IwAR1luIbnan59CSxSDCLVik4NOkVBprzFSHThsbcSgLzgEQXuY5YLApyE_2s

"Motherland is eternal; not only do we owe
a responsibility to the currently existing one
but also to the one that may or
will be born in the future."
Lajos Kossuth

Alexandra Béni – Lilla P. Szabó

Metonymies of Monstrosity
The Visual Representation of the Russo-Ukrainian War in Hungarian Online News

Cognitive linguistics claims that figurative language types like metaphor, metonymy, hyperbole and irony play an important role in shaping public discourse.[1] Even though visual metaphors have been researched extensively, the study of visual metonymies remains a research gap, especially in the light of online news. Hence, this paper is motivated by the ubiquity of visual metonymy in online news.

In the classical sense, metonymy refers to a relationship in which there is substitution: we use X to stand for Y (e.g., the head stands for the whole person in *headcount*).[2] It is important to point out that metonymy is not just a matter of one entity substituting another, but a new, complex meaning is created by the relationship. This relationship can be understood visually as well, although the study of metonymic images is still in its infancy.

This paper contributes to the discussion of visual metonymic framing (i.e., aspects that are made more salient via metonymic relationships) with the case study of the Russo-Ukrainian War in online news images. The research reveals the substitutions through which Hungarian news portals represent the war, since explicit portrayal is not possible (or at least severely limited by the editorial guidelines of most news websites).

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[1] See Christian Burgers, Elly A. Konijn, and Gerard J. Steen, "Figurative Framing: Shaping Public Discourse through Metaphor, Hyperbole, and Irony", *Communication Theory*, vol. 26, issue 4 (2016), pp. 410–430.

[2] See Günter Radden and Zoltán Kövecses, "Towards a Theory of Metonymy", in Panther and Radden (eds.), *Metonymy in Language and Thought*, Amsterdam: John Benjamins, 1999, pp. 17–60.

The corpus covered the period from February 24, 2022, to August 24, 2022, i.e., the first six months of the war (the end point also marks the Independence Day of Ukraine). The raw corpus contained all the articles published in the given period on three leading Hungarian news portals: 24.hu, index.hu and origo.hu.[3] Subsequently, we randomly selected 100 articles from each of the three websites; thus, the analysis was performed on the featured images in 300 articles.

As war is a violent and complex act, we examined the ACTION and COMPLEX EVENT metonymic frames in the news images.[4] The ACTION frame includes relationships such as those between an ACTION and an INSTRUMENT used in the ACTION, an ACTION and the RESULT of this ACTION, etc. Meanwhile, the COMPLEX EVENT frame states that events may involve several distinct subevents and phases. In this sense, we can talk about initial, central and final phases. Since violent acts are always complex, the use of the COMPLEX EVENT frame allows for a better understanding of the sequentiality of such cases.

Based on the analysis, it can be stated that news portals most often replaced the ACTION with the RESULT OF THE ACTION (36%). Two subcategories can be distinguished: global results, which depict financial and economic consequences (for example, a blocked gas tap), and local results, which show local damage, such as destroyed houses, burned areas, etc. Depictions of damage to Ukrainian territories were three times more frequent (76%) than portrayals of global results, thereby portraying the immediate consequences of war.

The AGENT FOR ACTION metonymic relationship also largely characterized the visual communication of news portals (34%). A significant part (45%) of the images depicts soldiers, i.e., agents

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[3] Digitális Közönségmérési Tanács [Digital Audience Measurement Board]. Toplisták [Top lists]. *DKT*. Retrieved from: https://www.dkt.hu/.

[4] Conceptual metonymies are formatted in small capitals according to the traditions of cognitive linguistics, cf. Zoltán Kövecses, *Metaphor: A Practical Introduction*, Oxford University Press, 2010, p 4.

directly involved in the war. The circle of political actors represented a slightly larger proportion (55%) than this, in which case the action is only indirectly related to the war.

The INSTRUMENT FOR ACTION metonymic relationship (15%) frequently accompanies the agent for action connection, especially when agents are soldiers depicted with guns and in some cases with tanks that metonymically stand for the act of shooting or attacking. Meanwhile, the victims of the war were coded under the PATIENT FOR ACTION metonymic relationship (11%). Within this, two patterns emerged: the depiction of refugees (e.g., a line of refugees pulling suitcases), and the portrayal of locals. The latter often occurred together with the RESULT FOR ACTION relationship (e.g., a resident standing in front of a demolished house).

Finally, the application of the COMPLEX EVENT frame revealed that most often the final or initial phase of a given action is depicted, the showcasing of the most explicit central phase is rare. This latter result is probably due to the abovementioned limitations of explicit representation, while its consequence is victim-centred visual communication. Although the global consequences are also shown, and soldiers are also featured in the images as passive characters, the sample uncovers that the portrayal of the results of the war in the form of victims, injured civilians, devastated cities, and destroyed houses, was more dominant in the chosen period. Although the research did not examine the recipient side, it can be assumed that this type of visual communication evokes sympathy and compassion in the readers.

Overall, the research promotes the interpretation of a current, global event, reflects on the role visual metonymies play in forming public perception and contributes to the understanding of the Russo-Ukrainian War's complex media representation.

CONTEMPORARY SOCIETY

James E. Katz

Algorithmic Nudging: A Site of Social Control, Resistance and Conflict

Algorithmically generated nudges open and foreclose opportunities through "choice architectures". When we use digital resources, we frequently experience nudges that are becoming increasingly personalized as they build on user experience databases and cross-platform comparisons.

While the level of their presence varies considerably in different cultures, as an extreme case we can look to China, where computer algorithms are extensively used to influence people's behavior. In other parts of the world, such practices – while not as intense – are spreading. Throughout the West, algorithmic nudging systems are influencing areas from which television shows to watch to controlling pandemics. Past choices influence how one is directed towards future opportunities. The proliferation of these systems not only give rise to abuses, privacy invasion, and biased delivery of benefits. They also are prompting policy-makers to seek regulatory controls, the structure of which can alter both personal comfort and convenience as well as trajectories of information systems.

Shifting focus from the prosaic to the transcendental, algorithmic nudging can raise important questions about the role of the individual vis-à-vis society, the social construction of human choice, and, ultimately, meaningfulness in modes of life (as Wittgenstein might have formulated it).

To answer these questions, we offer a user-experience perspective on how humans interpret the algorithmic nudging experience. In 2021 and 2022, Elizabeth Crocker and I interviewed 16 users and researchers and we used these conversations as a springboard to generate insight into the question of experiential interpretations of algorithmic nudging.

We firstly found a continuum of algorithmic nudging awareness. Due to levels of age, environmental surveillance, education or other factors, some users were ignorant of even the existence of such algorithmic nudging. Moving along to the other end of the continuum, we find high awareness of algorithmic nudging in the environment even to the extent of hypervigilance towards their presence and effects.

Among those who are aware, we can derive a second continuum in terms of attitudes towards algorithms. At one end, responses are typically deferential and without psychological engagement. At the other, we find much more agency. Users actively reflect on the nudges and react to them given the social setting and the users' symbolic interpretation of choices. They not only are engaged with the decision at hand but are also willing to expend the effort required for deliberation.

At times, users' awareness of the longer-term implications of their choices made in response to nudging leads them to undertake a complex set of mental calculations concerning counter-strategies and ways to manipulate the algorithm to achieve the users' goals. These goals may be quite material or purely symbolic. I will now go deeper into this continuum of attitudes toward nudging by describing some of the categories along the continuum. These may serve as a template for further consideration.

Attitudes towards Nudging

Compliant acceptance

Q: have you had recent encounters with algorithmic nudging seeking to affect your behavior? (Asked just after the US Thanksgiving holiday of a US professor)

A: We just had the Thanksgiving holiday, where you have the day after Thanksgiving Black Friday and then . . . Cyber Monday, so I'm getting bombarded by advertisements that are pretty spot on based on my past behaviors for the types of things I'd like, though. I try my best to keep my own email filters up, and I try to filter all sorts of commercial mail into a separate folder that I only look at when I

want to. So I'm not constantly seeing [prompts] . . . But stuff gets by those filters and I see them.
Q: Do they have any influence on you? Do you think they affect your behavior?
A: As the target, I guess my professional assessment regardless of what I'd like to think is yes. . . I don't want to be manipulated, but at the same time, when the filters are good and they give me the information I'm looking for – and I think they're pretty good at that – I will engage in that information. If those filters hadn't nudged me toward it, I would have probably not otherwise done it, so sure. [Michael Beam]

Subtype: Pigeon-holed

We spoke with Dr. Judith Möller, at the University of Amsterdam, heading to Leibniz-Institut für Medienforschung in Germany. She described an important finding from her research: "One of the main concerns was feeling pigeonholed, being miscategorized", she said. But of even greater importance is being "under-categorized". By this she noted that her research subjects were feeling that only certain aspects of their personality were being picked up correctly by recommender systems, but those aspects were "not all of who they are. Especially, [the recommender system] doesn't include their aspirational self, who they want to be." The behavioral self is, maybe, not the best reflection of who we want to be, and, maybe the recommender should not only serve who we are, but also who we want to be." [Moeller]

We found this concern echoed by several other of the people we spoke with, people who we could consider typical users who had not been imbued with the sorcery of social science theorizing.

Manipulated, resentfully

Yet, at some level, knowledge of the plausible reuse and exposure of nudging choices plays in users' minds. This adds another level of cognitive processing and complexity. Here we can turn to a scholar who has been imbued with social scientific theories, namely Mike Ananny, another US scholar. He is concerned about how if he avails

himself of the algorithmically offered titles – despite the fact that they may be useful to him – his action may result in him presenting himself to colleagues as a parasite or puppet of Amazon: "But I do so with this nagging feeling in my mind which is – especially in academic work – where I am nervous about putting myself in a small intellectual box, a too small of a box. I don't want to be doing work that stems from reading that has been defined by this Amazon recommendation, even though they are great books and the people who write them are great people, and it's all good stuff in a way... But I worry that I just am existing in this box of recommendations. So that is a kind of anxiety that I do have. I have an ambivalence that I don't have a resolution to. I just have an awareness of this box, but also an appreciation of the box somewhat. I would say that anxiety or ambivalence probably characterizes my relationship to this stuff." [Mike Ananny]

Morally Compromised by Algorithmic Nudging?

In the above case, Amazon appears as a vast, morally-compromised high-tech firm, so its inherent sin of existence stains those who benefit from its algorithms. It may even appear that users become marionettes of algorithm constructors. These concerns are at the immediate and perhaps visceral level. But what is the larger concern that one has about responding to algorithmic nudges? Are there concerns that go beyond the pragmatic and impressionistic levels and go to deeper philosophical questions about the direction of society and one's roles and responsibilities within it? Once again, Mike Ananny has revelatory comments:

> What worries me about being in that box is contributing to a social world that has been shaped by Amazon commercial imperatives. I know I'm probably being shown that book not through some completely transparent and well-designed Algo that wants to show me new things. I'm subject to some logic of Amazon algorithms, and I don't know what those Algorithms are. I'm highly aware that I'm subject to it, But I don't un-

> derstand i.e. also understand what I'm subject to is different than what you are subject to. . . . I'm also worried that I will land in a "Mike specific" box, which is reproducing me. I also don't like that I'm feeding corporate America data Patterns. But I recognize I'm probably losing that battle; I need to make peace with that. But also I like the aesthetic of being surprised by something new and different. [Michael Ananny]

Perspective

Our findings may be juxtaposed to a different line of research by Ytre-Anre and Hallvard on Norwegian teens' folk theories of algorithms. They hold that users have five primary categories to conceptualize algorithms, namely: (1) confining, (2) practical, (3) reductive, (4) intangible, and (5) exploitative.[1] By contrast, while many of our respondents shared comparable views at a broad level, they also expressed frustrations that algorithms only seemed to reflect a part of themselves rather than their whole person and thus provided incomplete or inaccurate feedback. Too, they were aware of the ways that algorithmic nudging can push people to consume content that is harmful or simply sucks them in with endless content but ultimately fruitless waste of time. In contrast to the Norwegian study, our interviewees often had positive views and saw instances of algorithms' utility. One example of a practical aspect was how algorithms can keep them on track for self-directed activities like exercise or by suggesting places to visit.

In essence, we find some similarities but also differences to their study, particularly in terms of what we found to be a more dynamic and interactive relationship. Yet it is important to highlight the importance to many of being seen as a whole person, not simply fodder for an empirical regime. The value of personhood to users should not be underestimated.

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[1] Brita Ytre-Anre and Moe Hallvard, "Folk Theories of Algorithms: Understanding Digital Irritation", *Media, Culture & Society*, vol. 43, no. 5 (2021), pp. 807–824.

Users revealed a dialectic dance between who they are and what they wanted to be versus the pushes and nudges they experienced. An associated point we noted is the degree to which users felt that they could at least partially direct, guide, and even manipulate the algorithmic delivery of nudges. (Importantly, though, this sense of agency was a perception rather than a demonstrated fact.)

Perhaps the anthropomorphizing of algorithms in popular media support the sense that everyday users are engaged in a bi-directional experience with algorithms. And perhaps the intangibility of algorithms supports this attitude. Consider that, as interlocutors, throughout the day we have interactions with co-workers, friends and family. When the dialectic communication choreography is well attuned it can result in an experience that is truly enjoyable and productive, while if beset with miscommunication or conflicting goals it can be quite the opposite.

Such a perspective also provides a framework for assessing the ways in which we can examine the role of algorithms and the self philosophically. To return to the example of improving the self, perhaps rather than examining the concept as a collection of unidirectional sets of pushes, we should instead examine the process as a two-way serving of needs and interests. Certainly one party is in control of options, but the other is in control of response, even in circumstances of non-participation or hijacking the intentions behind the nudges.

In sum, we used our interviews to complement other analyses of algorithmic nudging, including those that address free-will and autonomy from a logical-deductive method. We have tried to do this by examining users' sense-making when engaged with algorithmic nudges. This "bottom up" perspective may provide firmer foundation for the arguments and policies on the proper role of computer-based nudging in a society that values freedom and autonomy. [2]

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[2] This paper is drawn from Elizabeth Crocker's chapter to appear in *Nudging Choices through Media: Ethical and Philosophical Implications for Humanity*, co-edited by James E. Katz, Katie Schiepers and Juliet Floyd, New York: Palgrave Macmillan, forthcoming.

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Curation: The Digital World of Manipulated Experience

"It's relevant to our democracy, citizenship. We're going to have to rebuild, within this wild, wild west of information flow, some sort of curating function that people agree to…[1]

The basis character of propaganda, censorship, advertising, religious ritual, education, and similar social technologies is that they are ways of changing something internal, the way people think, or think in relation to a voluntary action, by something external. We have a long list of inherited experiences with such processes, some of which have been very effective. But we know from this experience that the actual effects of these social technologies are unpredictable, and that they can produce resistance as well as acquiescence. I will specifically focus on the puzzling idea of "curation".

Curation is a form of censorship, with conscious or unconscious propagandistic intent, and operates at least in part as a form of subconscious manipulation, a hidden persuader, in the older language of Vance Packard. It operates by deprivation. But like the concept of ideology, there is a problem of explaining the difference between it and the rest of experience that affects thought, for example between indoctrination and education. We ordinarily operate with limited information, derived from limited experience. Curation is usually blandly described as a means of correcting for "disinformation". But the concept of information is a poor match for it, and obscures the workings of curation as a means of producing internal change as well as the epistemic character of the change. But to see what the issues are,

[1] Barack Obama, cf. https://www.c-span.org/video/?416888-1/president-obama-delivers-remarks-white-house-frontiers-conference.

it is necessary to review some of the relevant distinctions we can make now.

The notion of disinformation, unlike "information" itself is meant to be epistemic, or veritistic. The concept of disinformation implies falsity, but also suggests intentional fraud. It also suggests a model of action: that people presented with the correct information will behave correctly, and that when they do not, disinformation may be a cause. Correcting people, at least with respect to this cause of action, becomes a matter of curating the information they have access to. If the information is correct, and meets other unspecified criteria, perhaps including, for example, representativeness, curating is neutral: it is merely a way of eliminating a source of potential cognitive error. It would be "democratic", if there was an agreement on what to eliminate. And among truth-seeking and abiding people, such an agreement should be possible. If so, the reasoning is, we would have an improved democratic discourse, and greater acquiescence to a world of fact. And by limiting information sufficiently, we would create a world of fact that is common to more people, facilitating actual agreement or reducing polarization. This is typically presented as a way of "saving democracy", and as an alternative to authoritarianism, which points to issues in democratic theory itself. The implication here is that tacit or indirect control or influence by curation is not "authoritarian", but that polarization, indicated by claims that are bigoted, "false", or violations of norms of discourse, is authoritarian. This is a novel definition of authoritarian, but one rooted in a model of tolerant liberal democratic discourse.

This model is never clearly articulated: it is taken for granted that it is something like what is actually happening in the digital world: that people's experience is shaped by informational inputs that range between the actively curated and the "wild west", in which polarizing disinformation flourishes. When there is evidence that interventions, for example in the news programs people watch, actually matter, it is taken to confirm the general picture. And clearly there is something to the general picture. If there was not there would be no point to such established activities as advertising. But it is also the case that our understanding of the relevant processes in general is not

very strong, and that the evidence for how the model applies in the digital world is also weak. We can see that there are differences in the nature of different mediated or media experiences. We have less grasp of how any of them actually work.

The model is nevertheless useful as a starting point: we can apply some of the distinctions we are aware of in relation to previous regimes of mediation to the new digital regime, and notice differences. The place to start is with the concept of information itself. Taken in the terms of information theory, information is a neutral concept: it is simply a kind of input. The "dis" in disinformation needs to be grounded elsewhere. So to analyze it we are necessarily forced into epistemic questions: how does one know something is "dis" information? And is curation restricted to "dis" information, or does it work in other ways?

There is an immediate problem here: who decides what is fact? It is well-known that much of what is presented in science journals, especially in medicine, does not live up to standards of evidential quality, that pharmaceutical funding leads to biases, and that the funding system of science itself influences the content of science and its consensus. Journalism, similarly, is prone to ideological selectivity and bias. The idea that there would be a neutral agreement on what is "dis" information seems fanciful at best, sinister at worst.[2]

But the point of curation cannot be to simply eliminate false claims or non-facts. The range of possible knowable things is vast: all experience of individuals is a small sample of a massive universe. The explicit aim of curation is to control this sample. Obama, in a recent speech, commented: "Forty years ago, if you were a conservative in rural Texas", he said, "you weren't necessarily offended by what was going on in San Francisco's Castro District because you didn't know what was going on."[3] These are polarizing, but presumably irrelevant facts, toxic to "democracy". If the aim is to eliminate

[2] T. R. Clancy, "Whose Democracy Is This, Anyway?", *American Thinker*, March 16, 2022.

[3] Cf. https://cyber.fsi.stanford.edu/events/challenges-democracy-digital-information-realm.

the elements that contribute to polarization, the relevant concepts differ. Disinformation, even if it could be defined neutrally, or by "agreement," is not enough. More needs to be suppressed.

The term "authoritarian" is especially inapt in this context, for an intrinsic reason. The strategy is a "behavioral intervention", i.e a way of manipulating the external environment in such a way as to produce change without either conscious consent or coercion. The intervention is a "nudge" that relies on the ingrained heuristics of the recipient. But the heuristics in question are precisely about authority. The ordinary recipient accepts the news, the authority of experts, the authority of the state in defining reality, and of schools. Those who accept authority do not require an intervention. The target of the intervention is the people who reject or are suspicious of authority, and are thus vulnerable to disinformation or non-standard, meaning unacceptable, sources. The solution is restricting the available choices in news, experts, and schools, so that the recipients' heuristics have a curated sample to operate on, and are not fed by non-standard sources. The goal is to transform the recipient.

Foucault had a term for this kind of behavioral intervention: normalization. As Michał Krzyżanowski summarizes him, quoting Dianna Taylor,

> … the key idea of the normalizing process is not to create its vision/image as the overarching or dominant one, but to normalize it in a much more obscure or opaque manner. Normalization is, hence, a process both introducing as well as obscuring norms, whilst practices which carry new norms "become embedded to the point where they are perceived not as a particular set of prevailing norms, but instead simply as 'normal', 'inevitable'."[4]

[4] Michał Krzyżanowski, "Normalization and the Discursive Construction of "New" Norms and "New" Normality: Discourse in the Paradoxes of Populism and Neoliberalism", *Social Semiotics*, 2020, p. 7, and Dianna Taylor, "Normativity and Normalization", *Foucault Studies* 7, 2009, pp. 45–63, the quoted passage on p. 47.

For an individual to accept the "normal" that has been designed for him or her by a behavioral intervention is, on the superficial and conscious level, to abide by the norms of democratic discourse. On the deeper level the goal is to make them fail to see them as norms at all – and thus to be unable to reject them. The intervenor or designer emphatically does not abide by these norms or practices, but stands above and outside these norms as their enforcer, simply because of the technology of enforcement.

The equality of control of the discussion that exists in face to face exchange, or the less equal exchange of political campaigns and discourse, is replaced by the censorship of curation. Thus the digital world, the designed or curated world rather than the wild west, raises a familiar question: who decides? When Obama speaks of an agreement, it is clearly not intended as an agreement between polarized sides, or even as an explicit agreement, but as one which overcomes polarization by way of curation. His audience is tech executives who share his political tropisms. The kind of control that is envisioned is not the kind that can be codified in law, but depends on constant revision by the enforcers. The agreement on the new "norms" preexists tacitly. For them the message is clear, and he makes it clear as well: hide that which triggers polarization and lack of deference to the "correct" authorities. Deference in this sense is not overtly authoritarian: the manipulation is opaque, and the change is experienced as voluntary. But experience betrays us here. And this raises new questions about the character of the novelty of the digital world, and particularly about its democratic character.

There is a basic question here, comparable to the older problem of ideology. Is all experience in some sense curated? Are we not each in the business of curating the experiences of others? It is axiomatic that no man is a hero to his valet, and that the front stage differs from the back stage. What else could impression management, for example, mean? But there is a difference between the powers of the individual to curate and those in control of social media of the state. To note this is also to raise the question of equality, and therefore of "democracy". In what meaningful sense is curated normalization "democratic"? It relies on what it takes to be a powerful

method of intervention that differs from the mere provision of "information" in a "wild" or ungoverned arena. And it attempts to provide the norms for this arena, but in an opaque way. But it is controlled by the few and imposed on the many.

In the face of this raw fact, the issue is agreement: the intervention is needed and justified because there is neither agreement nor adherence to the right norms. It is taken for granted that the disagreement that threatens democracy cannot be resolved otherwise. So we need new norms or the enforcement of norms – that is to say the transformation of informal norms sustained by tacit agreement into enforcement. But without "agreement" in a democratic sense, the result is mere imposition by a "people" other than the "people" of democratic procedure and representation. And there are obvious limits to the idea of democratic governance of highly technical matters – algorithms, rules that are enforced by people exercising judgement, and so forth.

But there is also a more fundamental, issue: can the problem of discourse in the digital sphere, even if we could agree on what the problem was, be resolved by curation? Put differently, what are the limits of the curation of the digital? The model with which we began assumed the efficacy of these reforms. But we know from the experience of the Soviet regime, with which the new digital censorship regime is often compared, that there are limits – perhaps limits of human nature which even the Soviets with their engineering of the human soul could not overcome, perhaps those deriving from interconnected traditions which sustained them against replacement. In either case, the same problem arises: there is a realm of personal experience apart from the official or digital realm, which has special, perhaps unwarranted, epistemic salience.

The Soviet experience in reforming the thought processes of its subjects through a change in the norms of public discourse, holds some lessons here. The effects were profound, and some people adhered fanatically to the new order. But not everyone was transformed, nor did the process always work as intended. The epistemic role of personal experience was to provide data points that allowed for dif-

ferent patterns to be recognized, which subverted the official line. People lived on two levels: the official and the personal and private.

There are parallels to the new order. Personal experience is not obliterated by the digital. It may not allow for the intersubjective validation provided by social media. But it is a brake on its epistemic power. So is self-curation: the personal selection of digital environments with which to interact and engage. The opacity of the processes is another brake: methods of external control do not produce entirely predictable internal results. And we understand far less about the new methods and their effects than the old ones. Indeed, the attempt at control in conjunction with the reality of conflicting personal experience may polarize to a greater extent than leaving the west wild.

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Speleology in the Metaverse: From Plato's Cave to Zuckerberg's

"Modernity" denotes a type of society or culture, selectively emphasising aspects to create narratives that may simultaneously be descriptive, teleological or normative, making sense of the present and co-creating futures, and inspiring economic, military and technological development.[1] Myth-making is a persistent Western intellectual practice, and this paper will look at 21st century modernity myths alongside a far more venerable example.

Modernity's latest manifestation rests on the advent of ubiquitous networked digital technology, connecting people (via smartphones), places (the Internet of Things [IoT]), companies (surveillance capitalism) and the state (surveillance, e-government) into a single network linked by an ambient data infrastructure; I refer to this myth as *digital modernity*.[2] Enabling technologies include: cloud computing; data science/big data analytics; the IoT, smart homes and cities; 5G wireless; artificial intelligence (AI), machine learning (ML) and deep learning; text, image, video and voice processing; autonomous vehicles, drones and non-humanoid robotics; augmented

[1] Anthony Giddens, *Modernity and Self-Identity: Self and Society in the Late Modern Age*, Cambridge: Polity Press, 1991; Ulrich Beck, Anthony Giddens & Scott Lash (eds.), *Reflexive Modernization: Politics, Tradition and Aesthetics in the Modern Social Order*, Cambridge: Polity Press, 1994; Zygmunt Bauman, *Liquid Modernity*, Cambridge: Polity Press, 2000; Jane Bennett, "Modernity and Its Critics", in Robert E. Goodin (ed.), *The Oxford Handbook of Political Science*, Oxford: Oxford University Press, 2009, pp. 127–138; Peter Wagner, *Modernity: Understanding the Present*, Cambridge: Polity Press, 2012.

[2] Kieron O'Hara, "Digital Modernity", *Foundations and Trends in Web Science*, in press.

and virtual reality; distributed ledgers, blockchain and cryptocurrencies; 3D printing; and telemedicine.

Digital modernity narratives build on potential (even hype), rather than actuality, but they matter when taken seriously by opinion-formers, academics, technologists (e.g. Elon Musk, Bill Gates), entrepreneurs (e.g. Mukesh Ambani, Steve Jobs) and policymakers (e.g. Dominic Cummings, Toomas Hendrik Ilves). When influential people take such narratives as normative, they become imaginaries through which reality is shaped.[3]

They may be positive or negative,[4] but "the dystopians join the utopians in imagining a supremely competent and visionary Silicon Valley."[5] Many suppose that machines will become more intelligent than people, either because they enhance humans in various ways,[6] or simply outperform us. An especially potent vision is the

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[3] Sheila Jasonoff, "Future Imperfect: Science, Technology and the Imaginations of Modernity", in Sheila Jasonoff & Sang-Hyun Kim (eds.), *Dreamscapes of Modernity: Sociotechnical Imaginaries and the Fabrication of Power*, Chicago: University of Chicago Press, 2015, pp. 1–33.

[4] Pippa Norris, *Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide*, Cambridge: Cambridge University Press, 2001, pp. 3–92; Brad Smith & Carol Ann Browne, *Tools and Weapons: The Promise and the Peril of the Digital Age*, London: Hodder & Stoughton, 2019.

[5] George Gilder, *Life After Google: The Fall of Big Data and the Rise of the Blockchain Economy*, Washington DC: Regnery Gateway, 2018, p. 7.

[6] Donna Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century", in Donna Haraway, *Simians, Cyborgs, and Women: The Reinvention of Nature*, New York: Routledge, 1991, pp. 149–182; Ray Kurzweil, *The Singularity is Near*, New York: Viking Penguin, 2005; David Pearce, "The Biointelligence Explosion: How Recursively Self-Improving Organic Robots Will Modify Their Own Source Code and Bootstrap Our Way to Full-Spectrum Superintelligence", in Amnon H. Eden, James H. Moor, Johnny H. Søraker & Eric Steinhart (eds.), *Singularity Hypotheses: A Scientific and Philosophical Assessment*, Berlin: Springer, 2012, pp. 199–238, https://doi.org/10.1007/978-3-642-32560-1_11; Ben Goertzel, "Artificial General Intelligence and the Future of Humanity", in Max More & Natasha Vita-More (eds.), *The Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future*, Chichester: John Wiley, 2013, pp. 128–137.

singularity,[7] the idea that technology is reaching a tipping point where technological advance becomes uncontrollable by human agency (scathingly dismissed as "residual anthropolitical signature").[8] Technological generations will improve autonomously in rapid cycles, creating a powerful feedback loop, as the singularity "identifies the basic diagram of modernity as explosive".[9]

I

Modernity is often spatially-oriented, negatively contrasting a *periphery*, rural areas, edgelands, liminal spaces, and the developing world, with the *centre*, major cities, hubs, centres of excellence, clusters of creativity and industry where modernisation happens and value is created.[10] As we near the centre space collapses: "cities are the absence of physical space between people and companies".[11] The

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[7] Kurzweil, *The Singularity is Near*; Robin Hanson, "Economics of the Singularity", *IEEE Spectrum*, 45(6), 2008, pp. 45–50, https://doi.org/10.1109/MSPEC.2008.4531461; Amnon H. Eden, Eric Steinhart, David Pearce & James H. Moor, 'Singularity Hypotheses: An Overview', in Eden et al. (eds.), *Singularity Hypotheses*, pp. 1–12, https://doi.org/10.1007/978-3-642-32560-1_1; Richard Loosemore & Ben Goertzel, "Why an Intelligence Explosion Is Probable", in Eden et al. (eds.), *Singularity Hypotheses*, pp. 83–98, https://doi.org/10.1007/978-3-642-32560-1_5; James Barrat, *Our Final Invention: Artificial Intelligence and the End of the Human Era*, New York: Thomas Dunne Books, 2015; Max Tegmark, *Life 3.0: Being Human in the Age of Artificial Intelligence*, London: Allen Lane, 2017; Nick Land, "Teleoplexy: Notes on Acceleration", in Robin Mackay & Armen Avanessian (eds.), *#Accelerate: The Accelerationist Reader*, 3rd edition, Falmouth: Urbanomic, 2019, pp. 509–520.

[8] Land, "Teleoplexy", p. 519.

[9] Land, "Teleoplexy", p. 511. Also Loosemore & Goertzel, "Why an Intelligence Explosion Is Probable".

[10] Edward Shils, *Center and Periphery: Essays in Macrosociology*, Chicago: University of Chicago Press, 1975; David Harvey, *The Condition of Postmodernity: An Enquiry Into the Origins of Social Change*, Oxford: Blackwell, 1990; Hannah Arendt, *The Human Condition*, 2nd edition, Chicago: University of Chicago Press, 1998, p. 201.

[11] Edward Glaeser, *Triumph of the City: How Urban Spaces Make Us Human*, London: Macmillan, 2011, p. 6.

periphery can modernise through development, integrating with global networks,[12] using space-shrinking technologies such as fast broadband and 5G.

In digital modernity, as networked devices create and support increasingly many important relationships (e.g. via social media or super-apps), functional space shrinks to within the device – to its representations of human and non-human actors.[13] This was termed *cyberspace* by William Gibson: "A consensual hallucination experienced daily by billions of legitimate operators, in every nation."[14] Manuel Castells wrote of real virtuality "*in which appearances are not just on the screen through which experience is communicated, but they become the experience*."[15]

This idea has crystallised around a synthetic parallel world called the *metaverse*,[16] a sci-fi term coined in 1992, and honed by online games,[17] 3D virtual environments,[18] and augmented re-

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[12] Manuel Castells, *The Information Age: Economy, Society and Culture*, vol. 1: *The Rise of the Network Society*, 2nd edition, Malden: Blackwell, 2000, pp. 407–459.

[13] Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network Theory*, New York: Oxford University Press, 2005, pp. 63–86; Deborah Lupton, *Digital Sociology*, Abingdon: Routledge, 2015, pp. 23–27.

[14] William Gibson, *Neuromancer*, New York: Ace Books, 1984, p. 69.

[15] Castells, *The Information Age*, p. 404, his emphasis.

[16] Matthew Ball, *The Metaverse: And How It Will Revolutionize Everything*, New York: W.W. Norton, 2022.

[17] Edward Castronova, *Synthetic Worlds: The Business and Culture of Online Games*, Chicago: University of Chicago Press, 2005; Nicolas Ducheneaut, Nicholas Yee, Eric Nickell & Robert J. Moore, "'Alone Together?': Exploring the Social Dynamics of Massively Multiplayer Online Games", in *CHI '06: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, New York: ACM, 2006, pp. 407–416, https://doi.org/10.1145/1124772.1124834; William Sims Bainbridge, *Online Multiplayer Games*, Morgan & Claypool, 2009, https://doi.org/10.2200/S00232ED1V01Y200912ICR013; Jane Barnett & Mark Coulson, "Virtually Real: A Psychological Perspective on Massively Multiplayer Online Games", *Review of General Psychology*, vol. 14, no. 2 (2010), pp. 167–179, https://doi.org/10.1037/a0019442.

[18] Simon Gunkel, Hans Stokking, Martin Prins, Omar Niamut, Ernestasia Siahaan & Pablo Cesar, "Experiencing Virtual Reality Together: Social VR Use Case

ality.[19] As a series of persistent virtual spaces unified by a platform infrastructure to support data analysis,[20] the metaverse is hyped in

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Study", in *TVX '18: Proceedings of the 2018 ACM International Conference on Interactive Experiences for TV and Online Video*, New York: ACM, 2018, pp. 233–238, https://doi.org/10.1145/3210825.3213566; Joshua McVeigh-Schultz, Elena Márquez Segura, Nick Merrill & Katherine Isbister, "What's It Mean to 'Be Social' in VR?: Mapping the Social VR Design Ecology", in *DIS '18 Companion: Proceedings of the 2018 ACM Conference Companion Publication on Designing Interactive Systems*, New York: ACM, 2018, pp. 289–294, https://doi.org/10.1145/3197391.3205451; Joshua McVeigh-Schultz, Anya Kolesnichenko & Katherine Isbister, "Shaping Pro-Social Interaction in VR: An Emerging Design Framework", in *CHI '19: Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*, New York: ACM, 2019, paper no.564, https://doi.org/10.1145/3290605.3300794; Tao Zhan, Kun Yin, Jianghao Xiong, Ziqian He & Shin-Tson Wu, "Augmented Reality and Virtual Reality Displays: Perspectives and Challenges", *iScience*, vol. 23, issue 8 (2020), 101397, https://doi.org/10.1016/j.isci.2020.101397.

[19] Julie Carmigniani & Borko Furht, "Augmented Reality: An Overview", in Borko Furht (ed.), *Handbook of Augmented Reality*, New York: Springer, 2011, pp. 3–46, https://doi.org/10.1007/978-1-4614-0064-6_1; Julie Carmigniani, Borko Furht, Marco Anisetti, Paolo Ceravolo, Ernesto Damiani & Misa Ivkovic, "Augmented Reality Technologies, Systems and Applications", *Multimedia Tools and Applications*, 51 (2011), pp. 341–377, https://doi.org/10.1007/s11042-010-0660-6; M. Carmen Juan & David Pérez, "Augmented Reality in Psychology", in Furht (ed.), *Handbook of Augmented Reality*, pp. 449–462, https://doi.org/10.1007/978-1-4614-0064-6_21; Donna R. Berryman, "Augmented Reality: A Review", *Medical Reference Services Quarterly*, vol. 31, issue 2 (2012), pp. 212–218, https://doi.org/10.1080/02763869.2012.670604; Zhan et al., "Augmented Reality and Virtual Reality Displays", cf. above.

[20] Olivier Hugues, Jean-Marc Cieutat & Pascal Guitton, "GIS and Augmented Reality: State of the Art and Issues", in Furht (ed.), *Handbook of Augmented Reality*, pp. 721–740, https://doi.org/10.1007/978-1-4614-0064-6_33; Dan Golding, "Far from Paradise: The Body, the Apparatus and the Image of Contemporary Virtual Reality", *Convergence*, vol. 25, issue 2 (2019), pp. 340–353, https://doi.org/10.1177/1354856517738171; Zhan et al., "Augmented Reality and Virtual Reality Displays", cf. above; Lik-Hang Lee, Tristan Braud, Pengyuan Zhou, Lin Wang, Dianlei Xu, Zijun Lin, Abhishek Kumar, Carlos Bermejo & Pan Hui, "All One Needs to Know about Metaverse: A Complete Survey on Technological Singularity, Virtual Ecosystem, and Research Agenda", *arXiv*, 2021, https://arxiv.org/abs/2110.05352.

the worlds of fashion, real-estate (trading virtual properties), and streamed events (pop group ABBA relaunched themselves in 2022 with on-stage "Abbatars"). Physical reality can be dynamically reconstructed in the metaverse, providing opportunities to do things virtually that are impossible, too dangerous, or too expensive, to do physically.[21] Identities, gender, ethnicity and other markers may be altered or even created,[22] with virtual ethical codes,[23] pushing back at fixed ideas about what it means to be human or social. Some anticipate a reality as meaningful as the physical.[24]

In the tech industry, Facebook fired the first shot, controversially buying VR company Oculus in 2014,[25] and was later brought under a holding company significantly called Meta.[26] Nvi-

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[21] Jeremy Bailenson, *Experience On Demand: What Virtual Reality Is, How it Works, and What it Can Do*, New York: W.W. Norton, 2018; Haihan Duan, Jiaye Li, Sizheng Fan, Zhonghao Lin, Xiao Wu & Wei Cai, "Metaverse for Social Good: A University Campus Prototype", in *MM '21: Proceedings of the 29th ACM International Conference on Multimedia*, New York: ACM, 2021, pp. 153–161, https://doi.org/10.1145/3474085.3479238.

[22] Keziah Wallis & Miriam Ross, "Fourth VR: Indigenous Virtual Reality Practice", *Convergence*, vol. 27, issue 2 (2021), pp. 313–329, https://doi.org/10.1177/1354856520943083.

[23] Lucy A. Sparrow, Martin Gibbs & Michael Arnold, "Ludic Ethics: The Ethical Negotiations of Players in Online Multiplayer Games", *Games and Culture*, vol. 16, issue 6 (2021), pp. 719–742, https://doi.org/10.1177/1555412020971534.

[24] Johnny Hartz Søraker, "Virtual Worlds and Their Challenge to Philosophy: Understanding the 'Intravirtual' and the 'Extravirtual' ", in Harry Halpin & Alexandre Monnin (eds.), *Philosophical Engineering: Toward a Philosophy of the Web*, Chichester: Wiley Blackwell, 2014, pp. 168–180; David J. Chalmers, *Reality+: Virtual Worlds and the Problems of Philosophy*, London: Allen Lane, 2022.

[25] Ben Egliston & Marcus Carter, "Oculus Imaginaries: The Promises and Perils of Facebook's Virtual Reality", *New Media and Society*, 2020, https://doi.org/10.1177/1461444820960411; Daniel Harley, "Palmer Luckey and the Rise of Contemporary Virtual Reality", *Convergence*, vol. 26, issues 5-6 (2020), pp. 1144–1158, https://doi.org/10.1177/1354856519860237.

[26] Mark Zuckerberg, *Founder's Letter*, 2021, https://about.fb.com/news/2021/10/founders-letter/; Casey Newton, "Mark in the Metaverse", *The Verge*, 22nd July, 2021, https://www.theverge.com/22588022/mark-zuckerberg-facebook-ceo-metaverse-interview.

dia's Omniverse allows users to bring their own constructions to a virtual space, where they can combine with others collaboratively. Microsoft has a similar platform, Mesh, and HoloLens, a mixed-reality headset. Epic Games and Tencent are major players, while Decentraland, SuperWorld, the Sandbox and Somnium Space are growing as they specialise in metaverse services.

A well-used metaverse would be a mine for data, analysed with AI in real time, creating a "fantasy of perfect data".[27] It affords opportunities for order, calculation and rationality, implementing the Enlightenment dream of a society in which human needs are accurately identified and supplied. The ambient infrastructure knows individuals better than they do themselves, because it has far more information about the individual, and events, actions and judgments involving people with similar attributes. ML can make judgments about individuals' optimal choices and behaviours *if only they had the relevant information with which to judge their own interests*. This is a *subjunctive* world: people are told what choices they *would* have made, if only they knew as much as the data infrastructure.[28]

We can imagine a "digital body politic": Pentland argues that big-data systems with feedback form a "nervous system" to maintain stability of government, energy, health and transport systems, which could "reinvent societies' systems within a control framework: one that first senses the situation; then combines these observations with models of demand and dynamic reaction; and, finally, uses the resulting predictions to tune the systems to match the demands being made of them."[29] Sensors and the IoT make the nervous system, AI

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[27] Marcus Carter & Ben Egliston, "What Are the Risks of Virtual Reality Data? Learning Analytics, Algorithmic Bias and a Fantasy of Perfect Data", *New Media and Society*, 2021, https://doi.org/10.1177/14614448211012794.

[28] Kieron O'Hara, "Personalisation and Digital Modernity: Deconstructing the Myths of the Subjunctive World", in Uta Kohl & Jacob Eisler (eds.), *Data-Driven Personalisation in Markets, Politics and Law*, Cambridge: Cambridge University Press, 2021, pp. 37–54, https://doi.org/10.1017/9781108891325.004.

[29] Alex Pentland, *Social Physics: How Good Ideas Spread – The Lessons From a New Science*, Brunswick: Scribe, 2014, p. 138.

the brain, blockchain the memory,[30] and social media the limbic system for collective precognitive function.[31] McGilchrist suggests that modernity is biased towards left-brain thinking: "[T]he left hemisphere sees things abstracted from context, and broken into parts, from which it reconstructs a 'whole': something very different."[32]

All this effects an ideal of modernity, "that there is a fundamental common interest which is inherent in society and which, once disclosed, will supervene over all other interests of the respective parties; it assumes rigorously persuasive rationality and relevant empirical knowledge of a high degree of precision and reliability."[33] "Computational rationality" comprises the progressive development of representations and inferential procedures for reflexivity, probabilistic inference at scale, and managing tradeoffs in effort, precision and timeliness, to maximise expected utility of outputs.[34] Thus the ideal of mastery over a deterministic universe is jettisoned in favour of a probabilistic model driven by experimentation, A/B testing, perpetual beta, etc. After the disappointments of the

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[30] Hugo Tay, "The Holy Trinity of Disruptive Technology: Blockchain, Internet of Things and Artificial Intelligence: A Critical Perspective on How They Shape Our Future", *medium.com*, 2019, https://medium.com/london-blockchain-labs/blockchain-iot-and-ai-4f36581c4094.

[31] Julie Cohen, "The Emergent Limbic Media System", in Mireille Hildebrandt & Kieron O'Hara (eds.), *Life and the Law in the Era of Data-Driven Agency*, Cheltenham: Edward Elgar, 2020, pp. 60–79.

[32] Iain McGilchrist, *The Master and His Emissary: The Divided Brain and the Making of the Western World*, new expanded paperback edition, New Haven: Yale University Press, 2019, pp. 27–28.

[33] Edward Shils, "Civility and Civil Society: Good Manners between Persons and Concern for the Common Good in Public Affairs", in Edward Shils, *The Virtue of Civility: Selected Essays on Liberalism, Tradition, and Civil Society*, Indianapolis: Liberty Fund, 1997, pp. 63–102, this passage on 85.

[34] Samuel J. Gershman, Eric J. Horwitz & Joshua B. Tenenbaum, "Computational Rationality: A Converging Paradigm for Intelligence in Brains, Minds and Machines", *Science*, vol. 349, issue 6245 (2015), pp. 273–278, https://doi.org/10.1126/science.aac6076.

Enlightenment, the hope is reopened for "humans to attain the powers typically associated with the divine".[35]

Digital modernity is terraforming the physical world to assert its priority.[36] Restaurants and other venues converge on the style of Instagram.[37] Apps such as Facetune and Adobe Lightroom improve facial appearance in photos, influencing self-image[38] and inspiring a boom in plastic surgery.[39] The quantified self philosophy[40] uses data

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[35] Agnes Horvath, Camil Francisc Roman & Gilbert Germain, "Introduction: Divinisation and Technology – The Political Anthropology of Subversion", in Agnes Horvath, Camil Francisc Roman & Gilbert Germain (eds.), *Divinization and Technology: The Political Anthropology of Subversion*, London: Routledge, 2018, pp. 1–13, this passage on p. 1.

[36] Kieron O'Hara, "Data, Legibility, Creativity ... and Power", *IEEE Internet Computing*, vol. 19, issue 2 (2015), pp. 88–91, https://doi.org/10.1109/MIC.2015.34.

[37] Sarah Frier, *No Filter: The Inside Story of How Instagram Transformed Business, Celebrity and Our Culture*, London: Random House, 2020, pp. 159–178.

[38] Jasmine Fardouly, Phillippa C. Diedrichs, Lenny R. Vartanian & Emma Halliwell, "Social Comparisons on Social Media: The Impact of Facebook on Young Women's Body Image Concerns and Mood", *Body Image* 13 (2015), pp. 38–45, https://doi.org/10.1016/j.bodyim.2014.12.002; Jasmine Fardouly & Lenny R. Vartanian, "Social Media and Body Image Concerns: Current Research and Future Directions", *Current Opinion in Psychology* 9 (2016), pp. 1–5, https://doi.org/10.1016/j.copsyc.2015.09.005; Jasmine Fardouly, Brydie K. Willburger & Lenny R. Vartanian, "Instagram Use and Young Women's Body Image Concerns and Self-Objectification: Testing Mediational Pathways", *New Media and Society*, vol. 20, issue 4 (2018), pp. 1380–1395, https://doi.org/10.1177/1461444817694499; Mariska Kleemans, Serena Daalmans, Ilana Carbaat & Doeschka Anschütz, "Picture Perfect: The Direct Effect of Manipulated Instagram Photos on Body Image in Adolescent Girls", *Media Psychology*, vol. 21, issue 1 (2018), pp. 93–110, https://doi.org/10.1080/15213269.2016.1257392; Scott J. Fatt, Jasmine Fardouly & Ronald M. Rapee, "#Malefitspo: Links Between Viewing Fitspiration Posts, Muscular-Ideal Internalisation, Appearance Comparisons, Body Satisfaction, and Exercise Motivation in Men", *New Media and Society*, vol. 21, issue 6 (2019), pp. 1311–1325, https://doi.org/10.1177/1461444818821064.

[39] Susruthi Rajanala, Mayra B. C. Maymone & Neelam A. Vashi, "Selfies – Living in the Era of Filtered Photographs", *JAMA Facial Plastic Surgery*, vol. 20, no. 6 (2018), pp. 443–444, https://doi.org/10.1001/jamafacial.2018.0486; Anthony Youn, "What Is the Ideal Instagram Filter?", *Aesthetic Surgery Journal Open*

from wearable devices such as fitness trackers, smart watches, biosensors, mood trackers and monitors of specific functions such as ECGs or blood pressure, as well as devices embedded in the body, to render individuals as quantified systems, allowing digital feedback for self-optimisation or biohacking.[41] The Chinese social credit system is "generative of a distinctive personhood that concretizes China's ongoing social transformation", through successive processes of depersonalisation (e.g. automating credit allocation systems) and repersonalisation (as citizens infer a "logic" underlying the system).[42] But self-optimisation is really optimisation of the *data*.[43]

Forum, vol. 1, issue 2 (2019), https://doi.org/10.1093/asjof/ojz019; Krystyne Basa & Jeffrey H. Spiegel, "Facial Plastic Surgery on Instagram: What Is Trending? What Is Working?", *Aesthetic Surgery Journal*, vol. 41, issue 7 (2021), pp. 846–851, https://doi.org/10.1093/asj/sjaa374.

[40] Deborah Lupton, *The Quantified Self*, Cambridge: Polity Press, 2016; Deborah Lupton, "How Does Health Feel? Towards Research on the Affective Atmospheres of Digital Health", *Digital Health* 3 (2017), https://doi.org/10.1177/2055207617701276; Minna Ruckenstein & Mika Pantzar, "Beyond the Quantified Self: Thematic Exploration of a Dataistic Paradigm", *New Media and Society*, vol. 19, issue 3 (2017), pp. 401–418, https://doi.org/10.1177/1461444815609081.

[41] Ali K. Yetisen, "Biohacking", *Trends in Biotechnology*, vol. 36, issue 8 (2018), pp. 744–747, https://doi.org/10.1016/j.tibtech.2018.02.011; Harsha Gangadharbatla, "Biohacking: An Exploratory Study to Understand the Factors Influencing the Adoption of Embedded Technologies within the Human Body", *Heliyon* 6 (2020), e03931, https://doi.org/10.1016/j.heliyon.2020.e03931.

[42] Tom McDonald & Li Dan, "Alipay's 'Ant Credit Pay' Meets China's Factory Workers: The Depersonalisation and Re-Personalisation of Online Lending", *Journal of Cultural Economy*, vol. 14, issue 1 (2021), pp. 87–100, https://www.tandfonline.com/doi/full/10.1080/17530350.2020.1763424. The quoted passage on p. 87. Also Josh Chin & Liza Lin, *Surveillance State: Inside China's Quest to Launch a New Era of Social Control*, New York: St Martin's Press, 2022.

[43] Mika Pantzar & Minna Ruckenstein, "Living the Metrics: Self-Tracking and Situated Objectivity", *Digital Health* 3 (2017), https://doi.org/10.1177/2055207617712590; Dorthe Brogård Kristensen & Minna Ruckenstein, "Co-evolving with Self-Tracking Technologies", *New Media and Society*, vol. 20, issue 10 (2018), pp. 3624–3640, https://doi.org/10.1177/1461444818755650; Jia Tolentino, *Trick Mirror: Reflections on Self-Delusion*, London: 4th Estate, 2019; Luke Stark, "The

In all these cases, the data is prior or more important, suggesting a key principle of digital modernity:

> In digital modernity, the best that hapless reality can achieve is to get closer to the perfection of the algorithm and the data.[44]

II

In the cave from Plato's *Republic*, the perceptions of a group of prisoners, only able to see shadows cast by a flickering fire behind them, were contrasted with someone who had escaped and seen the outside world,[45] illustrating the imperfection of our knowledge of the everyday, physical world. Precision and certainty are only possible in the abstract world of ideas. Nowhere did Plato suggest Descartes' distinctively modern vision of the subjective world being entirely spurious, which received a scientistic twist from Putnam's thought experiment that people may be brains in a vat, with a powerful computer simulating reality with electrical stimuli.[46]

In a digital version, there would be no need for recourse to the outside to calibrate the prisoners – ML could interrogate the shadows, extracting informative signals to communicate direct to the prisoners' smartphones without releasing them. In Zuckerberg's cave, the alternative realm is an epistemologically transparent rendering of the existing physical world, which the physical takes as feedback and *to which it is expected to conform*.

Emotive Politics of Digital Mood Tracking", *New Media and Society*, vol. 22, issue 11 (2020), pp. 2039–2057, https://doi.org/10.1177/1461444820924624.

[44] Kieron O'Hara, "The Contradictions of Digital Modernity", *AI and Society*, vol. 35, issue 1 (2020), pp. 197–208, https://doi.org/10.1007/s00146-018-0843-7, the quoted passage on on p. 200.

[45] Plato, "Republic", in John M. Cooper (ed.), *Plato: Complete Works*, Indianapolis: Hackett Publishing Company, 1997, pp. 971–1223, the quoted lines on pp. 1132–1135.

[46] Hilary Putnam, "Brains in a Vat", in Hilary Putnam, *Reason, Truth and History*, Cambridge: Cambridge University Press, 1981, pp. 1–21; Chalmers, *Reality+*, see above.

This is the imaginary that underlies virtual reality, reaching its fictional apogee in the 1999 film *The Matrix*,[47] which among other things laid down the challenge of the red and blue pills. Taking the latter allows the character to live peacefully in the virtual paradise, while the former reveals the true nature of reality – an allegory that challenges digital modernity while accepting its being and the force of its representational abilities. The "red pill" has become a popular online meme for introducing converts to aggressive heterodoxy and rejection of social norms, e.g. alt-right Internet activism.[48] Even though the trope turns digital modernity on itself by suggesting it is "only" virtual, it fails in the end: "red-pilling" thrives (could only thrive) online.[49]

Those in Plato's cave and Putnam's vat, or tormented by Descartes' demon, are denied understanding of their world, and are unaware of their predicament. But dwellers in the metaverse are *fully* aware, preferring the virtual and in the ideal accepting its priority over the physical. Digital modernity has hit a sweet spot for the prisoners in Zuckerberg's cave.

Are there counternarratives available? We could deny that our current context is a species of modernity, making a postmodernist

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[47] William Irwin (ed.), The Matrix *and Philosophy: Welcome to the Desert of the Real*, Peru IL: Open Court, 2002.

[48] Scott F. Aiken, "Deep Disagreement, the Dark Enlightenment, and the Rhetoric of the Red Pill", *Journal of Applied Philosophy*, vol. 36, issue 3 (2019), pp. 420–435, https://doi.org/10.1111/japp.12331; Joshua Tait, "Mencius Moldbug and Neoreaction", in Mark Sedgwick (ed.), *Key Thinkers of the Radical Right: Behind the New Threat to Liberal Democracy*, New York: Oxford University Press, 2019, pp. 187–203, see esp pp. 194–195.

[49] Tait, "Mencius Moldbug"; Benjamin Teitelbaum, "Daniel Friberg and Metapolitics in Action", in Sedgwick (ed.), *Key Thinkers of the Radical Right*, pp. 259–275; Pierce Alexander Dignam & Deana A. Rohlinger, "Misogynistic Men Online: How the Red Pill Helped Elect Trump", *Signs: Journal of Women in Culture and Society*, vol. 44, no. 3 (2019), pp. 589–612, https://doi.org/10.1086/701155; Matias Nurminen, "From Swallowing the Red Pill to Failing to Build the Wall: Allusive Cognitive Metaphors in Advocating Political and Extremist Views", *Poetics Today*, vol. 43, issue 2 (2022), pp. 309–334, https://doi.org/10.1215/03335372-9642637.

case[50] – but its decadence and trivialisation of principle are hardly likely to wean people off their smartphones. Alternatively, we could reconstruct the ambient data infrastructure, for example relocating it in the blockchain, providing transparency of data use and control over data.[51] The problem with that option is that there is so little evidence that ordinary data subjects are interested in pursuing their data protection rights and exercising such control.[52]

Ultimately, the potential for top-down control offered by digital modernity may simply be too tempting for policymakers, tasked with mitigating climate change, pollution, congestion, public health and security, to ignore. Furthermore, choice facilitated by the internet can seem problematic from the perspective of authority, e.g. with pornography, populism, disinformation or self-harm sites. It remains to be seen whether smart cities or "nudge" paternalism live up to their rhetoric, or that online harms can be suppressed, but digital modernity affords an opportunity for political elites to regain the control they have lost (or given away), if they can wrest it from private tech giants. The Chinese government flexed its muscles successfully with Tencent, Alibaba and Didi Chuxing in 2020–22; whether the US or EU can rein in the Silicon Valley giants without destroying the network value they create is a harder question to answer.

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[50] O'Hara, "Digital Modernity".

[51] Essam Mansour, Andrei Vlad Sambra, Sandro Hawke, Maged Zereba, Sarven Capadisli, Abdurrahman Ghanem, Ashraf Aboulnaga & Tim Berners-Lee, "A Demonstration of the Solid Platform for Social Web Applications", in *WWW '16 Companion: Proceedings of the 25th International Conference Companion on World Wide Web*, New York: ACM, 2016, pp. 223–226, https://doi.org/10.1145/2872518.2890529; Gilder, *Life After Google*.

[52] Kieron O'Hara, *Privacy, Privacy-Enhancing Technologies and the Individual*, Web Science Trust White Paper #1, 2022, https://webscience.org/project/privacy-privacyenhancing-technologies-the-individual/; Kieron O'Hara, *The Seven Veils of Privacy: How Debates About Privacy Conceal its Nature*, Manchester: Manchester University Press, in press.

David McGrogan

The Right Not to Be Exposed to Pornography

It appears increasingly apt to describe our era as "post-liberal".[1] An illustration of this comes in the form of the Online Safety Bill, a proposed law which had its second reading in the UK Parliament in April 2022 and is likely to come into effect in 2023.[2] Its stated goal is to "make the UK the safest place in the world to be online", and this involves, among other things, imposing duties on online platforms to "protect" users by removing "harmful" content. Most controversially, "harmful" content in this context will include "misinformation and disinformation". This is, quite naturally, of great concern to those of us who worry about the trend, which is now plainly evident in Western democracies, to treat the right to freedom of expression much less seriously than in the past.[3] The Bill will also, however – less controversially – require any platform hosting pornographic material to mandate age verification for users, which could, if implemented correctly, remove at a stroke the potential for children to access such material online. In these respects, the Bill illustrates neatly that as faith in liberalism declines both problems and opportunities will reveal themselves.

First, then, a brief recapitulation. For a liberal, such as Ronald Dworkin, the only justification for restricting the rights of an individual was if exercising that right would directly interfere with the rights

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[1] P. Deneen, *Why Liberalism Failed*, Yale University Press, 2018; P. Gottfried, *After Liberalism: Mass Democracy in the Managerial State*, Princeton University Press, 2021.

[2] Online Safety Bill, Bill 121 2022–2023 as amended, available at https://publications.parliament.uk/pa/bills/cbill/58-03/0121/220121.pdf.

[3] It is now, indeed, becoming common to associate being in favour of freedom of expression itself with 'the grammar of nationalist resentment', as Titley puts it in G. Titley, *Is Free Speech Racist?* (Polity Press, 2020), p. 112.

of another (or in cases of genuine public emergency).[4] A right, by definition, means the liberty to act in a certain way even if it would go against the general good. It is only where an identifiable and direct harm to another individual can be identified that the exercising of a right should be restricted. This meant that Dworkin himself, like many liberals, was "intensely relaxed"[5] about the availability of sexually explicit material. "The right of moral independence", as he put it, meaning the right not to suffer any disadvantage merely on the grounds that officials or other citizens think that one's opinions about the good life are ignoble or wrong, "is to be justified as a trump over an unrestricted utilitarian defence of prohibitory laws against pornography."[6] In other words, even if the majority of a society were to believe the availability of pornography to be demeaning or unsuitable for human flourishing, the right of moral independence would prevent the majority from enforcing a prohibition against it. Dworkin recognised that, pragmatically, some restrictions on pornography would not be "trumped" by this right because they simply came down to a matter of taste.[7] But his starting position was clear.

The UK's Online Safety Bill is predicated on different reasoning: rights are generally qualified (with some exceptions) by what is in the public interest. The rights to freedom of expression or privacy, deriving from an underlying right of "moral independence", do not "trump" the general good; and, indeed, they may be proportionately restricted in order to achieve legitimate social ends. In this case, they may be limited in order to "protect" not other specified users but general classes of persons from real or perceived "harms", including mere "falsehoods". This is in fact largely in keeping with the way in which human rights law has developed, and will presumably con-

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[4] R. Dworkin, *Taking Rights Seriously*, Harvard University Press, 1977; "Is There a Right to Pornography?", *Oxford Journal of Legal Studies*, vol. 1, no. 2 (1981), pp. 177–212.

[5] The phrase is a coining of Peter Mandelson, in "Mandelson Plans a Microchip Off the Old Block", *Financial Times*, 23 October, 1998.

[6] "Is There a Right to Pornography?", *supra* note 4, pp. 194 and 205.

[7] *Ibid*., pp. 196 f.

tinue to develop, in the European Convention system, where the question of whether a violation of a right has occurred is often described as a "balancing" process between the rights of the individual and the public interest, and whether a restriction on a right can be considered to be "proportionate" on those grounds.[8]

Dworkin would probably have said that this shift in conceptualising rights comes with the risk of making rights themselves worthless. If one only has the right to do something if it complies with the general good, then it is not really a right at all.[9] Indeed, it is more akin to an obligation. This is undoubtedly correct. If one only has the right to express oneself freely so long as what one is expressing accords with the authorities' list of acceptable views, then that is tantamount to saying that one has a duty to express oneself only in particular ways. The negative consequences of this are perfectly clear, and are becoming clearer. Just a few weeks ago, for example, the digital payments processor PayPal, apparently at the indirect behest of the European Commission, summarily terminated a number of its users' accounts in order to "demonetise the dissemination of disinformation" – in this case, expressing sceptical views about the viability of Covid vaccines.[10]

In this respect, the Online Safety Bill is simply another aspect of a trend that can only reasonably be described as worrying. It represents a freestanding opportunity for online services providers, working in coordination with politicians and civil servants, to remove whatever content they deem to be "misinformative" or "disinformative" on the basis that it is "harmful". In turn, it represents an opportunity for these actors to impose obligations on their users to express themselves only insofar as the content is compliant with those actors' own views. This is, to say the least, a regrettable devel-

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[8] See e.g. J. Gerards, *General Principles of the European Convention on Human Rights*, CUP, 2019, pp. 229–260.
[9] *Taking Rights Seriously*.
[10] European Commission, 2022 Strengthened Code of Practice on Disinformation, 16 June 2022, available at https://digital-strategy.ec.europa.eu/en/library/2022-strengthened-code-practice-disinformation.

opment, and the Bill's likely passing in this respect is genuinely indicative of a declining faith in liberal values.

But the collapse of the liberal understanding of rights, alongside a broader decay in liberal institutions, does open opportunities to think in different ways – to problematise notions that have been largely taken for granted under liberalism.

One of these notions is that society essentially comprises adults, and that adult interests for the most part trump those of children. Dworkinian liberalism is founded on the adult as rights-holder: independent, autonomous, and capable of withholding or giving consent. This is, indeed, perfectly clear in his writings on pornography, in which children are only referred to as objects of the parent's slightly prudish desire to restrict circulation of such material "so that [their children] develop certain similar tastes and opinions".[11] Within this context, his conceptualisation of, say, the right to moral independence follows impeccable logic. But when one takes the best interests of children into account, that conceptualisation collapses. It cannot be the case that one's "moral independence" should be permitted to trump the general good when that general good includes the interests of children in growing up in an environment that optimally supports their moral and psychological development. There is now a wealth of evidence to support the claim that widely available pornography, particularly violent pornography, has disastrous effects on both girls and boys – but to cite such evidence would be to concede that the point is even arguable. It is not, and it is entirely appropriate for the state to act to restrict the availability of such material to all in order to prevent it falling into children's hands. This will necessarily include restricting the ability of adults to access such material, even at the cost of their privacy or "moral independence", by forcing them to input credit card details or other personal information in order to do so. It cannot be the case, in other words, that one individual's freedom with respect to the consumption of pornography trumps utilitarian considerations about the likelihood that such material will fall

[11] "Is There a Right to Pornography?", *supra* note 4, p. 196.

into the hands of children. It must rather end at the general good – which encompasses children's interests.

The Online Safety Bill thus demonstrates to us that new vistas will open to us as the institutions of liberalism continue to fray. As much as we might regret the state arrogating for itself the power to protect adults from "falsehoods" online, and as much as we may be dismayed at where the exercising of this power might take us, we ought also to sense that there are chances available to us in a post-liberal era to think about society and the "general good" in a different way.

This is, of course, not limited to pornography alone. In many other domains of life, Dworkin's "right to moral independence", trumping the moral instincts of the majority, has found widespread implicit approval, and frequently at the cost of what is best for children. Perhaps the most obvious and prominent example is that of divorce, and the dissolution of the presumption in favour of the nuclear family, where the incommensurability of the right to moral independence and the interests of children is at its most acute. But across modern life we find many other examples, and the internet, which seems at times to collapse the borders between the social lives of children and adults, is causing them to multiply.

In this sense, it is almost possible to think of the best interests of children as a critique, in the purest Kantian terms, of a certain way of conceiving of the "general good" – which Dworkin himself exemplified. Implicit in all of Dworkin's writing is the assumption that there is in fact no distinction between his right to moral independence and the general good – that, indeed, fostering and protecting the right to moral independence would mean more or less the same thing as achieving the general good in the long run. This anthropological position, if it can be called that, appears to underly much of contemporary thought, and could be described as one of the fundamental tenets of liberalism. When one starts from the position of asking what is best for children, however, one is sooner or later confronted with the question of whether the right to moral independence and the general good are in fact the same thing, or whether these two imperatives

might pull in very different directions. This leads us to look at the basic claims of liberalism in a fresh light. And as faith in liberalism and its institutions declines, it may lead us to seek a rebalancing between those imperatives along alternative axes.

Rich Ling

Does Democracy Need a Digital Council of Trent?

Introduction

The main idea behind this paper is that transitions in the flow of information result in the ebb and flow of social institutions. The point here is to look at the historical example of printing and the printing press to see how that development played out in society. Which institutions waxed and which ones waned?

While there are wildly different contexts, the same question can be applied to the development of digital communication. We are in the middle of the transition from the pre-digital to whatever the digital era will bring. Thus, it is interesting to speculate as to how the current array of social institutions will weather this new transition.

As will be developed here, there was a striking effort to make printing safe for the existing institutional (power) structure of its era. While printing resulted in many positive outcomes, it also unleashed vicious intersectarian conflicts and changed the structure of many pre-printing institutions. The same question can be asked of digitalization. Are we in the process of trying to make our institutions safe from Facebook (and the other digital artifacts and platforms that have arisen)? Alternatively, which social institutions are in for a change? This is the focus of this piece.

The Council of Trent

Something more than 480 years ago in December of 1545, in the Northern Italian town of what we now call Trento, a collection of cardinals, patriarchs, archbishops, bishops, proxies (for absent bishops), and generals of religious orders assembled for the first meeting of Council of Trent. It was called by the Catholic Church. Its assignment, among other things, was to address the development of Prot-

estantism. The council convened in a series of meetings over the next two decades.

The Council came approximately 20 years after the edict of Worms in 1521 (an edict that was promulgated using the printing press) where Pope Leo X excommunicated Luther and censored his books and pamphlets. The edict read:

> …henceforth no one shall dare to buy, sell, read, preserve, copy, print, or cause to be copied or printed, any books of the aforesaid Martin Luther, condemned by our holy father the Pope as aforesaid, or any other writings in German or Latin hitherto composed by him, since they are foul, harmful, suspected, and published by a notorious and stiff-necked heretic.[1]

It also said:

> No printer … may begin to print books or writings containing anything that concerns the Christian faith to a lesser or greater extent without the consent of the local bishop or his representative or deputy and without the consent of the theological faculty of one of the nearest universities.[2]

Cleary, the edict did not achieve its intended purpose. This resulted in the need for the Council of Trent as an attempt to further bolster the position of the Catholic church. At the council there was discussion of issues such as the inclusion of the Apocrypha (additional books that were outside the accepted canon of scripture); the sale of indulgences; the Nicene Creed; the position of marriage in the church and Transubstantiation (the relationship between bread and the body of Christ as well as the relationship between wine and his blood) that was brought about by the appropriate form of prayer.

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[1] Theodor Dieter, "Another Quincentennial: The Diet and Edict of Worms (1521)", *Lutheran Quarterly*, vol. 35, no. 1 (2021), pp. 1–17, https://muse.jhu.edu/article/785040, this passage on p. 10.
[2] *Ibid*., p. 11.

The point of the council was not idly determining the number of angels that can dance on the point of a pin. The Council developed decrees that sought to stem the growth of Protestantism and revitalize the Catholic Church. The council formed the basis for the counter-reformation. It declared as central, the Old and the New Testaments (in Latin) as sacred and canonical.

To be sure, it was called in order to address the issue of Protestantism, a social movement that can be said to have arisen, at least partially because of the development of the printing press.[3] The Council helped to formalize the *Index Librorum Prohibitorum*. That is the books and publications that were seen as heretical and were thus banned by the church.[4] However, in many ways, it was too late. It proved to be impossible to control the spread of printing and thus the spread of alternative dogmas that opposed the Catholic Church.

Taking this a step further, Elizabeth Eisenstein[5] suggests that printing was not only important in spreading the effects of Luther and the Protestant reformation (in the vernacular language). She argues that it was an important cause of the Reformation. Her argument is that without access to printed biblical texts that allowed Luther to cull through the various dogmatic issues, he would never have been able to develop his alternative theology. The proliferation of different biblical texts eventually cast into doubt the existence of a single infallible text.[6]

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[3] Robert E. McNally, S.J., "The Council of Trent and Vernacular Bibles", *Theological Studies*, vol. 27, issue 2 (1966), pp. 204–227, https://doi.org/10.1177/004056396602700202.

[4] Max Lenard, "On the Origin, Development and Demise of the *Index Librorum Prohibitorum*", *Journal of Access Services*, vol. 3, issue 4 (2006), pp. 51–63, https://doi.org/10.1300/J204v03n04_05.

[5] *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early-Modern Europe*, vols. I–II, Cambridge University Press, 1979.

[6] James A. Dewar, "The Information Age and the Printing Press: Looking Backward to See Ahead", *Ubiquity*, August 2000, p. 13, https://doi.org/10.1145/347634.348784.

Printing, Social Tensions, and the Chaos/Blossoming of Society

From the middle of the 15th century for the next 200 years (and beyond) the easy reproduction of text afforded by the printing press gave us the worst and the best of society. Printing, and the resulting access to information that it afforded allowed the distribution of information in a way that had not been possible heretofore.[7] The "one to many" form of access was not simply new books, pamphlets, and newspapers.[8] This information played into the various social schisms and dynamics that were in society. In short, the printing press helped to advance a variety of political, religious, scientific, and social movements. To be sure, these were not always in harmony, and indeed, were often in direct and violent conflict.

There was the congealing of the tension associated with the sale of indulgences and the development of Lutheranism. Some of the context associated with Luther writing his theses was his fundamental disagreement with Johann Tetzel, who was the church's "Grand Commissioner for Indulgences" in Germany. Indulgences are a construct in the Catholic church that removes or alleviates an individual's sin. To receive it, the individual needs to pray and perform an act of redemption. Tetzel, and others, saw the pecuniary potential of providing indulgences. In exchange for money, he was willing to grant indulgences. Indeed, some of the payment for St. Peters Basilica in Rome was raised this way. According to Luther, Tetzel not only sold indulgences for past sins, but one could also purchase indulgences proactively.[9]

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[7] See esp. Eisenstein, *op. cit.*

[8] Zac Gershberg – Sean Illing, *The Paradox of Democracy: Free Speech, Open Media, and Perilous Persuasion*, Chicago: The University of Chicago Press, 2022.

[9] Will Durant, *The Reformation: A History of European Civilization from Wycliffe to Calvin, 1300 – 1564*, New York: Simon & Schuster, 1957.

Malevolence and Savagery Unleashed

The printing press gave a voice to underlying stress and tensions in society (e.g., resentment at the Catholic Church's practice of selling indulgences). Thus, there was a synergy between the underlying social tension that had been building and the ability to broadcast the protest.

The corruption associated with selling indulgences and other social stresses were uncovered (or made obvious) by the development of printing. The Luther Bible, for example, helped to underscore the precarious position of the Catholic priesthood as the sole interpreters of the holy scripture and institutionalize a more personalized type of religion.

As illustrated by the Council of Trent, religious conflict was particularly near to the surface. Approximately 15 years previous to the first meeting of the Council of Trent, Henry VIII had challenged the position of the Pope when he sought an annulment of his marriage to Catherine of Aragon in order to marry Anne Boleyn who had Protestant sympathies. In the process, Henry established the Church of England.

In France, the wars of religion between the Catholics and the Huguenots led to what can only be called religious cleansing. In 1572 the St. Bartholomew massacre resulted in the death of as many as 30 000 people as well as royal intrigues by people such as Catherine de Medici.[10] Somewhat later in 1598 there was the Edict of Nantes that gave the Huguenots civil rights and, in a fit of intolerance the later Edict of Fontainebleau (1685) revoked the civil rights of the Huguenots and led to their relocation outside of France.

Moving into the 17th century we see the 30 Years War (1618–1648), fought largely for religious purposes, ending in the Peace of Westphalia after as many as eight million people died. The savagery

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[10] See e.g. https://www.atlasobscura.com/articles/how-catherine-de-medici-made-gloves-laced-with-poison-fashionable?utm_medium=atlas-page&utm_source=facebook..

of these conflicts was also seen in the French Revolution and the Terror.[11]

Seen in this light, printing abetted the elaboration of interectarian ideologies. These ideologies, in turn, helped to motivate several centuries of violence that saw the deaths of a significant portion of European society. Indeed, we still have the after-effects of this in places such as Northern Ireland and the rise of Christian Nationalism in a variety of countries.

Positive Effects of Printing

To be sure, printing was not only bad. Looking at the other side of the ledger, we see that printing helped to facilitate many positive developments in society.

From the mid-1400s we see that it contributed to the Renaissance and later the Enlightenment since printing allowed for the distribution of scientific ideas.[12] From the late 1400s, printing facilitated the spread of literature, e.g., András Hess and his printing press in Buda. At this time, the printed copy of works by, for example, Cicero, cost "only" a month's wages in Venice, far less than a hand-transcribed copy that could cost a year's wages.

Printing enlarged people's sense of the world. This was seen in the spread of translated works that described expeditions to other parts of the world and the cultures that were common there. The printing of maps enabled exploration as seen in the voyages of the Portuguese and later Columbus.[13]

Moving into the 16th century, we see the printing of *De revolutionibus orbium coelestium* by Copernicus, the printing of music,

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[11] Gershberg – Illing, *The Paradox of Democracy*, *op. cit*.

[12] In some cases, the printing of these ideas had its cost as seen, for example in Galileo's inquisition given his views of the solar system.

[13] Maria Fernanda Alegria et al., "Portuguese Cartography in the Renaissance", in *The History of Cartography*, vol. 3, part I, ed. by David Woodward, *Cartography in the European Renaissance*, Chicago: The University of Chicago Press, 2007, pp. 975–1067.

and in the 17th century the development of newspapers such as the German-language *Relation aller Fürnemmen und gedenckwürdigen Historien*.

During the middle of the 17th century, printing and the peer review system enabled the development of the scientific method by Bacon (1620) and Descartes (1637). The peer-review system relies on the distribution of exact copies of the same text for consideration by members of the wider scientific community. This is not possible in a world where the printing press does not exist. In many ways, this is the core of the academic enterprise. The first major example of the peer review system was in *Philosophical Transactions* published by the Royal Society in London in 1665. According to Eisenstein,[14] the greatest impact of printing on science was not the speed with which ideas could diffuse, it was the accuracy of the text. Peer reviewers could trust the fidelity of the writing, the tables, and the formulas as opposed to stumbling over poorly transcribed text, as was common in the previous hand-written epoch.

The printing revolution led to the preservation of ideas in a way that had previously not been possible. According to Dewar,[15] this was one of the important results of printing.

> "Typographical fixity" refers to the preservative power of print. Ideas recorded in only a few manuscripts were always in danger of being forgotten or lost by the intellectual community. Put those same ideas in hundreds of identical printed copies, and they were much more likely to spread and endure.[16]

Another effect of printing according to Eisenstein is that it allowed thinkers of the Renaissance to question older ideas, as was the case with Luther. For example, according to Leed,[17] Copernicus

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[14] Eisenstein, *op. cit.*
[15] See above, *op. cit.*
[16] See above, *op. cit.*, p. 14.
[17] Eric J. Leed, "Review Essay: Elizabeth Eisenstein's *The Printing Press as an Agent of Change* and the Structure of Communications Revolutions", *American*

was able to compare the ideas of, among others, Ptolemy and Aristotle for inconsistencies when he was working on his *De Revolutionibus Orbium Coelestium.* This is an early example of how printing facilitated the development of the scientific revolution.

In addition, the development of printing led to popular literacy and the educational system. "Book learning" was an important consequence of printing. Again, according to Eisenstein,

> Possibly no social revolution in European history is as fundamental as that which saw book learning (previously assigned to old men and monks) gradually become the focus of daily life during childhood, adolescence and early manhood... As a consumer of printed materials geared to a sequence of learning stages, the growing child was subjected to a different developmental process than was the medieval apprentice, ploughboy, novice or page.[18]

Finally, in the 18th century, based on the ideas of Locke and Voltaire, the idea of a literate population is a founding condition for democracy and the idea of the enlightened electorate. This assumes accessible education and the publication of news, again activities that are based on the development of printing.

Another child of the printing press is the state's ability to preserve and archive information which are central to the bureaucracy and public administration.[19] While many people will only begrudgingly accept that this is a positive effect of printing, the ability to develop archives of information is the foundation of modern liberal democracy. Rather than rely on transient interactions and faulty memory, this development means that public policy is often founded on the ability to preserve a common record of decisions.

Journal of Sociology, vol. 88, no. 2 (Sept., 1982), pp. 413–429, this reference on p. 420.

[18] Eisenstein, *op.cit.*, p. 432.

[19] *FROM MAX WEBER: Essays in Sociology*, translated, edited, and with an introduction by H. H. Gerth and C. Wright Mills, New York: Oxford University Press, 1946, p. 196.

This is seen in the development of, for example, legal precedents and patents that documented the discovery/development of innovations and granted the individual or group the right to exploit the innovation for a particular period of time. This process would not be possible without the printed records of innovation.

Institutions that Were Transformed, Eliminated or Established with a Little (or a Lot) of Help from Printing

Once developed, printing spread into and transformed most realms of society. As Eisenstein convincingly stressed,[20] printing allowed for the dissemination, standardization, and preservation of information. Just as with writing and the development of the alphabet before it (and currently digitalization), printing mutated existing institutions and the development of new ones.

From the above we see that there are several major social institutions that were affected by the development of printing. The most obvious is the church and religion. While there had been disquiet regarding the excesses of the Catholic Church, it is argued that it was not until printing allowed Luther to develop and publish his thoughts, and to distribute them in the language of the people, that Protestantism was able to gain purchase. During the next decades and centuries, Protestantism waxed while the absolute power of the Catholic Church waned.

Dissemination, as noted above, allowed the distribution of information that could be supportive or critical of the existing power structure. It also encouraged the spread of literacy in the local vernacular. Standardization facilitated the ability to develop knowledge and the academic project. Finally, preservation enabled the growth of, for example bureaucracy.[21]

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[20] Eisenstein, *op. cit.*

[21] Max Weber, *Economy and Society*, ed. by G. Roth & C. Wittich, Berkeley: University of California Press, 1968.

Another institution that was fostered by printing was science.[22] The peer review system and the ability to compare identical manuscripts allowed scientists to share their work and to develop research traditions.[23] This allowed the development of modern science. Printing also facilitated the rise of national identity.[24]

In addition, following upon the ideas of Voltaire and later Thomas Jefferson,[25] democracy developed depending on the enlightenment of the citizens that is achieved through their education and access to a free press. Thus, printing is at the core of the modern democratic project.

This is not to say that there were not alternatives approaches to empirical science. Printing facilitated the development of pseudo sciences such as alchemy and astrology. The same forces that allowed for the diffusion of empirical science also facilitated the diffusion of these alternative forms of inquiry.

> ... roughly during the first century after Gutenberg's invention, print did as much to perpetuate blatant errors as it did to spread enlightened truth. Putting scribal products into print resulted in a cultural explosion. Never had scholars found so many words, images, and diagrams at their fingertips. And never before had things been so confusing with, for instance, Dante's world view achieving prominent visibility at the same time that Copernican views were making their way into print. Nonsense and truth seemed to move hand in hand with neither made uncomfortable by the presence of the other. Though many have discussed Renaissance culture's playful spirit, love of many-sided accomplishment, or lighthearted indifference to historical fact, Eisen-

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[22] See esp. Eisenstein, *op. cit.*

[23] Randall Collins, *The Sociology of Philosophies: A Global Theory of Intellectual Change*, Belknap: Harvard University Press, 1998.

[24] See esp. Eisenstein, *op. cit*.

[25] Cf. Jefferson, "Second Inaugural Address, 4 March 1805", *Founders Online*, National Archives, https://founders.archives.gov/documents/Jefferson/99-01-02-1302.

> stein more prosaically says that things simply had not yet been sorted out.[26]

In summary then, the transition from manuscript culture to print culture had widescale effects on western culture.

The Digital World

As noted, printing is a one-to-many medium, i.e., one author to many readers.[27] Digitalization and the internet are multi-faceted. The digital world is simultaneously one-to-one, one-to-some, many-to-many, some-to-many, etc. These possibilities change the game with regard to the diffusion of information. They also challenge our assumptions with regard to the structure and functioning of different social institutions.

Digitalization started in the middle of the last century. The transistor was first developed in the late 1940s. Leading from the transistor was the integrated circuit from the late 1950s. This led to ever more electronics in our everyday lives. Items such as transistor radios and calculators came in the 1960s and 1970s. The personal computer started to diffuse into society in the 1970s and by the 1990s the computer and the internet had entered the scene. The internet was first used (in a very primitive form) in the late 1960s[28] and web 2.0, that facilitated general interaction came in the mid-2000s. The World Wide Web has spawned, among many other things, social media. From the time of the transistor until the rise of social media has been a few decades. Mobile communication started in the 1970s and has moved through successive generations until, with the 3rd generation coming in about 2002 and the 4th generation coming in around 2010,

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[26] Renato Rosaldo, "The Cultural Impact of the Printed Word: A Review Article", *Comparative Studies in Society and History*, vol. 23, issue 3, 1981, pp. 508–513, this passage on p. 509, https://doi.org/10.1017/S0010417500013475.
[27] Dewar, *op. cit.*
[28] *Ibid.*

it fused telephony and the internet into a device that we carry around in our pockets.

In that time, digitalization, and the technologies/platforms that it has spawned have nuzzled their way into our lives. However, it can be argued that we are just starting to see the wider effects of digitalization on major social institutions. When seen in the scale of the printing revolution, we are barely out of the starting gates.

Positive Effects of Digitalization

At a broad-brush level, there are many positive sides associated with digitalization. As stressed by Beniger,[29] digitalization has resulted in far enhanced logistics and control of production processes. This has meant that there is less waste and tighter regulation of commercial and governmental activities. We can also point to medical advances and developments in science. The recent COVID pandemic has shown us, for example, that digital tools were used to quickly develop a vaccine for the virus.

The pandemic also showed us that it was possible to carry out many social functions using digital mediation platforms, e.g., education, different forms of work, consumption, entertainment, etc. At the social level, we now have access to information that was formerly inaccessible or difficult to seek out. Scholars have access to journal articles from the most obscure corners of academia. We can find out whether it is raining in Managua, Malmo, Melbourne, Macau, and/or Moscow[30] instantly, in the comfort of our living room. We can text

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[29] James R. Beniger, *The Control Revolution: Technological and Economic Origins of the Information Society*, Cambridge, MA: Harvard University Press, 1986.

[30] As these words are being written, a simple internet search shows that it is raining and 24C in Managua, sunny and 22C in Malmo, 13C and rainy in Melbourne, rainy and 26C in Macau, and 22C and partly cloudy in Moscow. The ability to so simply gather this information would not have been possible previous to digitalization. With some effort, it could have been collected during the "telephone era" by making long-distance calls or, with more effort, during the "tele-

and converse with friends (and eventually scammers) from around the world, just as we can buy stock, order dinner, and purchase useless plastic items from Amazon via our smartphones as we ride the bus.

Institutions that May Have to Change

If we do a simple survey of common social institutions, which of them will be (or have been) altered by digitalization? This list of institutions might include things like the family, religion and belief systems, science & medicine, economics, and commercial activities, education, journalism, government, the military, law, and politics (including the provision of public service, and the integrity of democratic processes as well as the integrity of the judiciary and elections), and finally, commercial activities, work, and careers.

While each of these deserves an essay for itself, I will look at three of them, namely journalism, science, and governance/democracy.

Journalism

Where the printing press is controlled by the journalistic (and state-based) gatekeepers,[31] digitalization provides a voice for all. In 2016, candidate Donald Trump said that Twitter "Is like owning my own newspaper … without the losses."[32] Digital media represent a breach in the ability of the individual to broadcast their communications.

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graph era". Before that time, the logistics of recording and collecting this simple metrological information would have been extremely difficult.

[31] Morris Janowitz, "Professional Models in Journalism: The Gatekeeper and the Advocate", *Journalism & Mass Communication Quarterly*, vol. 52, issue 4 (1975), pp. 618–626, https://doi.org/10.1177/107769907505200402.

[32] See https://www.reddit.com/r/TrumpCriticizesTrump/comments/gsedpy/i_love_twitter_its_like_owning_your_own_newspaper/.

The PC, internet, and smartphones mean that we all are publishers.[33] The notion of a neutral source of information is not without under attack.

Science

In the current digital regime there is not the same fixity of books and printed material. There is the legacy of information that is seen, for example in blockchains. At the same time, there is a highly dynamic nature to the information available in the digital sphere. This means that various competing "truths" can simultaneously occupy the current cycle. These truths may have some afterlife that is available to those who are interested in looking them up, but they become yesterday's news and lose their currency quite quickly. The sheer weight of these items means that there is not the ability to build, brick upon brick, a more refined understanding of a situation. Rather, the situation is dominated by the noise of interested parties shouting out their version.

Thus, NASA scientists and members of the Flat Earth society share the same stage, just as the Vax and the Anti-Vaxxers, the pro-choice and the pro-life sides of the abortion debate. According to the cross-national analysis of Taha Yasseri et al.,[34] controversial topics on Wikipedia include, among many others, gun control, religious freedom, privacy rights, UFOs, Homosexuality, "Gipsy" crime, the Gaza war, Hitler, etc.

Governance and Democracy

One of the central framing questions for the present piece is whether we can make Facebook safe for Democracy. Perhaps this is the

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[33] Zac Gershberg – Sean Illing, *The Paradox of Democracy: Free Speech, Open Media, and Perilous Persuasion*, Chicago: The University of Chicago Press, 2022.

[34] "The Most Controversial Topics in Wikipedia", 2013, https://doi.org/10.2139/ssrn.2269392.

wrong question. It is worth considering whether Facebook (and more generally digital communication) will reshape society to the degree that Democracy is eclipsed with another system of governance.

Kedzie,[35] writing at the dawn of the internet era, suggested that democratization and economic growth are correlated with democracy. He notes, for example, "it may now be virtually impossible for any country to maintain an open economy for expansion while remaining closed to democratic ideas"[36]. This suggested that the growth of the internet will limit the ability of tyrants and autocrats to survive in a context dominated by the free flow of information. Kedzie's interpretation seemed to find some mooring in the sense of optimism associated with the early internet. Indeed, there was the sense that open access to information augured against the ability of dictators to hold sway as seen in the example of the Arab Spring. At first blush, this seemed to confirm Kedzie's idea.

Given two and a half decades of remove, this suggestion by Kedzie needs to be reconsidered. The link between the internet and social media on the one hand, and democratic processes on the other, is at best strained. The use of digital channels for collecting personal information, spreading disingenuous, and false information/propaganda and the ability to develop clan-like groups in social media all augur against the democratic potential of digital technologies. Indeed, these digital channels can be the accomplice of populist and autocratic movements more than the opposite. Kim[37] suggests that in spite of the experience of the Arab Spring, the rise of autocrats and quasi-autocrats around the globe is the major development in the decade after the events in Tunisia and the Arab world. Indeed, the

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[35] Christopher Robert Kedzie, *Communication and Democracy: Coincident Revolutions and the Emergent Dictator's Dilemma*, The RAND Graduate School ProQuest Dissertations Publishing, 1996.

[36] Kedzie, p. xi.

[37] E. H. Kim, "Democratization and Authoritarianism in the Information Age", *International Area Studies Review*, vol. 24, issue 3 (2021), pp. 205–223.

work by Weidmann and Rød [38] shows that the internet and social media enable the sustenance and spread of autocratic movements. Indeed, countries with higher use of the internet are less, and not more likely to democratize according to Weidmann and Rød.

More recently, Gershberg and Illing[39] question whether liberal democracy can survive digitalization. Their argument is that the openness of the democratic process exposes it to subversion from within. They point specifically to the potential of new media and digitalization to give voice to people in a way that we have not seen heretofore. While this openness allows deliberation and the wisdom of the crowd, it also allows for disingenuous actors to exploit the system. Gershberg and Illing suggest that social media make society susceptible to backsliding into authoritarian systems with the failure of mutual tolerance and forbearance. They suggest that these are the bulwarks against the growth of illiberalism. There is a sense of democracy whereby there is voting, but it is not carried out for the good of all, but rather for some populist subgroup. In this case, the institutions that are meant to guard democracy are appropriated and repurposed to support the populist ideology. Indeed, we have seen this being done around the globe. As if to buttress this argument, Haidt [40] notes that democracies are becoming markedly more polarized during the last decade.

Gershberg and Illing [41] refer to Plato's discussion that equates oligarchy, democracy, and tyranny. They also re-examine the debate between Walter Lippmann and John Dewey. According to Lippmann, the complexity of society makes it impossible for citizens to self-govern. The degree of enlightenment and insight required for self-government is, in Lippmann's eyes, too intricate. It is not the case that citizens are not intelligent enough, but rather it was not possible

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[38] N. B. Weidmann – E. G. Rød, *The Internet and Political Protest in Autocracies*, New York: Oxford University Press, 2019.
[39] *The Paradox of Democracy*, see above.
[40] "Yes, Social Media Really Is Undermining Democracy", *The Atlantic*, July 28, 2022.
[41] *Op. cit.*

for them to know enough to make the correct selections. This is why we fall back on the use of stereotypes and needlessly simplified caricatures as we navigate life. In this case, argued Lippmann, there is the need for a technical elite to govern. One can ask, for example, whether developments in artificial intelligence might fit into this role in society.

It was this point that Dewey disagreed with. For Dewey, the solution was not transference of power to an elite, but rather greater social interaction among the populace. It was only through their interaction that there could be agreement about the proper path forward. Gershberg and Illing take the path of Dewey. They write:

> … democracies are defined by their cultures of communication. If a democracy consists of citizens deciding, collectively, what ought to be done, then the manner through which they persuade one another determines nearly everything else that follows.[42]

Their fear is that rather than informed debate there will be empty debate, duplicity, and theatrics. Their hope is that an ethos of democracy will sustain the institution.

In the context of present piece, the fact that there is this discussion points out that digitalization and democracy may not mix. Is, for example, the January 6th committee of the US Congress, a latter-day form of the Council of Trent? Is its work to mask up the ruptures shown by the January 6th attempted insurrection?

Conclusion

Writing was one major communication transition that allowed for the development of recordkeeping, accounting, it fixed information and made it transportable. Printing was another transition, that is our contemporary transition into the digital world.

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[42] Gershberg and Illing, p. 10.

It is wrong, however to speak only of changes in communication. This is only half of the story. This transition needs to be introduced in a time of social tension. If the communication regime is controlled by one (powerful) group, then there is not a major social transition. However, if the new technology comes at a time when there are social tensions, then the synergy between the technology and the social dynamics can realign existing institutions and it can see the rise of new ones

In short, the interaction between printing and the underlying social tensions led to major social transitions. There was the mutation of major institutions. There was the rise of institutions that challenged the existing institutions.

We are seeing some of the same dynamics with the introduction of digitalization. There are strong underlying tensions in society that find their voice in various digital platforms. These tensions and their growth via digital mediation may well require a fundamental rethinking of major social institutions. The humanistic project of Jefferson and the need to save the environment will need to be held in focus as we move through this potentially turbulent time.

Balázs Bodó – Zsolt Boda – Márton Bene

Peers, Rules, Institutions: Factors of Trust in Social Media
An Explorative Study in Seven European Countries

People are extensively using the platforms of social media. Is this usage rooted in trust or is it just the manifestation of unreflected social practices and the result of peer pressure? If the former: what are the factors behind trust towards the social media? Is it related to trust in institutions or trust in people? Which institutions and what kind of institutional characteristics do play a role in establishing this confidence? Do self-regulatory efforts of the platforms matter or trust is best supported by external regulatory agents? What are the most important risks perceived by the users and what are their coping strategies? Can we match patterns of trust to patterns of activities and behaviour on the platforms? Are there differences in this respect between high-trust and low-trust countries? Our research, following an explorative research design and using data from an original online survey conducted in seven European countries (Estonia, France, Germany, Greece, Hungary, the Netherlands, and Portugal) seeks to address the questions above.

The first results allow us to reflect on the main themes of this conference: Are we facing the same future? Are we facing the same screen? Our data suggest that the answer is "No" to both questions. Respondents of our survey differ considerably among themselves in their attitudes about the social media; their perceptions concerning the risks associated with using social media; and their expectations about who, and to what extent, should regulate the global platforms such as Facebook. While, as it is customary with surveys, the majority of the answers reflect some hesitancy concerning trust, risks and expectations about the social media, there is a considerable minority which deny the risks associated with using Facebook; whose trust in social media does not depend on their own perceived capacities to

recognize and avert risks; and who are not interested in institutional efforts to regulate Facebook. On the other extreme, some respondents seem to be highly reflective about risks; conscious about their own, or other agencies', capacities to regulate social media; and base their trust in them on those perceived capacities. Variations among people are influenced by a number of factors – in the following we highlight only some country differences.

Our questionnaire focused on Facebook and we differentiated between trust in other FB users, trust in information available on FB and trust in FB as a company. While trust indicators exhibit a high degree of positive association between them, there are variations across countries. Overall trust in FB is higher in Germany, Greece, and Portugal, while it is lower in Estonia, France, Hungary and the Netherlands. The Greek and the Portuguese trust FB as a company more than the users on the platforms; while the Germans and the Dutch have more confidence in people than in the company. These patterns seem to reflect the different levels of interpersonal trust in those countries.

Concerning risks and negative outcomes associated with FB, the majority of the respondents in all countries agree that the platform does allow the spread of harmful content (hate speech, fake news, conspiracy theories etc.) and censors the opinions expressed. People are generally concerned about their privacy on the platform, the self-misrepresentation of other users as well as the trustworthiness of information available on FB. However, in terms of other risks country differences are starker. The Estonians, the Germans, and the Dutch are the least concerned about the risks on FB, although most of the respondents worry about FB creating filter bubbles around them, and the manipulation of businesses on FB are also seen as a problem in most of the countries. But only Hungarians have a stronger-than-average fear that their own government may try to manipulate them on FB; while both Hungarians and Greeks are concerned more than the others that their government may use their personal data on FB against them. Interestingly, potential manipulations by foreign governments on FB are seen as a risk mostly in France and Greece.

As for their own abilities to recognize and avert risks on FB people are the most self-confident in Greece, Hungary and Portugal, with Germany only slightly behind them; Estonia and France are around the average, while, surprisingly, Dutch express a rather low self-confidence in these matters. The picture is not utterly coherent: while the high self-confidence of the Germans matches their perception of low risks on FB, apparently the Dutch' lack of concern about risks in not based on their trust in themselves. Our further analyses will untangle the factors behind these patterns and hopefully shed light on the hidden connections between different social and political attitudes, but the most intriguing questions concern the relationship between attitudes and actual behaviour on the social media. Results are expected soon.

Judit Sebestény

A Real *Modern Family*?
The Depiction of Contemporary Family Structures in Domestic Sitcoms: The Current State and Future Possibilities

Domestic sitcoms are essential if we want to examine the media portrayals of families. These half-hour prime-time programs deal with family life in detail since the main characters are members of a family, whose life is shown for a longer period of time, and the major portion of action happens among the family members, usually in the home.[1] Families that are portrayed in these series can serve as a model for contemporary family life and can have an impact on viewers' expectations towards marriage and their own family.[2] As Pallister[3] points out, domestic sitcoms can also be reflective to the present status of family roles such as the role of women or the current views on parenting practices.

This paper aims to highlight some typical characteristics of the depiction of sitcom families from the previous decades and present the result of a pilot study which examined the extent to which these characteristics can be observed in the family portrayal of the the latest widely popular family sitcom, *Modern Family.*

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[1] See Richard Butsch, "Class and gender in four decades of television situation comedy: Plus ça change…", *Critical Studies in Mass Communication*, vol. 9, issue 4 (1992), pp. 387–399.

[2] See William Douglas and Beth M. Olson "Subversion of the American family?: An examination of children and parents in television families", *Communication Research*, vol. 23, issue 1 (1996), pp. 73–99.

[3] See Kathryn Pallister, "Modern Fathers in *Modern Family*: The Impact of Generational Differences on Fatherhood Styles", in Elizabeth Podnieks (ed.), *Pops in Pop Culture*, New York: Palgrave Macmillan, 2016.

Modern Family ended in 2020 after 11 seasons and it is often considered a landmark of its genre. Even the title suggests that this is something different from what we have previously seen in earlier domestic sitcoms. The show wanted to provide a novel approach in the depiction of families, showing more diverse family settings and family relationships compared to earlier domestic sitcoms. It has an extended family (the Pritchetts) with three different family structures in the center. The patriarch of the family is Jay Pritchett, a man in his sixties, who has two grown children, Claire and Mitchell. Jay is married to his second wife, a much younger Colombian woman named Gloria and together they raise Gloria's son from her first marriage, Manny. Jay's daughter, Claire lives with her husband, Phil and their three children, Hailey, Alex and Luke. The third family is Mitchell's, who lives with his partner, Cameron and their adopted daughter from Vietnam, Lily.

Research on the family portrayal of television and especially sitcoms are quite extensive, however most analyses were made in the 1990s and the early 2000s. In this paper I highlight only a few characteristics.

The foolish father: Analysing family sitcoms in the 1990s and the 2000s, Scharrer[4] and Pehlke et al.[5] both found that while fathers were typically seen interacting with their children, they were also frequently depicted as being "immature" and "foolish". On the one hand sitcom fathers having more quality interaction with their children can be considered a progress from previous portrayals of fatherhood in family sitcoms, where the father was depicted as more authoritative, however, portraying fathers as childish or foolish can be interpreted that they are incompetent and unable to fulfill the role

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[4] Erica Scharrer, "From Wise to Foolish: The Portrayal of the Sitcom Father, 1950s–1990s", *Journal of Broadcasting & Electronic Media*, vol. 45, issue 1, 2001, pp. 23-40

[5] Timothy Allan Pehlke II, Charles B. Hennon, M. Elise Radina and Katherine A. Kuvalanka. "Does father still know best? An inductive thematic analysis of popular TV sitcoms", *Fathering: A Journal of Theory, Research, and Practice about Men as Fathers*, vol. 7, issue 2, 2009, pp. 114–139.

as a parent. The "foolish father" trope continues to be common: as Scharrer et al.[6] found in their recent study, sitcom fathers as a whole are still more foolishly portrayed nowadays than in the early sitcoms.

The mother as a nag: Portraying the father as foolish implies that mothers are the ones who discipline children. Previous analysis[7] found that mother characters are usually portrayed as nurturing "nags" strictly focusing on maintaining family morality.

Family conflicts: Comstock and Strzyzewski[8] analysed family conflicts and reported that fathers usually used more distributive strategies while mothers used more integrative strategies during conflicts. Larson[9] examined children's interactions and found that while children had a more central role in later domestic sitcoms, their interactions became less and less friendly and more conflictual.

In order to find out how *Modern Family* portrays families compared to the above mentioned characteristics, a pilot study was conducted. Randomly selected episodes from the 11 seasons were analyzed focusing on the portrayal of the fathers, the mothers and the children. Scenes including interactions involving any of the parents and at least one of their children were analyzed. No distinction was made whether the child is the biological, stepchild or adopted child

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[6] Erica Scharrer, Stephen Warren, Eean Grimshaw, Gichuhi Kamau, Sarah Cho, Menno Reijven and Congcong Zhang, "Disparaged Dads? A Content Analysis of Depictions of Fathers in U.S. Sitcoms Over Time", *Psychology of Popular Media,* vol. 10, issue 2, 2021, pp. 275–287.

[7] June M. Frazer and Timothy C. Frazer, "'Father Knows Best' and 'The Cosby Show': Nostalgia and the Sitcom Tradition", *Journal of Popular Culture*, vol. 27, issue 3 (1993), pp. 163–172.

[8] Jamie Comstock and Krystyna Strzyzewski, "Interpersonal interaction on television: Family conflict and jealousy on primetime", *Journal of Broadcasting and Electronic Media*, vol. 34, issue 3, 1990, pp. 263–282.

[9] See Mary Strom Larson, "Sibling interactions in 1950s versus 1980s sitcoms: A comparison", *Journalism Quarterly*, vol. 68, issue 3, 1991, pp. 381–388; Mary Strom Larson, "Sibling interaction in situation comedies over the years", in J. Bryant & J. A. Bryant (eds.), *Television and the American family* (2nd ed.), Hillsdale, NJ: Lawrence Erlbaum Associates, 2001, pp. 163–176.

of the given parent(s), but scenes between Jay and his adult children were excluded.

The results suggest that one novelty in *Modern Family* is that, due to the variety of family settings, it can simultaneously show different types of fathering styles. All of the fathers spend quality times with their children; however, they are almost always more permissive than mothers. Both fathers and mothers discipline, but mothers do more while paternal discipline usually serves humor. The series does not show anything new in terms of the portrayal of the mothers: they are the stricter parents, they worry about the children more and they perform more tasks related to child rearing and housekeeping. That is, the foolish father character can also be seen in modern family, and the series is not quite modern in terms of mother characters. However, when it comes to family conflicts, the varied family lineup serves the purpose of having family members in different lineups in the episodes, so there are fewer opportunities for siblings to confront each other.

VISUAL LEARNING EMBODIED COGNITION

András Benedek

Changes in the Visual Characteristics of Micro-contents in Education

The "retreat" of text-based documents can be clearly perceived in traditional education. We are physically surrounded by a mass of icons, smileys, video clips, and images posted on Twitter. We are characterized by the "tube vision" of mobile communication, which our smart devices (phones, watches, iPods, tablets and functional notebooks) put into a subjectively zoomable frame. The images they broadcast dazzle me like a kaleidoscope. The billions of synapses in our brains compete in growing more complex and more complicated to organize the various patterns.

Nowadays, the limitations of learning theories are more and more perceptible. For example, Piaget's structured development theory[1] tries to build a bridge between cognitive and constructive learning theories. Still, it cannot keep the process of today's flood of information in check. On the other hand, after the turn of the millennium, Siemens' connectivist learning theory[2] based on the principles of network operation and the practice of internet communication, became greatly prevalent among teachers and students of the new generation.

Education's horizontal and vertical expansion has significantly changed classical didactics in the past century. The horizontal and vertical extent of general compulsory education and schooling and the turbulence of Lifelong Learning shape a modern educational approach that defines the student's subject. In addition, the rise of vis-

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[1] Jean Piaget, *Structuralism*, translated and edited by Chaninah Maschler, New York: Basic Books, 1970.

[2] G. Siemens, "Connectivism: A Learning Theory for the Digital Age", *International Journal of Instructional Technology and Distance Learning*, vol. 2, no. 1 (2005).

ual effects significantly contributed to recognizing a new paradigm in modern education systems. But, of course, the antecedents were already connected to period signs. Arnheim's work, *Visual Thinking* concerning education and Ferguson's findings on technical visual thinking and non-verbal thinking in technical design processes can be considered as such.[3]

The "visual turn" emphasized by Mitchell already in the decades of the millennium[4] is based on the essential realization of adding multimedia elements. Images, animation, and sound in communication (in the appropriate case, the education content) makes reviewing a large amount of complex data more manageable. These antecedents also impacted the establishment of the Budapest Visual Learning Lab initiated by Kristóf Nyíri a decade ago.

Nowadays, it is clear that visual representation helps knowledge inclusion independent of the discipline. The influence of visual stimuli in space and time has become so intense these days that classical classroom teaching does not have a prioritized place in actual learning processes. A striking example of the last decade is the so-called "flipped classroom"[5], an innovative educational practice. This procedure enables the theoretical (teacher) explanation, collaborative group work and heuristic discussion of problems within the framework of the school after getting to know the course material and textbook beforehand. It shows that the deductive, constructive teaching logic has "fallen", and the possibilities of searching for individual paths also come to the fore in inductive learning.

Our project related to the professional inspiration of the Visual Learning Lab faced specific challenges between 2017–2022 also due to the pandemic. The research focused on constructing visual content

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[3] E. S. Ferguson, "The Mind's Eye: Nonverbal Thought in Technology", *Science*, vol. 197, no. 4306 (1977), pp. 827–836.

[4] W. J. T. Mitchell, "The Pictorial Turn", in his *Picture Theory: Essays on Verbal and Visual Representation*, Chicago: The University of Chicag Press, 1994, pp. 11–34.

[5] Europass Teacher Academy, *Flipped Classroom*, https://www.teacheracademy.eu/course/flipped-classroom/.

during online collaborative curriculum development. This curriculum development model similarly interprets verbal, visual and mathematical curriculum representation as elementary learning units. The results concluded that visual elements dominated about 85% of the construction works of the teaching students. The online portal (www.mikropedia.hu), created in the framework of the project and currently operating, is an interface suitable for the analysis of the visual representation of the curriculum and is also ideal for illustrating development trends (cf. Figures 1 and 2).

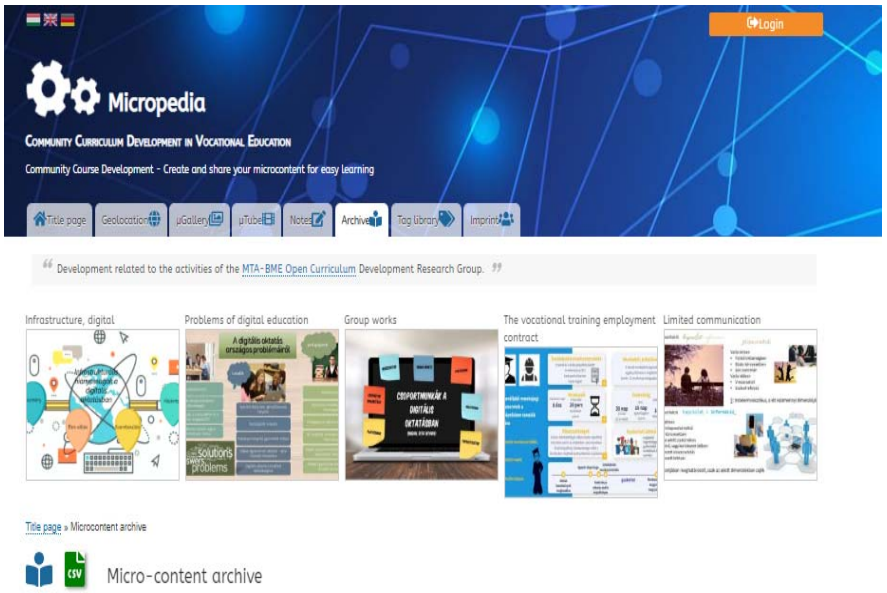

Figure 1: The portal side of the Micropedia

The development that creates the framework for the analysis of the visual construction also offers the opportunity to analyze the differentiated, directly implemented curriculum development at the practical level. During the four-year project period and two more years of sustainability analysis, around 650 micro-contents were created, representing a severe base to research. Within the framework of open online content development, the creation of study material units as micro-contents by students has been given a privileged role.

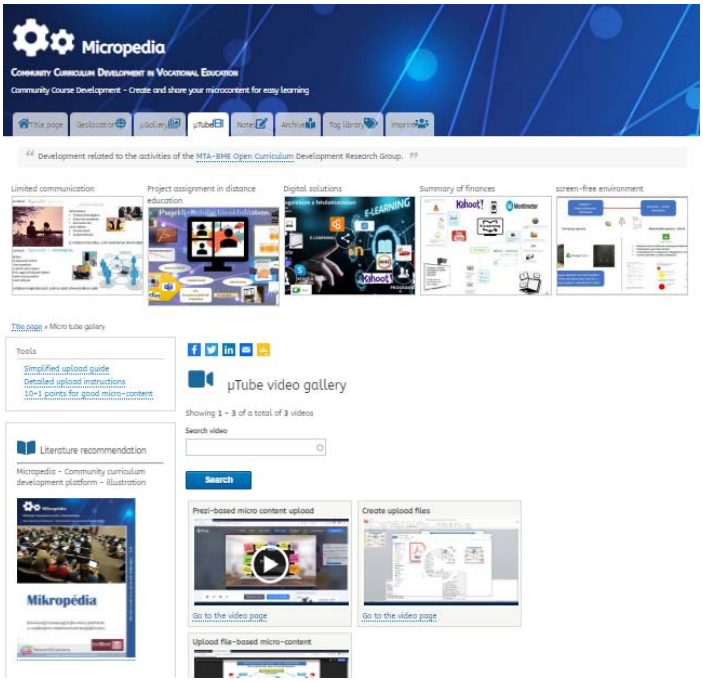

Figure 2: The screen of the archivum of Micropedia

The micro-content repository, which illustrates the specifics of visual screening, currently enables educational applications for 205 curriculum units developed in this process. The implemented interactive platform created by the project can give a sense of the process of a pictorial paradigm shift that has always occupied educational science.

Hédi Virág Csordás[1] *– Krisztina Szabó*[2,3]

(Visual) Literacy Challenges in Digital Distance Learning Materials

"What new patterns of life and in particular forms of education should we strive to create?" – asks VLL10, and so do we, as the COVID situation highlighted the issues of distance teaching. Since surveys have pointed out students' struggles with digital literacy[4] and learning, transferring learning material into digital platforms present extra challenge. Especially that course materials are often assigned into the digital space in a rush, without paying attention to *format*, *visual layout* or the *type* of the actual course.

We sought for answer to the opening question through quantitative research with 318 students at Budapest University of Technology and Economics in the academic year of 2020-21 (Figure 1).

We asked questions about digital documents/files, with the exclusion of streamed education and printed sources, through which students obtained course material, according to the *type* of course (lecture, seminar, lab practice). We focused on the documents/files' *format* and *visual layout* students had to read, comprehend and learn;

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[1] "Back to Science!" Scholarship – BUTE 2022.

[2] Supported by the ÚNKP-22-4-II-BME-192 New National Excellence Program of the Ministry for Culture and Innovation from the source of the National Research, Development and Innovation Fund.

[3] Department of Philosophy and History of Science, Faculty of Economic and Social Sciences, Budapest University of Technology and Economics, Műegyetem rkp. 3., H-1111 Budapest, Hungary.

[4] OECD PISA. n.d. At: https://www.oecd.org/pisa/.

however, presently we are going to discuss only research results concerning *the act of reading*.

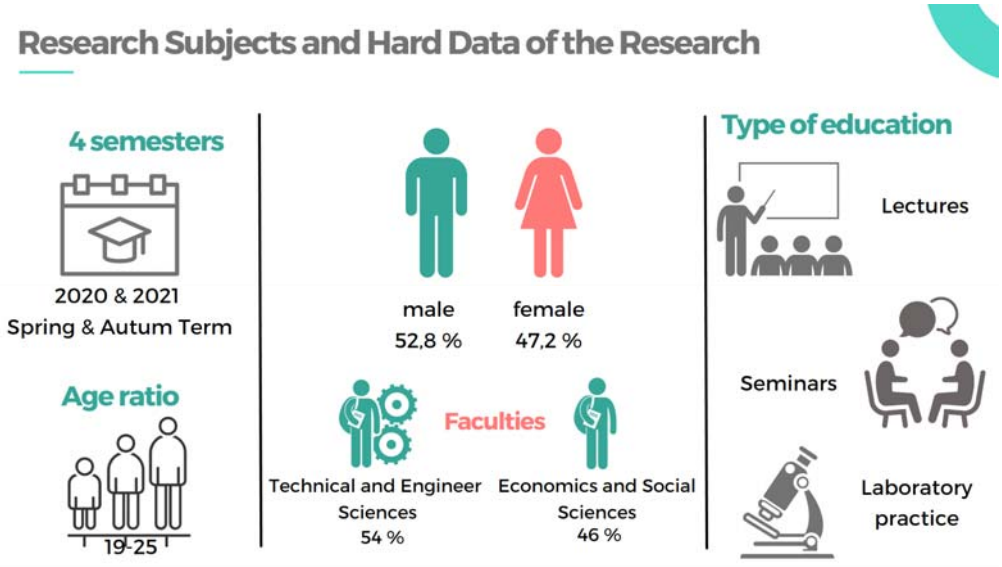

Figure 1[5]

These results show that by course *types,* students had to face various *formats* and *visual layouts* of course material and follow different strategies to coping. Concerning the *format* (Figure 2), we expected that multimodal course materials might have a higher role than "PDF" or "PPT without voice", at least in the case of seminars and labs. Surprisingly, except for "Film shots" (gained the 3rd place), the multimodal or originally digital document/file formats ("Podcasts", "PPT with voice/video", and "Other videos") were not as frequently applied as they could have been or often as the online space might have justified it.

The ratio of the visual elements in course material (Figure 3) shows that charts, diagrams and pictures appeared more frequently than "Film shots", "Animated texts & Slides" or designed "Layout". However, visual elements should have gained more significance be-

[5] Original figure created by the authors.

cause (1) of the attributes and opportunities of the digital space by nature, and (2) to fill the gaps caused by the differences of attendance and distance teaching.

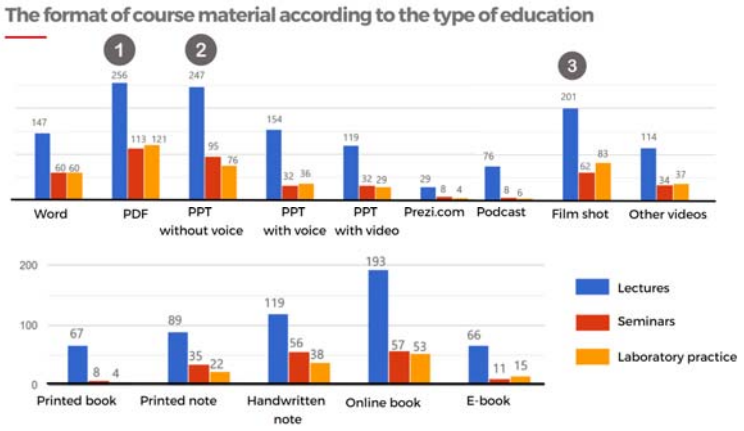

Figure 2[6]

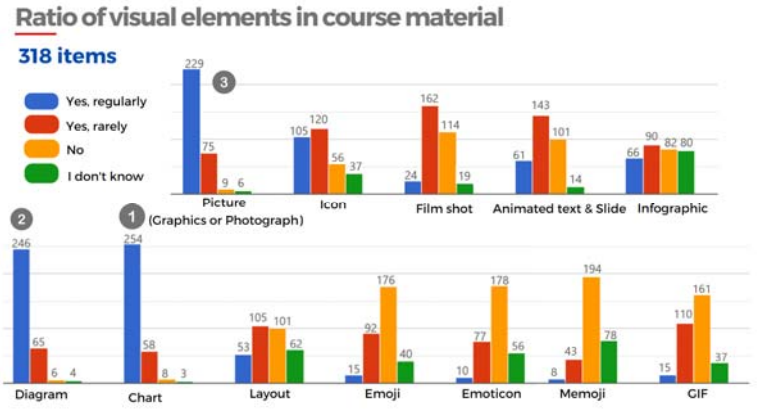

Figure 3[7]

Results strengthened the integral role of visuality in digital reading (Figure 4). According to a 0–5 scale, "Text with explicatory visual elements" reached the highest rank, followed by "Text with

[6] Original figure created by the authors.
[7] Original figure created by the authors.

illustrative visual elements" and "Text with coloured markings", meaning that from those texts available, containing visual attributes, the most preferred ones seemed to have explanatory and/or illustrative functions as well.

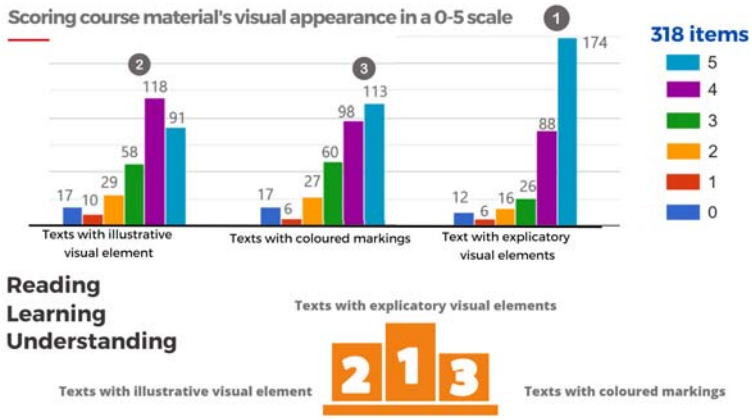

Figure 4[8]

Results indicate that visual elements in digital course materials should not be self-serving or being simple solutions for transforming non-digital materials into digital without serious considerations of digital and visual literacy but must support the processes of reading, understanding and learning, especially in the case of digital course materials. Data show that students chose different strategies to to cope with digital course materials (e.g., print out the given digital documents), so economical, infrastructural and designer opportunities of printouts or offline reading, comprehension and learning come into scope again.

Based on the results, we can claim that (1) during digital reading, students have a better comprehension of visual learning materials (that is, texts with illustrative or explicatory pictorial elements and visual markers) than non-visual learning materials (that is, texts

[8] Original figure created by the authors.

without illustrative or explicatory pictorial elements and visual markers). Regarding non-digital reading, we can claim that (2) students better comprehend the non-visual learning material than the visual ones. Since digital course materials must be suited to offline/digital and attendance/distance education, the modification of these contents or creating and applying new ones are urgently needed. Since the foundation of distance learning is comprehension rooted in digital-visual literacy, we recommend university educators to apply digital-visual solutions to create comprehensible and learnable course materials.

Krisztina Szabó[1]

"Screengagement" – On Embodied Reading and Learning in the Era of Screen[2]

Since we gain our knowledge from written sources, learning is connected to the act of reading. The *brain* (with its mental activity), the *tool* (e.g. paper, newspaper, book, etc.), the *body* (e.g. holding, touching, smelling the tool, flipping the pages, etc.), and the *environment* (e.g., where the reading takes place) get into dynamic interactions.[3] During this *embodied reading*,[4] the physical reality affects the com-

[1] Department of Philosophy and History of Science, Faculty of Economic and Social Sciences, Budapest University of Technology and Economics, Műegyetem rkp. 3., H-1111 Budapest, Hungary.

[2] Supported by the ÚNKP-22-4-II-BME-192 New National Excellence Program of the Ministry for Culture and Innovation from the source of the National Re search, Development and Innovation Fund.

[3] N. Carr, *The Shallows: What the Internet is Doing to Our Brain*, New York, NY: Norton, 2011; R. W. Clowes, "Screen reading and the creation of new cognitive ecologies", *AI & Society*, vol. 34, issue 4 (2018), pp. 705–720; L. Malafouris, *How Things Shape the Mind: A Theory of Material Engagement*, MIT Press, 2013.

[4] A. Mangen and T. Schilhab: "An embodied view of reading: Theoretical considerations, empirical findings, and educational implications", in N. Synnove and A. Skaftun (eds.), *Skriv! Les!*, Trondheim: Akademika forlag, 2012, pp. 285–300.

plex cognitive activity,[5] which is precisely the case with memory and learning.[6]

Suppose we change the tool and the environment, as we did in the pandemic of 2019–20 when many people were forced to accomplish their studies via screens. Interactions of the reading body and the reading mind resulted in a different reading experience due to the dynamic multimodal nature of digital documents. Since they require high cognitive effort to take in, screen reading could be even a "Multisensory Experience"[7]. In this case, the "pure" reading experience and engagement are difficult to separate or grab from the other accompanying experiences. The complexity of screen-reading based learning is shown below (original figure created by the author):

Screen-Reading Based Learning

Contents: digital documents and files; hypertexts and links; textboxes; multimodal elements for design, illustrative or explanatory purposes.

Instructions: reading instruction; questions connected to the actual document; aids for help to understand and do the tasks; criticise or memorise the content.

Comprehension and Memory: traditional, digital and visual literacy; memory capacity; individual learning strategies.

Ergonomics and Design: explain how to use the system and the device; scrolling; loading new page; turning page; zoom in and out; change the orientation of the screen; change or manipulate the windows; using the side bars; changing page colour, font size, background lights; opportunity to print, eliminate/visualise the graphical elements; edit the page for individual purposes; making marks, comments and sidenotes, highlight sentences.

Reader's Characteristics and Skills: individual set of non-digital and digital reading and ICT skills; interests; preferences; expectations; reading strategies.

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[5] A. Mangen and Adriaan van der Weel, "The evolution of reading in the age of digitisation: an integrative framework for reading research", *Literacy*, vol. 50, issue 3 (2016), pp. 116–124.

[6] F. Ianì, "Embodied memories: Reviewing the role of the body in memory processes", *Psychonomic Bulletin & Review* 26 (2019), pp. 1747–1766.

[7] S. Sanchez, T. Dingler, H. Gu and K. Kunze, *Embodied Reading: A Multisensory Experience: Designing Interactive Systems*, Proceedings of the 2016 CHI Conference, San Jose, CA, 2016.

Still, the physical reality of reading seems to be abandoned. One can read a thousand digital documents on one device, with entirely the same experience of touching, holding, and smelling it, but the lack of actual flipping. The experience of various paper types, weight and size, the smell of the ink, the paper and the book cover, or the process of turning pages are missing. However, these physical body experiences are essential during reading and comprehension.[8] The environment is also changed in screen reading as the body posture is influenced by the need to charge the device, avoid overheating, or scroll with one hand. But readers must also deal with cognitive challenges such as operating the system that runs on the reading device.

Despite the physical inconveniences, screen time has increased, not just because of obligatory tasks but for entertainment.[9] Besides the primarily verbal and visual activities, most screen time is spent *reading* digital texts. We are engaged in screen reading, even if it is just superficial scrolling.[10] Surprisingly, students still struggle reading, comprehending, and learning digital documents.[11] If the reading experience is poor, comprehension will presumably be poor or laborious, making learning difficult. Consequently, educators must find a way to surmount these problems and provide screen-reader-friendly, engaging educational material considering embodied reading and learning.

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[8] A. M. Glenberg, "How reading comprehension is embodied and why that matters", *International Electronic Journal of Elementary Education*, vol. 4, no. 1 (2011), pp. 5–18.

[9] A. Flockett, "Screen Time Has Increase by 76% during the COVID-19 Pandemic", *Startups Magazine*, 2021.

[10] T. Schilhab, G. Balling and A. Kuzmičová, "Decreasing materiality from print to screen reading", *First Monday*, vol. 23, no. 10 (2018).

[11] OECD PISA (2000–2022), see https://www.oecd.org/pisa/.

Dan O'Brien

Philosophico-Artistic Investigations

Many philosophy teachers use artworks to illustrate and communicate philosophical theories and ideas. Bruce Nauman's "Concrete Tape recorder Piece" consists of a tape recorder encased in concrete with its power flex emerging from a hole at the side. I like to think of the tape playing a recording of a tree falling in a forest and therefore as illustrating Berkeley's idealism: are there sounds inside the concrete if no one can hear them?[1] In the classroom we have 18th Century idealism alongside postmodern art – both difficult, but each can illuminate the other.

Bruce Nauman, "Concrete Tape recorder Piece", *mixed media sculpture, 1968.*

I therefore suggest including a diverse range of creative assessments into philosophy courses, such as plans, and blueprints for conceptual pieces that illustrate problems and paradoxes in the philosophy of language; video and photography projects on empathy and the problem of other minds; or installations involving embodied cognition. Such diversification would be pedagogically advantageous. Almost all philosophy graduates in almost all philosophy departments do not become philosophers, or write philosophy ever again,

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[1] George Berkeley, *A Treatise concerning the Principles of Human Knowledge*, Oxford: Oxford University Press, 1998.

or, for that matter, write an *essay* on any topic ever again. It's worth pausing on this point… Philosophy inculcates academic skills and many intellectual virtues, but the specific assessments we use to assess students are in many cases divorced from the lives and careers those students will lead after graduation. Part of the job of a philosophy teacher, though, should be to provide their students with the kinds of skills they may need in their careers, those involving creativity and the ability to communicate difficult ideas and concepts to a diverse audience.

The vision is for the assessment of students in philosophy to include creative elements that can demonstrate their critical engagement with a topic and their ability to communicate their understanding to others. Artworks could therefore become catalysts for philosophico-artistic investigations. Creative assessments could be used within classes, perhaps involving students on different courses or across institutions and borders. Such an ambition is in line with recent developments in COIL (collaborative online international) projects.[2] I have painted a series of works illustrating Descartes' *Meditations.*[3] Inspired by these, "how the night came" – a musician from Tokyo – composed some ambient electronic music to accompany them.[4]

Dan O'Brien, "Meditation 6"*, acrylic on canvas, 2021.*

[2] See http://www.coilconsult.com/what-is-coil-.html.
[3] René Descartes, *Meditations on First Philosophy*, Cambridge: Cambridge University Press, 1986.
[4] One piece can be found here: https://lllllllll.co/t/disquiet-junto-project-0544-feedback-loop/55883/14?u=howthenightcame.

This was wonderfully exciting – ambient music was being composed over the other side of the globe based on my paintings, themselves inspired by the meditations of Descartes, 300 or so years ago. This synergy between a philosophy text, painting and music went on to inspire further philosophical discussion between myself and the composer, concerning the relation between time, the emotions and ambient music. I intend to continue these discussions in my next Early Modern Philosophy class.

The principle challenge for my proposal concerns expertise in assessing creative work. How can such creative assessments be assessed, or how can they be assessed by philosophers? Philosophy lecturers are trained in writing essays and there are clear marking schemes that can be communicated to students. Feedback can therefore be precise. A student can learn from an assessment that their use of appropriate sources has improved, but that they still need to put further work into their referencing. There are templates that can be followed: classic essays that should be read by all students, those that successfully communicate certain philosophical ideas, but also those that are written in a style that should be emulated. Such assessment, feedback and engagement with canonical texts becomes second nature to philosophy teachers, but this would become daunting in the context of creative assessments. How, for example, do assessments of the philosophical idea communicated and the creativity involved contribute to the overall mark? Could a beautifully crafted, creative take on a rather mundane philosophical idea ever trump a piece that has more substantial philosophical content, but that is less creative or less skilfully realized in artistic terms?

The proposal, then, is to take it slow. It's not just a question of introducing optional creative assessments. There needs to be dialogue between philosophers, educationalists, artists, historians of art, employers and the students themselves, in order to consider such problems and the details of any such proposal.

Hagitte Gal-Ed

ARTiculation: Pictorial Image-Work in the Limbo of Consciousness

I. The Current Limbo

By now we know that social media is not just about communication, and certainly not an innocent venture of human progress. Mark Zuckerberg's testimony in front of the U.S. Congress publicly revealed that his platform was not created with any benevolent intentions in mind. While it technically facilitated communication between people over large geographic distances, its algorithmic design was used as a means for social manipulative control, aiming to interfere in the fundamental consciousness experiences of communication, being fully aware of its potential consequences to change that which constituted what used to define humanism. Social media, and indeed all communication media, with all their might, have brought humanity to an existential edge, indeed a crisis of consciousness. It has been previously argued that the consequence of printing was that all forms of communication other than reading and writing have receded into the background. But, by comparison, in my opinion, the consequences of the communication algorithmic design amounts to a mental, emotional and cultural rape, which, tragically, we have made possible by our own subjugation to its seductive allures. In this sense, the consciousness underlying this technological success is no different than that portrayed in *Fifty Shades of Gray*. Both challenge our capacity to make a healthy choice in highly seductive edgy situations. Both represent monopoly over our life by our given consent, so there is no liability – whatever the consequences, they are our responsibility to bear. Both expose our frailty, both as individuals and a society, when our choice capacity is losing its moral, aesthetic and truth integrity. Controlled by algorithmic trickery, today's edge forces us into a new form of slavery, by which we are turning ourselves into an-

other form of being altogether. Yes, we do what we can. Yet, throughout our evolution as a mind and a kind, pictorial image-working, through the organic eye-hand-mind continuum, has inevitably generated orientation, awareness, meaning, and consciousness emancipatory effects. But when an engineer can create algorithms that know us better than we know ourselves, predict our desires, manipulate our emotions, and even take decisions on our behalf, how is that different from any tyrannical dictatorship? Have we lost the possibility to experience freedom and to know ourselves with a different kind of consciousness? I assert this question as an artist and a scientific researcher who accumulated over 40 years extensive experience in education, psychotherapy and international work towards a civilization of peace. To me, the current edge situation is a direct assault on humanism and the consciousness of a civilization of peace. Socio-biologist, Edward Wilson, explained the problem saying that we have Paleolithic emotions, Medieval institutions, and God-like technology. I would argue that our consciousness is our domain and should be claimed as such. The only way to counter the current edge is to reinforce a counter consciousness that is also inherently ingrained in us – the Dialogic Intelligence (DIN). Enhancing DIN is the goal of ARTiculation and its raison d'être as a combined art and science knowledge endeavor. I conceptualized ARTiculation as a knowing by being modality geared to develop a consciousness of peace through existentially meaningful, formative multi-dimensional image-work experiences, both individually and collectively, guided by the principle agency of choice & change in mutuality, thus for the benefits of all. My attached video illustrates its applications in the contexts of education, trauma psychotherapy, and research in psychology of peace, with people of all ages, racial, and cultural backgrounds in local and international frameworks. From the onset of our evolutionary journey, in situations of existential edge, the pictorial image-work has been our immediate both tangible and symbolic articulatory vehicle of choice. I consider the pictorial image-work a morphogenetic

realm of multi-faceted intelligibility emancipation. It is as valuable today as it ever has been.[1]

II. Pictorial Image-Work and Dialogic Realism

Look at the deep dialogue among all living things, and see – a genuine dialogue is a process of mutual change. ARTiculation is geared to unlock the morphogenetic nature of the formative knowing by being realism ingrained in the deep dialogue of mutual change that defines the inevitable image-work/consciousness formative continuum. When conceptualizing ARTiculation I was inspired by the Dialogic ontology of Martin Buber. Dialogue is defined as a relation, a mode of being and knowing, an inherently human morphogenetic emancipatory capacity, "There is no ordering of dialogue. It is not that you *are* to answer but that you *are able*."[2] ARTiculation was purposely designed as a Dialogue-based vehicle to explore the profound affects of the image-work/consciousness formative realism, the first endeavor of its kind. Dialogue is not a verbal exchange. The Dialogic relation is a both existential and ontological approach, indeed a consciousness with far reaching ramifications for human emancipation, psychotherapy, and the possibilities for a civilization of peace. There is no dialogue outside of a relation. The genuine relation is a form of knowing. Thus, Art is on par with Knowledge, as Buber categorically stated, "The artist is the man who instead of objectifying what is over against him forms it into an image." Every human being is endowed with the image-work formative capacity. Art is "the work and witness of the relation between the *substantia humana* and the *substantia rerum*, it is the realm of 'the between' which has become a form."[3] "The between", thus, is a morphogenet-

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[1] Hagitte Gal-Ed, *The Making of Art and the Knowledge of Peace*. PhD dissertation, New York University, 2001. See also: https://hagitte.weebly.com.

[2] Martin Buber, *Between Man and Man*, New York: Routledge, 1947, p. 40.

[3] Martin Buber, *The Knowledge of Man – Selected Essays*, ch. VII: "Man and His Image-Work", Humanity Books, 1998, pp. 160–165. Underlined words by Hagitte Gal-Ed.

ic realm. In the creative act, the Self is a creative possibility in and of itself, hence a principle and agency of freedom. The creative act is the realm of consciousness and human emancipation in tandem, a transformative principle. Inspired by Buber, Erich Neumann, a student and critical colleague of C. Jung, regarded the agency of the Self as the defining principle that makes for wholeness of the personality, and termed it "Centroversion."[4] He drew parallels between the formative powers of Centroversion and pictorial image-work pointing out the aesthetic/ethic connection as principle factor in consciousness development and human emancipation. Challenged by his personal experience of Nazi Germany, he fiercely criticized the damage done to the Self under authoritarian power abuses that turn the meaning of freedom and human values upside down. A similar manipulative attitude we are experiencing in today's communication technology led edge situation. The course of pictorial image-work can be discussed similar to quantum physics whereby *Form* and *Content* intertwine in a flow of indeterminant freedom and randomness awaiting determination. In that situation, choice is a determinant principle of freedom and knowing, altering chaos, propelling a profound chain affects in the form of mutual change reverberating in many directions, all the while bringing new awareness, meanings, understanding, and consciousness to emancipation. The Dialogic realism of choice & mutual change is a principle of consciousness emergence in all human emancipatory experiences. If, for any reason, our individual choice capacity is compromised, as it seems to have been affected by the practices of social media, it changes our entire relation-ability. We have become objectified, our freedom of expression is disabled along with its entire aesthetic, ethic, and truth qualities causing vulnerable individuals to doubt the meaning of life altogether, and humanity at large to lose the very meaning of humanism. In today's edge, our creative agencies of the Self and consciousness are caught up in a war zone between techno-fed totalitarianism and underdeveloped natural DIN awaiting emancipation. This battle will determine our capacity for a

[4] Erich Neumann, *Art and the Creative Unconscious*, Princeton, NJ.: Bollingen, 1971, p. 165.

future civilization of peace. Pictorial image-work has a major role to play in this transformative evolutionary state of affairs. Sir Roger Penrose, the 2020 physics Nobel prize winner, when realizing that indeterminate situations that have randomness and freedom could not be resolved either mathematically or by quantum physics per se, turned to pictorial image-work having discovered a shared interest in the mystery of consciousness with the artist M. C. Escher. By stepping out of the confinements of the scientific reductionist computational paradigm, he created his famous graphic formations of the "impossible triangle" and "forbidden symmetry" tiles, whereby he discovered the choice factor and defined it as principle of freedom, upon which he categorically stated that consciousness is not a computation, cannot be explained by the understanding of physics, mathematics, biology or computers without factoring in the choice principle.[5] This ingenious turn of events resulted in a knowledge paradigmatic breakthrough, indeed a new kind of perceptual field, proving Buber's exclamation of Art is on par with Knowledge, and supporting ARTiculation DIN guided formative way of knowing. Forming is a dialogue of knowing.

III. ARTiculation at the Frontlines of a Civilization of Peace

DIN is defined by the principles of choice & mutual change. These principles are suppressed by the algorithmic communication. In the formative actuality of the pictorial image-work through the organic eye-hand-mind continuum, this principle triggers awareness of mutual accountability. Mutual change and mutual accountability present the utmost challenge in the development of peace consciousness. Tackling this challenge head on, ARTiculation made the formative realism of choice & mutual change its action agency and modus operandi. For example, our studies focus on the transformative efficacy of Centroversion processing via formative pictorial image-work with

[5] Roger Penrose, *Shadows of the Mind: A Search for the Missing Science of Consciousness*, Oxford: Oxford University Press, 1994.

its inevitable consciousness consequences in processes of trauma transformation. This way ARTiculation functions as a meaning system supporting the Self in processes of new orientation, meaning, awareness, self integrity, and socialization. The immediacy of the pictorial tactile experience manifests unequivocally this formative realism and the recognition that the quality of the choice & mutual change relationship itself determine the quality of the compositional whole as well as its inevitable affect upon the Self and its integrity. This is true of the image-work in symbolic interactionism as it is of Centroversion in shaping the human condition on both the personal and social levels. Thus, ARTiculation is a human realm of DIN morphogenesis. The possibility for a civilization of peace depends upon the quality of the choice & mutual change experiences in the course of the genuine dialogues as they generate new meanings, understanding, and consciousness emancipation. Art becomes *fine* when it *refines* the human condition. Many programs of peace education approached the arts as a realm of the "between" to provide a necessary safe environment for meeting through collaborative creative experiences and dialogue-based social bridge building. However, no serious study has explored the morphogenetic nature of consciousness emerging from the relationship between genuine dialogue and the pictorial image-work formative realism. This particular emphasis explains the unique potential of ARTiculation as a morphogenetic realm for peace consciousness formation. Evidently, the challenge of mutual accountability remains unresolved and thus a defining moment in this paradigmatic consciousness shift. A case in point is the Garden of Peace project.[6] Starting in 1999, on the occasion of Passover, Easter and Ramadan holidays coalesce, Garden of Peace was initiated at the UN as an interfaith celebration of a culture of peace, in collaboration with the Interfaith Center of New York, and with participation of high ranking diplomats, official representatives of various peace organizations and academic institutions as well as

[6] Hagitte Gal-Ed, "Garden of Peace: Responding to the Challenge of a Civilization of Peace", *Journal of Applied Arts & Health*, vol. 7, no. 2 (2016), pp. 275–288.

youth and parents. Awarded the Gift of Service to the World Award by the Parliament of the World's Religions (PWR), I have later expanded this model into a proposal for an international center for young peace leadership development to be located on the Golan Heights with the ARTiculation DIN formative practice as its operating principle. Its goal was to create a living model for a civilization of peace in the making. It was officially adopted and endorsed by the PWR, and I was asked to present it to official leaders in the USA in order to explore possibilities for its collaborative implementation. To this day no one of these top ranking official leaders has responded. But, a few years later, in an interview to an Israeli news paper, President Obama quoted almost verbatim my original proposal for Garden of Peace on the Golan Heights as endorsed by PWR using it as an example for a project in the right direction towards peace. The Garden's vision remained unrealized. Now, 23 years later, Garden of Peace is still an unfinished test of a possibility for peace consciousness in the making. I have no illusions regarding the war between the two conflicting consciousnesses. Both are ingrained deeply in our original makeup. Both are a matter of choice. At its current edge, humanity has a big decision to make. ARTiculation continues to be a safe environment nurturing DIN, approaching the limitations of the individual personal development and the creative material medium as opportunities for freedom awaiting emancipation. In ARTiculation, the tangible actuality of choice naturally brings to realization the *artist* and the *leader* qualities inherent in every individual, redeeming their joint spirit of courage. In ARTiculation, the formative action itself is the panacea – the way of knowing. For us, any limit is an opportunity in transition by relation of genuine dialogue. Human emancipation is our everlasting goal. Intimidation, fear, trauma, anxiety, or depression are opportunities in disguise of limitations – indeed principles of courage, empowerment, and integrity of the Self. In practice, limitations are possibilities awaiting choice. This is where DIN comes into play. A choice that does not take the form of mutual change with consequential mutual accountability, is a choice of terror and war. In the ARTiculation formative image-work, Buber's Dialogue and Neumann's Centroversion come together in concerted ef-

fort to empower the future leaders of a peace culture as they dare to imagine that which is *genuinely meaningful,* and make it *possible.* That is human freedom at its best. By its formative activism ART-iculation is modeling a civilization of peace. This road is paved with the courage of its participants to engage in a genuine dialogue of choice & mutual change, as well as in all ethic, aesthetic, Self integrity, knowing and truth processings. This is our response to the algorithm-led communication consciousness.

Anna Chiara Sabatino – Roberto Pisapia

Papers Like Stories
Video Essay as Research and (Online) Publishing Tool

Cinema and audiovisual media have historically been analysed through verbal language, which we are culturally accustomed to associate with rational thought and academic discourse. In most recent years, analytical practices have evolved in parallel to scholars, more and more frequently endowed with technical skills and operative competences, and to the hyper-media nature of the analysed objects. If still images are used as iconic support to the object of verbal analysis, in audiovisual media individual frames have traditionally been considered as an illustrative fragment of the entire representation.

As descendant of the essay film,[1] the video essay has developed into a new genre of discourse on and through the audiovisual language, retaining the scientific rigour and dissemination purposes of research, also allowing scholars to reflect upon the whole iconic ecosystem using practical examples expressed in the same visual language they are discussing.[2]

Generally constituted by a hypothesis and a thesis, the video essay aims to offer an original theoretical, methodological or analytical perspective through its linguistic and stylistic peculiarities: the strong verbal or textual connotation, the uniqueness and the original-

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[1] On the essay film, cf. Laura Rascaroli, *How the Essay Film Thinks*, Oxford: Oxford University Press, 2017; regarding the video essay ancestors, also cf. John Bresland, "On the Origin of the Video Essay", *Blackbird*, vol. 9, no. 1 (2010); Johannes Binotto, *In Lag of Knowledge: The Video Essay as Parapraxis*, in Bernd Herzogenrath (ed.), *Practical Aesthetics*, London–New York: Bloomsbury, 2020.

[2] The frequently selected subject of video essay is the movie, but other audiovisual forms such as video games can be analyzed as well. Cf. Ursula Biemann (ed.), *Stuff It: The Video Essay in the Digital Age*, Wien – New York: Springer, 2003; Christian Keathley, Jason Mittell, and Catherine Grant (eds.), *The Videographic Essay: Practice and Pedagogy*, 2019: http://videographicessay.org.

ity of the point of view, the critical discourse on a selected subject, and the focus on an engaging language.[3] Within a typical video essay configuration, a voice *off* and written text carry forward the argument while an iconographic and audiovisual apparatus support and add interpretative planes and possibilities for visual connections between words and images, in order to stimulate a more active and critical viewing. Following such realization process without abandoning a theoretical scaffolding of bibliographical references,[4] the video essay visualizes the "invisible" world of reflections and ideas,[5] unveiling a hermeneutic process that would be differently accessible off the screen.

Together with multiple international conferences dedicated to the video essay,[6] several scientific journals have opened up to or even specialised on video essay publishing, establishing specific dedicated submissions guidelines.[7] Among the many, while maintaining the canonical tenor of scholar research, Alphaville takes significant steps towards the recognition of the video essay as an acknowledged academic research output. In fact, the published video essays, such as *Chanchadas and Intermediality*,[8] where a hyperlink brings the read-

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[3] Phillip Lopate, "In Search of the Centaur: The Essay-Film", *The Threepenny Review* 48 (1992), pp. 19–22.

[4] Estrella Sendra Fernández, "Video Essays: Curating and Transforming Film Education Through Artistic Research", *International Journal of Film and Media Arts*, vol. 5, no. 2, 2020, p. 68.

[5] Miklós Kiss – Thomas van den Berg, *Film Studies in Motion: From Audiovisual Essay to Academic Research Video*, 2016.

[6] Just to mention the most recent conferences: *Essay Film Studio* organized by Łódź Film School (February 2021); *The Video Essay – A Conference on the Forms and the Future of Videographic Criticism*, Université de Paris (October 2021); *Interrogating the Modes of Videographic Criticism*, International Symposium (February 2022).

[7] Following, some of the abovementioned scientific journals: *inTransition*, *European Journal of Media Studies*, *Journal of Embodied Research*, *Reframe*, *The Cine-files*, *Alphaville*, *La Valle dell'Eden*.

[8] Flávia Cesarino Costa – John Gibbs, "Chanchadas and Intermediality: On the Musical Numbers of Aviso aos navegantes (Watson Macedo, 1950)", *Alphaville*, no. 19 (2020), pp. 28–30.

er-viewer to the video essay Vimeo page, do not stray at all from a canonical paper *tout court*. Nevertheless, in *Chanchadas and Intermediality* every video essay characteristic identified by Lopate can be detected – from the voice off to the written text exposing an original argument about the intermediality of Brazilian comedies between the 1940s and 1950s, up to the articulation of a clear point of view – within a rigorous discourse built up on a solid bibliographical apparatus, through a more informal, but no less precise language.

In this framework, image and sound, together with written text, become specific medial segments of an academic dissemination system, with the peculiarity of involving the audience by visually showing the discussed sources and media objects, also requiring a high grade of critical participation. However, video essayism practice is not exclusively limited to canonical scientific dissemination: such audiovisual model has also received a strong echo on platforms such as YouTube, attended by non-scholar users and producers. Digital platforms' production, fruition and distribution have not to be underestimated, as the shared audiovisual texts, no less culturally dense than those hosted by scientific venues, catalyze the curiosity and expertise of online audiences, educating viewers and thinkers who would hardly come into contact with a scholar contents while searching for lighter critical stimulation. We are thinking, for instance, of Tom van der Linden's *Like stories of old* video production and YouTube channel, whose language, style and quality do not stray too far from the one published in Alphaville, although directed at a different target: within such framework, could other theoretical and operative perspectives open up for the scholar community in the wake of a mutually beneficial encounter between a more generalist public and the scientific discourse through images and sounds?

Anna Peternák

Painting Beyond and Below the Horizon of (Big) Data Cloud

What happens when image recognition algorithms analyse a complex image type such as a (digital) reproduction of a painting? Can an algorithm help us to better understand the context of works of art?[1] These kind of algorithms are primarily programmed to identify what the picture represents.[2] However, this task is not easy to be solved for a machine which does not think at all, just imitate human answers, and deals with paintings in the same way as with any other image. A lot can be said about an artwork, and the object of the representation is not necessarily the most important part of it. In many cases, there is no relevant category, or no one can tell what is in the picture. It is often difficult to say whether the algorithm made a mistake or not. So we should carefully revise the machine's reactions and ask ourselves questions which we might not considered to be important before. If we take advantage of the fact that the image recognition algorithm can compare images in a different way than we do, and thus point to different correlations, then we can learn a great deal from its discoveries. The confusing results can develop critical thinking, and

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[1] This short paper is based on my dissertation titled "Festészet az adattenger láthatárán innen és túl" [Painting Beyond and Below of the Horizon of (Big) Data Cloud], 2020. Consultant: Zoltán Szegedy-Maszák. The text is available online in Hungarian: http://doktori.mke.hu/sites/default/files/attachment/Disszertacio_Peternak_Anna_2020_11_02-compressed.pdf. Abstract in English: http://doktori.mke.hu/sites/default/files/attachment/Peternak_Anna_Tezisek_ANGOL_2021_09_11.pdf.

[2] Fei Fei Li, "How We're Teaching Computers to Understand Pictures", TED 2015, https://www.ted.com/talks/fei_fei_li_how_we_re_teaching_computers_to_understand_pictures#t-1066244. See also a pioneer of computer vision research: ImageNet: https://www.image-net.org/about.php.

inspire our thoughts, as long as we do not accept the algorithm's answers automatically.

Image recognition algorithms convert the pixels (so the properties) of digital images into vectors, creating a kind of abstraction: a reduced pattern.[3] When they make comparative analyses, they essentially deal with vector patterns, so they are counting. They compare highly reduced patterns and perform mathematical operations on simple image structures. These algorithms ignore some properties of the images, do not think or interpret; nevertheless, they use their own abstract operations to create relationships and definitions that can cast some images in a new light.

For example, Google Arts & Culture program titled *Tags*[4] uses categories generated by a machine learning algorithm and arranges reproductions of work of art under these categories; the algorithm gives name to a group of pictures which have common features according to the measurements. The following images (Figure 1) are grouped under the category "slaughterhouse", which includes Muybridge's motion studies of a dog, and also Renaissance paintings representing the seven liberal arts and the seven virtues. The machine recognised the similar patterns of these images, the rhythmic repetition of organic shapes, the horizontal and vertical divisions (straight lines) that separate the figures. Although the topics of these images are highly different, we can discover the similarities of visual patterns; it's true that we do not see representations of a slaughterhouse, but we may notice that the pictorial structure of these Renaissance allegories can be really compared to the form of a skewer with some food on it.

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[3] Adam Geitgey, "Machine Learning is Fun! Part 4: Modern Face Recognition with Deep Learning" – Medium, 2016, https://medium.com/@ageitgey/machine learning-is-fun-part-4-modern-face-recognition-with-deep-learning-c3cffc121d78.
[4] *Tags*: https://artsexperiments.withgoogle.com/tags/.

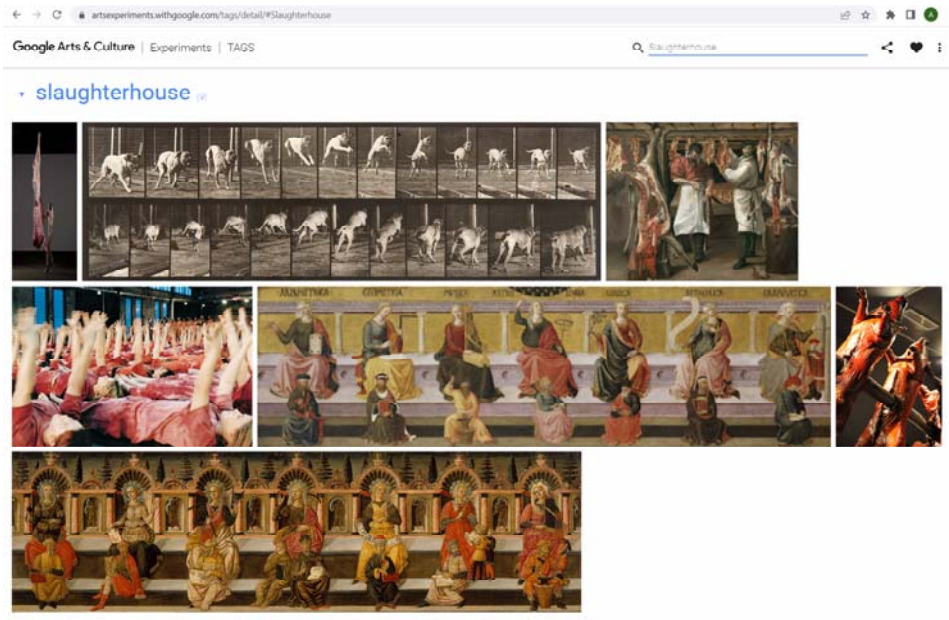

Figure 1: Tags, *Google Arts & Culture website – Slaughterhouse category.*

Another interesting program, the *X Degrees of Separation*[5] is capable to compare any two artwork in the database of Google Arts & Culture and creates a fictional pathway from the first picture to the second, showing steps of this imaginary metamorphosis through other artworks. In this case, the algorithm does not try to give definitions, only measures the visual characteristics of the images. The creator, the medium of the original work, the period, the theme of the representation, title, concept does not matter.

The most exciting results are obtained by comparing two very different pictures that are neither similar in colour, nor shape or technique, probably because the program can surprise us and show simi-

[5] *X Degrees of Separation:* https://experiments.withgoogle.com/x-degrees-of-separation. Artist Mario Klingemann is the intellectual author of the program (also an interactive artwork), which was first presented at the Ars Electronica festival in 2017, Linz. The online version was uploaded to the Google Arts & Culture Experiments website in March 2018 (co-authors Simon Doury, Fabien Viger, Gediminas Lilktaras).

larities in a way we never expected. For us, it is probably difficult to find common features in a 19th century photograph and a colourful carpet (see Figure 2), but for the algorithm, every digital image gives the same challenge, since the pictures are already transformed into vectors, the comparison method is only a mathematical calculation: one measurement is not harder than the other.

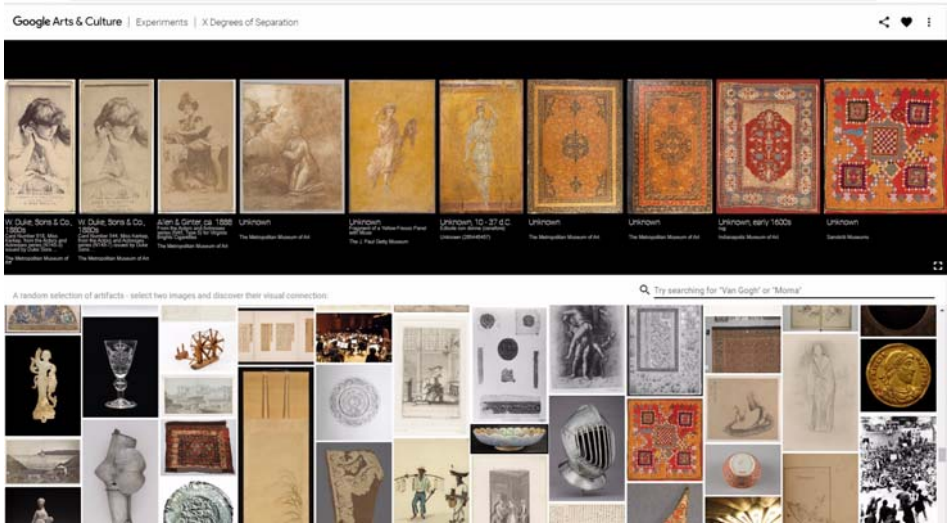

Figure 2: X Degrees of Separation
– fictional pathway between a 19th century photograph and a carpet.

The Google Images search program[6] allows to upload any picture we want and we can easily test the image recognition algorithm's reactions: it will give both verbal definitions and visual analogies ("similar images") for us, related to our picture.

How does this Google algorithm react when it has to deal with nonfigurative or at least ambiguous pictures? My video titled *Blue: Sea, Green: Grass*[7] addresses this problem; I uploaded to Google Im-

[6] Google Image Search: https://images.google.com/.
[7] *Blue: Sea, Green: Grass*, video, 13 minutes, 2021. Music: Máté Szigeti. Violin: Kinga Kowalczyk. Image, editing, concept: Anna Peternák. With English subti-

ages a reproduction of a painting which evokes different kind of associations. We might say, it resembles a carpet from a distance, but in its details, it looks like miniature landscapes underneath each other (see Figures 3 and 4). So it is not possible to say exactly what is in the picture, because it is not evident. In the video, I am using this painting as an example, and different kinds of transformed versions, details of it, and ask the Google algorithm again and again, how these images (coming from the same source) can be interpreted with the help of short definitions and visually similar images.

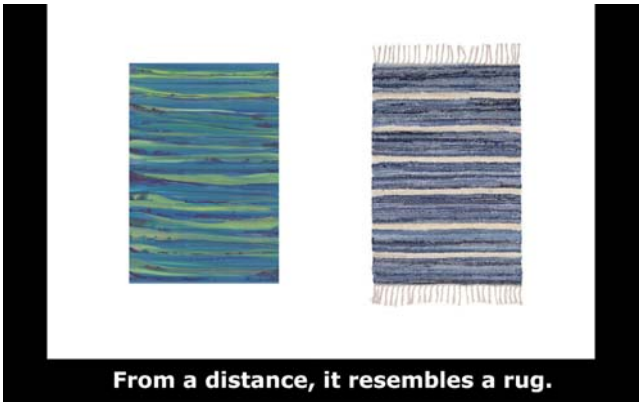

Figure 3: A frame from Blue: Sea, Green: Grass*, video, 13 minutes, 2021. Music: Máté Szigeti. Violin: Kinga Kowalczyk. Image, editing, concept: Anna Peternák.*

As a matter of fact, in the case of abstract paintings, we also often look for parallels: What is this? What does this resemble?

The algorithm can also tag two different reproductions of the same image with opposite keywords. For example, I received the words "horizontal" and then "vertical" for the very same painting. The mistakes of the algorithm are very absurd but also quite poetic.

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tles: https://vimeo.com/648237783. With Hungarian subtitles: https://vimeo.com/654429599.

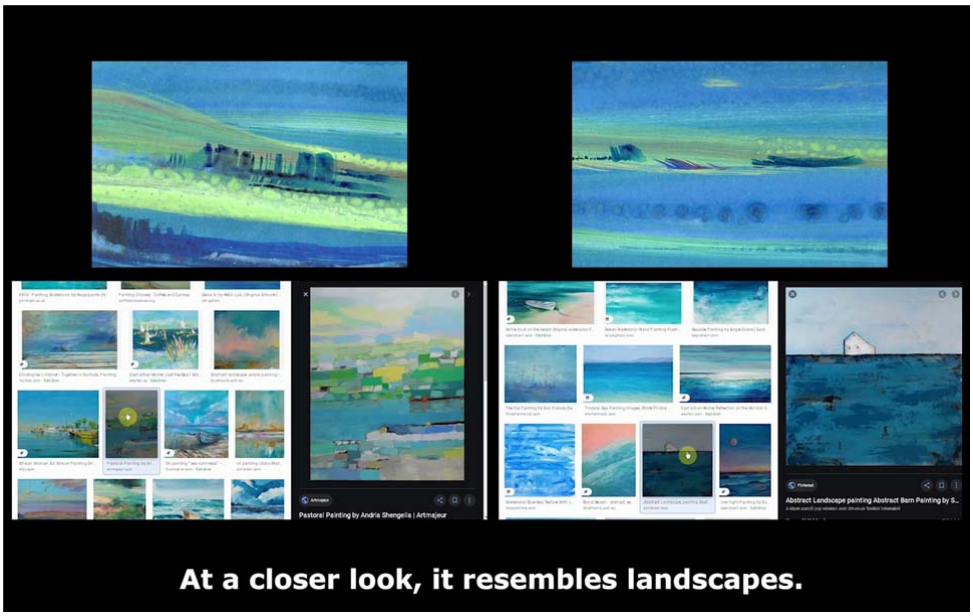

Figure 4: A frame from the video Blue: Sea, Green: Grass.

The blue and green version of the same picture (a detail of a digitally transformed picture) was also uploaded to Google Images, and the image recognition algorithm associated the blue picture with seascapes, the green one with green fields (see Figure 5), so used very simple categories for these nonfigurative pictures.

The algorithm tries to figure out what we think of and gives us what we expect to get, but for an artist, mostly the surprising results can be useful and interesting; the predictable, human-like answers will not help to better understand a picture. The new structure and responses of image recognition algorithms can also help us to give new, perhaps unusual but inspiring meanings to some concepts used in image science but not fully elaborated, such as Aby Warburg's Bilderwanderung (migration of images), through a close reading of the robot's "ready-made" iconography.

Figure 5: A frame from the video Blue: Sea, Green: Grass.

Matthew Crippen – Joanne Mun

Learning Korean Culture: Embodied Visuality

Our goals are to introduce embodied approaches to visual learning and to show how embodied visuality can help people learn Korean culture.

We start with a schematic history (Figure 1) of embodiment, which shows how the views of educationalists like Dewey evolve from Aristotelian, Confucian and other classic traditions. Dewey spent several years in China, and his predecessors in American Transcendentalism read Asian texts. Unsurprisingly, then, American and

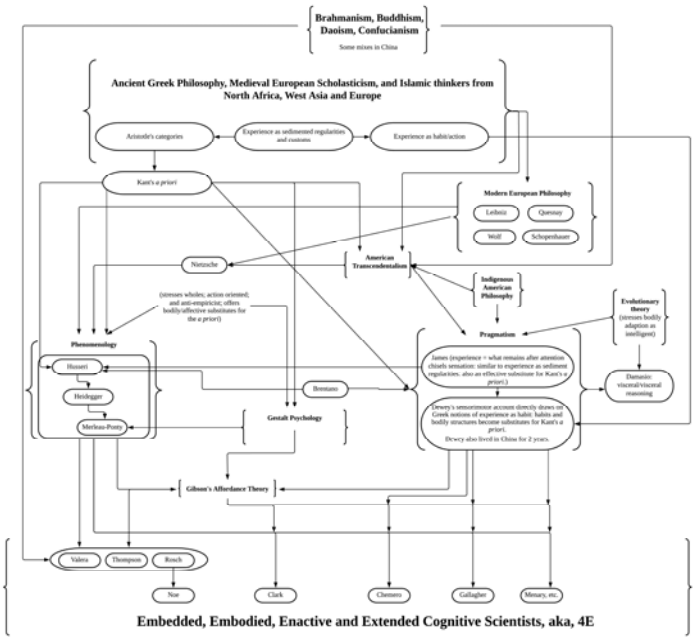

Figure 1

and Asian outlooks (e.g., Buddhism, Daoism) jointly advance the principle that things and their properties and even agents are inter-

dependent and such that they only show up together. Dewey also held our contact with the world occurs through a multi-faculty fusion. For example, to see solid ice as weight-bearing and thin ice less so is to perceive and cognize ice as emotionally safe or threatening, hence as affording walking or not.

Likewise, seeing a candle flame as such is more than registering a yellow smear; it means seeing warm waxiness, an intimate emotional resonance and quite a bit more.

So seeing always involves more than seeing, which has implications on learning. It explains, among other things, why images on smart phones can match the intensity of cinema: because we engage with mobile devices with our hands, rotating or adjusting image sizes with our fingers. *Embodied* visualization aids even highly cognitive learning. This is illustrated in Figure 2, which visually symbolizes Hangul (Korean) script in terms of things we do (e.g., mouthing words, skiing, hefting buckets) or in terms of what viscerally affects us (e.g., rattlesnakes).

Figure 2

An aspect of Korean culture that interests us is *uri*, a word connoting that social existence or "we-self" precedes individual psy-

chological existence. Merleau-Ponty and Dewey likewise defend this claim, as does the psychologist Colwyn Trevarthen, who is influenced by process philosophy. All of these scholars assert that infants' minds are scaffolded by their caregiver's gaze, movements and voices. Koreans think this continues through life, a view oriented by Confucianism, Daoism, Buddhism and local Shamanistic understandings that stress the primacy of interrelations, whether social, metaphysical or epistemological. *Uri* highlights that importantly human practices like talking, cooking, religion and technological know-how are fundamentally social. Uri also captures the East Asian sense that self is formed out of layers comprised of family, friends and the social-political community, and if we strip all this away, there's nothing left.

Uri can be difficult to verbally convey to Westerners, who do not *live* Korean culture. One reason, according to Merleau-Ponty, is that 1) primary experience – like the practical know-how of using a hammer – arises through bodily comportment; and 2) this primary experience cannot readily be communicated by conventional abstract means such as language, even though primary experience underlies abstraction.

With Merleau-Ponty's challenge in mind, we suggest *embodied visual* methods for teaching *uri*. Patrick Nalepka's experiments reinforce the idea. Nalepka's team (which includes Anthony Chemero, influenced by pragmatism and phenomenology) had pairs of participants engage in "sheep herding" tasks through an embodied visual interface, e.g., using VR setups that require the movement of their entire bodies (Figure 3) or else using something like an air hockey paddle (Figure 4).

Nalepka has more recently discussed speculative evidence that joint activity can be expressed in terms of what's called "pink noise" or "1/*f* noise," which mathematically characterizes self-organizing systems. This suggests that people in groups can integrate to form a larger self, in line with the concept of *uri*. By this means, participants controlled cursers (the herders) with the aim of repelling dots (the sheep), keeping them inside a circle (Figure 5).

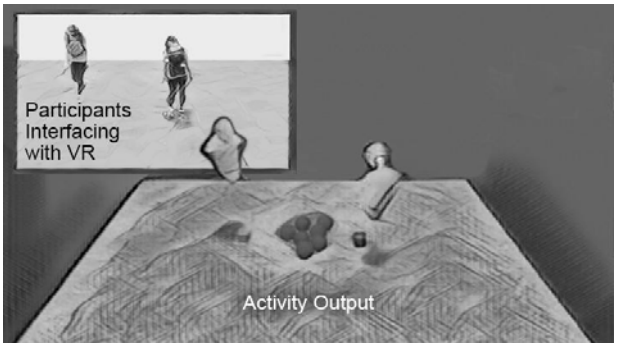

Figure 3

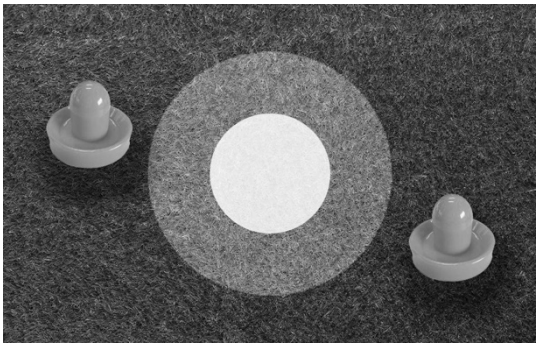

Figure 4

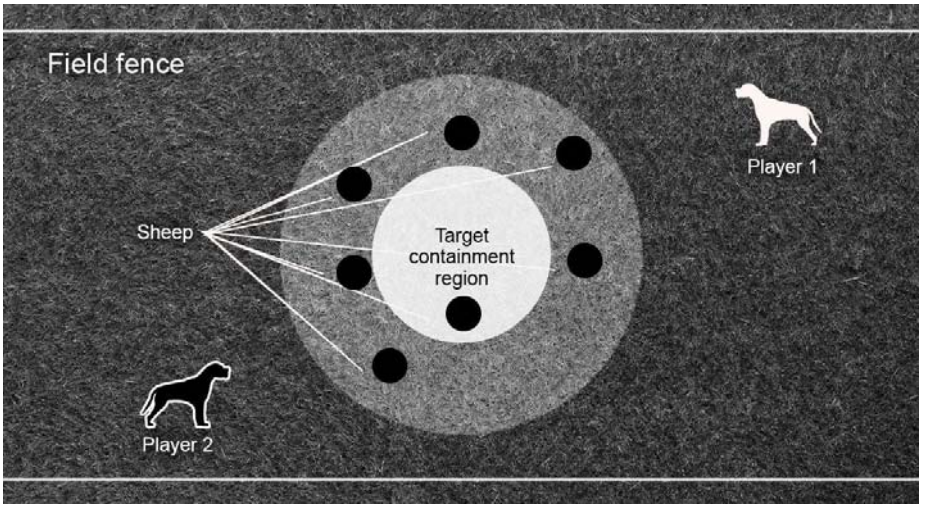

Figure 5

Talking was not allowed and most started by acting individually, an approach that fails. Rapidly, however, they went on to synchronize with their partners, in either phase or anti-phase patterns (Figure 6), both tactics effective for keeping the "sheep" penned.

This brings us to our own interactive visual and audio exercise intended to teach *uri* and also something about embodiment. Through rhythms of light and electronic music set up to respond to audience

feedback (dancing, etc.), we can teach the basic lesson that the body is a synergic system that achieves greater unity by coordinating around environmental contours. Insofar as each individual synchron-

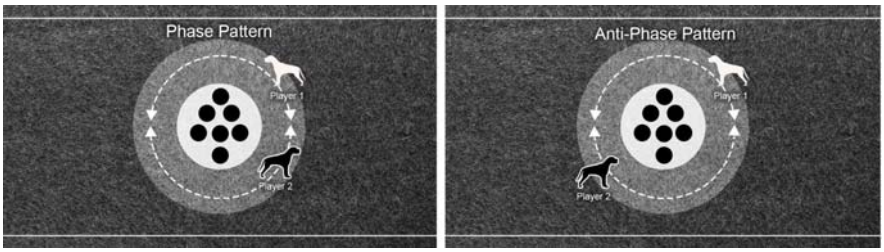

Figure 6

izes into self-feeding rhythms of light and music, the experience can instill a sense of communal consciousness or shared experience.

While *uri* is a primary experience for Koreans, it's typically foreign to Westerners. Broadly, we hope that our interactive visual and audio event opens a sense of Korean oneness to Westerners.

John Jairo Madrid-Carvajal

Embodied Cognition on Wikipedia: Making Open-Access Quality Research Available Online

Over the past years, with the internet's advent, scholars have progressively moved toward online-based resources when doing research. The COVID-19 pandemic challenged us all and made online content more pressing than ever. Journals, magazines, and newspapers now offer online content for everyone to access and document their research. However, the reliable scientific content available often costs, and subscriptions can become unaffordable for many students, academics, and people worldwide. Additionally, standard journals' format lacks dynamism; they often offer readers a (limited) number of single papers. In contrast, Wikipedia's online free-content policy facilitates equal access to information for everyone through encyclopedic articles that provide an overview of a particular topic based on multiple resources.

Wikipedia has become a widely and commonly used online free-content encyclopedia; its pedagogical advantages and the visibility of its articles are undeniable. Wikipedia's content has exponentially grown and is considered "the largest and most-read reference work in history". Its exponential growth highlights the significance of its open-access editorial policy.[1] However, due to its collaborative nature, Wikipedia's articles are susceptible to misinformation, incompleteness, and even vandalism. Anyone with internet connection can create, edit, and manipulate Wikipedia's content. Thus, both the quality and reliability of Wikipedia's articles vary significantly from one another and the same article over time.

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[1] Rodrigo Almeida, Barzan Mozafari, and Junghoo Cho, "On the Evolution of Wikipedia", ICWSM'2007, Boulder, Colorado, USA, 2007.

One such low-quality and unreliable Wikipedia entry concerns the "*embodied cognition*" (EC) article. EC is an interdisciplinary research field with an unclear past[2] and a relatively short history (Figure 1).[3] It has recently gained popularity among researchers who

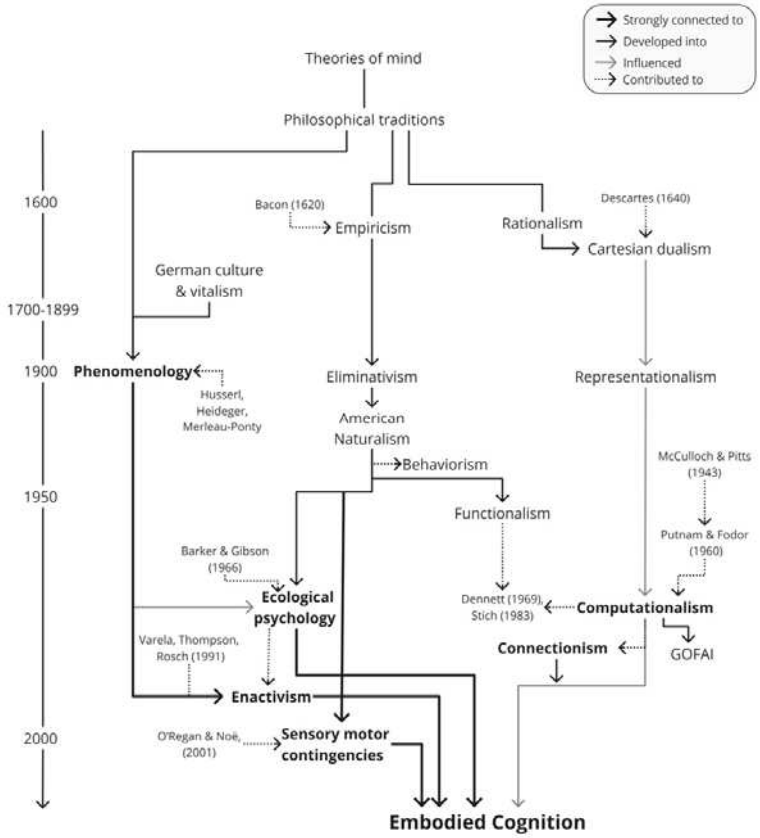

Figure 1: Timeline of the history of embodied cognition.
By John Jairo Madrid-Carvajal

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[2] McCarthy, John Aloysius, Stephanie Mathilde Hilger, Heather I. Sullivan, and Nicholas Saul (eds), *The Early History of Embodied Cognition 1740-1920: The Lebenskraft-Debate and Radical Reality in German Science, Music, and Literature*, Leiden: Brill Rodopi, 2016.

[3] Robert A. Wilson, and Andy Clark, "How to Situate Cognition: Letting Nature Take Its Course", in *The Cambridge Handbook of Situated Cognition*, edited by Philip Robbins and Murat Aydede, 1st ed., Cambridge University Press, 2001, pp. 55–77.

seek to understand how the (human) mind and its underlying cognitive processes work. Specifically, EC is a theory of mind that emphasizes the body's significant role during the acquisition, development, and employment of cognitive capabilities.[4] More radicalized versions hold that cognition is (entirely) determined by external sources outside the body,[5] such as the natural and social environment[6] and with no need for mental representations.[7]

EC reaches readers across multiple disciplines, such as cognitive science, psychology, neuroscience, artificial intelligence, linguistics, and philosophy (Figure 2). Evidence supporting EC comes from insights drawn from within those disciplines.[8] Likewise, embodied perspectives have been proved useful when incorporated into specific fields. An embodied perspective of robotics, for instance, allowed researchers to move from a mere representation and information processing approach to artificial intelligence (AI) to a more embodied AI, giving birth to situated robotics.[9] Similar examples of the benefits of the embodiment theory can be found across many other scientific fields, which eventually end up providing evidence favorable to EC.

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[4] Paco Calvo and Toni Gomila, *Handbook of Cognitive Science: An Embodied Approach*, UK: Elsevier, 2008.

[5] Andrew D. Wilson and Sabrina Golonka, "Embodied Cognition Is Not What You Think It Is", Frontiers in Psychology 4, 2013.

[6] Anthony Chemero, *Radical Embodied Cognitive Science*, The MIT Press, 2009. See also Andy Clark, "An embodied cognitive science?", *Trends in Cognitive Sciences*, vol. 3, issue 9 (1991), pp. 345–351.

[7] Gabriel Sanches de Oliveira, Vicente Raja, Anthony Chemero, "Radical embodied cognitive science and 'Real Cognition'", *Synthese* 198, 2021.

[8] George Lakoff, "Explaining Embodied Cognition Results", *Topics in Cognitive Science*, vol. 4, issue 4 (2012), pp. 773–785.

[9] Rodney A. Brooks, "Intelligence without representation", *Artificial Intelligence*, vol. 47, issues 1–3 (1991), pp. 139–159.

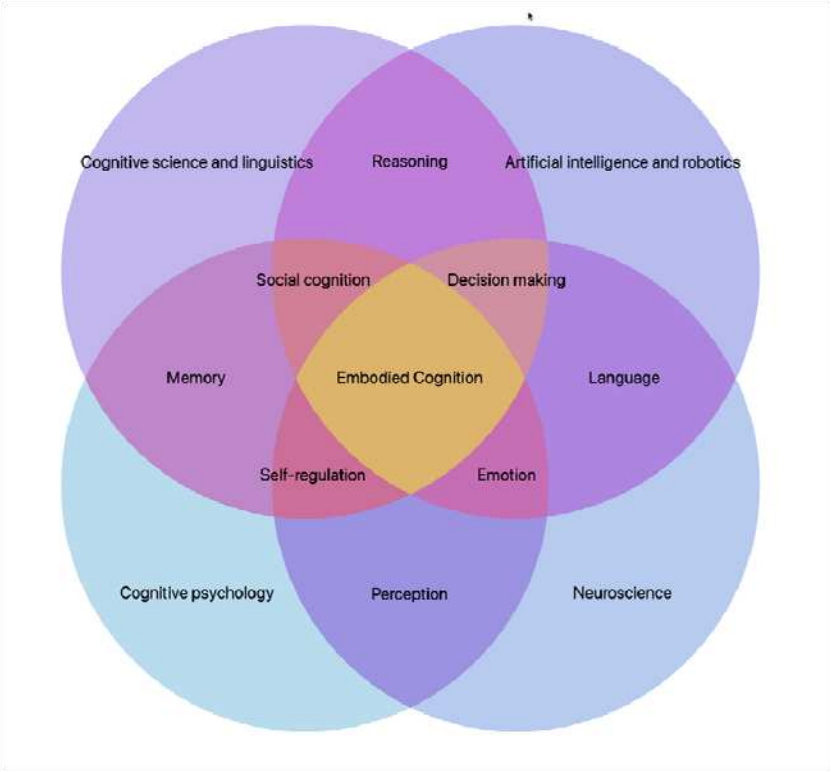

Figure 2: The scope of embodied cognition. By John Jairo Madrid-Carvajal

Despite both the gained popularity of EC theory across sciences and the relevance of Wikipedia as a source of information, little is done to improve the quality of the EC article's content on Wikipedia. Along with Wikipedia's online free-content policy, we undertook a collaborative effort to write, update, and improve the EC article's content and visualization. The editing actions performed materialized in a well-informed and well-written encyclopedic article, and it was granted *Good Article* (GA) status after complying with Wikipedia's *Manual of Style* (MoS).

To understand the impact of the editing contributions done to the article, two aspects were analyzed and compared to the article's state before the start of this project. First, the article's current version encompasses many notable and detailed topics in the field. For this

reason, the article's size (in characters) increased. Figure 3 shows that from 2015 until the start of this project, the article's size remained invariant (75,000 characters). In 2021, the article had reached a character count of about 140,000, and by the end of this project (May 2022), it had more than doubled against its original size to over 166,000 with twice the number of edits it ever had.

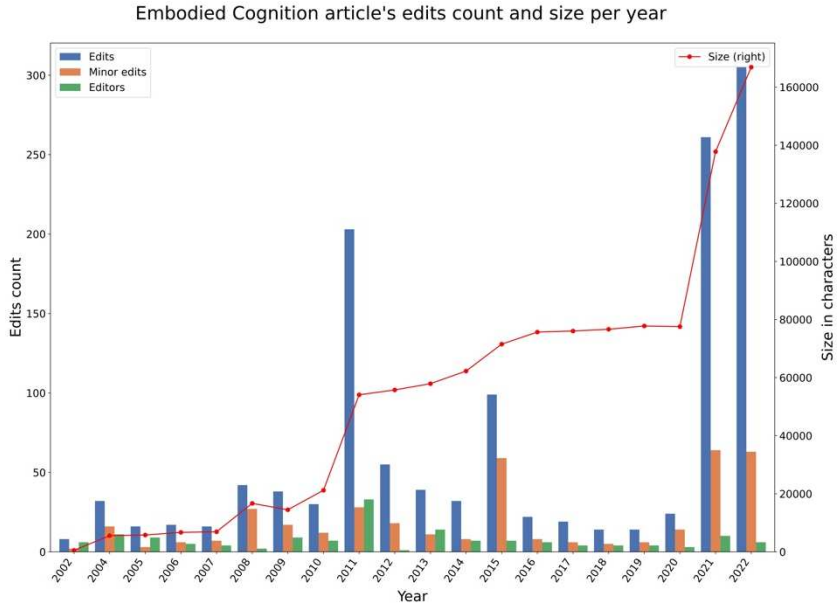

Figure 3: Histogram indicating the article's size and edits count. By John Jairo Madrid-Carvajal. Data provided by Wikimedia Statistics xtools page.

An additional quantitative measurement analyzed was the pageviews. The daily average page views increased during the 15 months period of this project compared to the prior 15 months (Figure 4).

Finally, the average daily views estimated tendency per month was around 340 views before the project and almost 400 during the project. This total calculates to a 14,8% increase in the views, as shown in the summary statistics of both periods (Table 1).

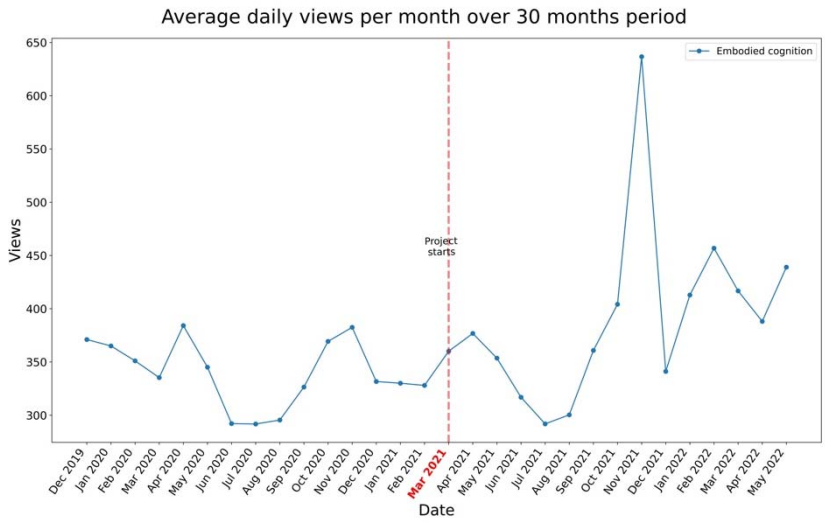

Figure 4: Article's views over fifteen months period before and after this project.

	Embodied cognition							
	count	mean	std	min	25%	50%	75%	max
Time period								
Before	15.0	339.934203	31.029994	291.741935	327.233333	335.322581	367.177419	384.133333
During	15.0	390.382074	83.574523	291.870968	347.354839	376.800000	414.774194	636.633333
Change in %	0.0	0.148405	1.693346	0.000442	0.061490	0.123694	0.129629	0.657324

Table 1: Page views summary statistics.

VIRTUAL REALITY

Michalle Gal

Buildings as Screens: Taking Over Material Ontology

The ever-growing ubiquity and rule of screens is a paradigmatic element in our visual age, and a supporting evidence of what I name "visualism": the visual kind of externalism. Visualism proposes that humans are more visualists than conceptualists, and more particular than abstract thinkers. Realizing that the visual sphere is the right arena to analyze both cognition and ontology generated the visual turn in philosophy. This line of thought is voiced by the Visual Learning Lab project whose leaders Kristóf Nyíri and András Benedek have been presenting in the last decade an ongoing confirmation that philosophy can no longer endorse the linguistic-conceptualist viewpoint. The practice of visuality which philosophy must address is described by Benedek in 2019 as follows: "A truly significant turn has been brought about by the massive spread of touchscreen devices and the practice of personalized use commencing at a very young age among children… Creating image ... applying specific genres (video, flash multimedia content and animation) have become an increasingly general practice in everyday communication."

Ontology is a most dynamic and therefore interesting stratum in our visual age. While the primary visibility of the ontological sphere is evident, the devices and practices of the visual turn may push it to a new transfiguration, showing yet again the power of visuality. A salient phenomenon within the rule of the screens is *the projection of images on three-dimensional environmental or everyday objects, mainly buildings, transforming them into screens*.

The herald of using everyday objects as screens in the art world is Pipilotti Rist, who claims that "today we put all our knowledge, our feeling, our history behind flat screens". Rist accordingly transformed mugs and take-out coffee cups lids, clear tubes, plastic bags, and egg cartons to screens of projected animated images in *Stir*

Heart, Rinse Heart (2003); projected grass and leaves illusions beneath 5 Park Lane tower at Central Park Sydney in her 2018 *Spark-*

Figure 1: Pipilotti Rist, Sparkling Pond*,* Bold-Coloured Groove & Tender Fire*, 2018.*

Figure 2: Pipilotti Rist, Big Heartedness, Be My Neighbor*, 2022.*

ling Pond, Bold-Coloured Groove & Tender Fire (2018, Figure 1)*,* and transformed a table-cloth and dinner set to screen by projecting a concentrically expanding movie on them in her *Big Heartedness, Be My Neighbor* (2022, Figure 2). However, this oeuvre is but a foreshadowing hint of this increasing, omnipresent, big-scaled phenomenon in the public sphere. We see buildings changing their colors through different flag-shaped arrangements of lights, such as *Allianz Arena* in Munich according to the paying teams, or the City Hall in Tel Aviv, which adjusted its colors in support of Lebanon following the ammonium explosion in its port, or of Ukraine following the Russian invasion. Less political but more aggressive are flickering ads projected on buildings fronts, Frank Gehry's Walt Disney Concert Hall in Los Angeles transformed by colorful patterns projected onto its entire metallic surface by Refik Anadol (2018, Figure 3), or the advertisement zone in the Korean counterpart of New York Times Square, housing mega-size LED screen displays that have been installed on the walls of the buildings. In it, for example, the COEX atrium, a K-pop center, is wrapped by *Wave* – an 80x23 meters electronic display of anamorphic wave (Figure 4), which produces a complete illusion of a three-dimensional wave, while completely oppressing the spatial flat medium of the wall.

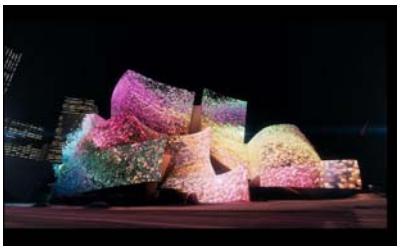

Figure 1: Refik Anadol, projection on Frank Gehry, Walt Disney Concert Hall, *Los Angeles, 2018.*

Figure 4: D'strict, Wave, *COEX Artium Seoul.*

These constructions of made-of-screens environments and buildings wrap up the original objects with an extra visual layer. They thereby enhance the objects' visibility but also distort their ontological character. Screening conceals the objects' original materiality and forms by turning their static spatial compositions into temporal ones. When animation is projected on objects and buildings, it also suppresses the flatness of walls through flickering colorful, either abstract or figurative, illusions. The result of the temporal three-dimensional illusion of wave COEX atrium is parallel to the concealment of the flatness of the canvas by realist painters, as Clement Greenberg convincingly described them in his 1960 "Modernist Paintings". Interestingly, the distrust of simple materiality, or the attempt to exhaust visuality to its fullest in order to allure the viewers, is what we are facing again surrounded by these aggressive screens.

Screens have been classified as dwelling at the level of representation. We see here a conversion of ontological status: the previously inferior projected image takes over the building, which is no longer ontologically superior. The environmental screens, namely, the projected imagery on buildings' walls and everyday objects, transforming them into screens, elevate the screens to the primary ontological level, conquering materiality. Is this conquer the pick of

visuality? Hopefully, the affordance of buildings and tendency to a yet more vigorous visuality, might, in Greenbergian terms, yield a dialectical conversion, leading back to visual simplicity which neither takes over materiality nor the bewildered viewer.

Ádám Kuttner – Andrea Kárpáti

AR/VR Technology to Enhance the Artistic Experience in Museums – An Experimental Study

This paper presents a usability study of a digital exhibition guide developed for three different exhibition settings. The study was designed to assess the communication value and experience enhancing effects of the guide with 142 visitors. The digital exhibition guide is based on Augmented Reality (AR) technology, using videos integrated in AR platforms for each of the studies.

The theoretical framework of our evaluation method developed for testing the usability of the AR museum guides specially aimed to enrich visitor experience in selected exhibitions is the transient, fluid nature of mental frames. Research indicates that they may be modified within a short time due to different interventions or events.[1] The worksheets used during the experiment were compiled and evaluated using a qualitative measurement method based on the methodology of visual framing.[2]

The AR guide was installed on the smartphones of visitors before entering the exhibition space. After installing the software, the functions of the guide were explained. Visitors could identify the artworks about which supporting information was available in the guide through signs in the exhibition halls. No information outside the guide was available for the visitors, as no interpretive texts were available in the exhibition spaces.

The first visitor study was undertaken at the permanent exhibition of the Ludwig Museum in Budapest, in the summer of 2021. We

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[1] I. Benczes & R. Benczes, "From Financial Support Package via Rescue Aid to Bailout: Framing the Management of the Greek Sovereign Debt Crisis", *Society and Economy*, vol. 40, issue 3 (2018), pp. 431–445.

[2] Á. Kuttner, "A kortárs multimédia alkalmazások lehetséges vizsgálati módszere a kiállítási kommunikációban", *Médiakutató*, 2022, no. 1, pp. 89–98.

have selected photographs of the NeoAvantgarde movement, a stylistic trend that is part of the learning program of future media workers who participated in this visitor research study. The content of the digital guide was based on the catalogue of the exhibition, and the AR application contained one-minute explanatory videos about five NeoAvantgarde photographs (Figure 1).

Figure 1: Artworks included in the visitor study: photographs by Géza Perneczky, Péter Türk, Dóra Maurer, Tibor Csiky Tibor and Gábor Attalai. Source: Ludwig Museum Budapest, https://www.ludwigmuseum.hu/search/work.

The second visitor study was undertaken at the Godot Gallery in Budapest, in January 2022. At the gallery space of about 50 square meters, 16 paintings of the Concept Art movement were exhibited from the collection of Péter Kacsuk. The collector focuses on socially oriented art works that reflect on contemporary political or social

issues. The AR guide included multimedia content and narratives by the collector about the way he acquired and matched the works and their expressive qualities (Figure 2).

Figure 2: Works included in this visitor study: dr.Máriás: George Soros in the Hungarian National Park; Fajgerné: Compromise; Tamás Galambos: Gold Rush; Société Réaliste: Camouflage of the United Nations; Kriszta Nagy Tereshkova: Damien collection. All artworks are part of the private collection of Péter Kacsuk. (Reproductions by the first author, with permission of the collector.)

The third visitor study was undertaken at the Móra Ferenc Museum in Szeged, at the collaborative exhibition the painter Tamás Konok and the biologist and museum educator Tamás Vásárhelyi. We prepared a 30-minute AR guide that included explanations of 15 exhibited objects narrated by Tamás Vásárhelyi. The experienced museum explainer showed how the scientific constructions can be used as cognitive toys by visitors and how they reflect on the works of art (Figure 3).

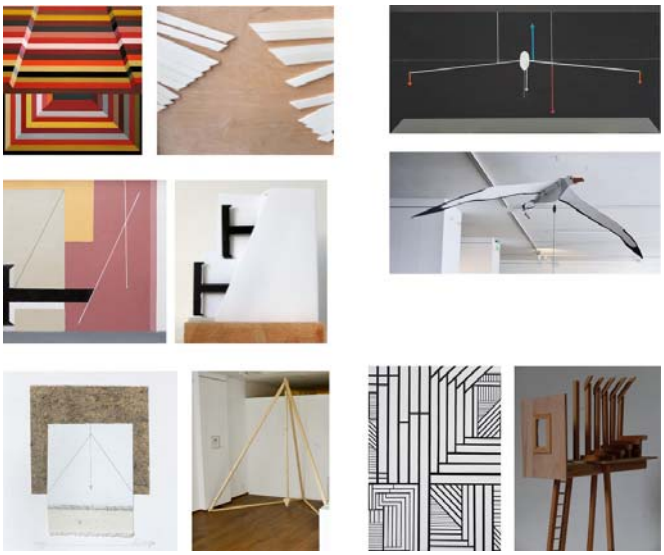

Figure 3: Works by Tamás Konok and Tamás Vásárhelyi included in the visitor study. (Images provided by the creators, Tamás Konok and Tamás Vásárhelyi.)

The three guides were prepared to meet the following criteria: *interactivity* (functions that help establish a human–machine relationship); *authenticity* (values represented that are correspond to those of the curator); high *technical standard* related to the design, implementation, and usage; and *communicative value* for exhibition communication to create a common culture and establish a relationship between the individual and the community by embedding the cultural experience gained during use and providing interpretive strategies. The application provides high-level *visitor experience* if it enhances the effects of the objects exhibited with added meaning, valuable interpretation, and new aesthetic insights or enhanced visual effects. Our research proves that such an application significantly enhances user experience.

The most important result of the three visitor studies that tested the potentials of AR technology for exhibition communication is that this device can be applied effectively to communicate the messages of an exhibition with good retention results. Students who

received AR-based support for their museum visit, were significantly better able to interpret artistic or scientific phenomena.

The major benefit of AR solutions as museum guides is that they may integrate the benefits of audio and video guides with multi-media information systems. AR-based guides can include 2D or 3D visual content without the need of installing a console or other device in the exhibition space. AR guides may be place-sensitive and start exactly when the visitor starts looking at the work of art with linked content in the AR guide

We hope that our method of analysis summarized here will contribute to the development of museum communication devices.

Video explaining the research tool: https://youtu.be/9TzyyEic-ZY.

Márton Gergely Rétvári

Virtual Classroom, Real Problems: VR Integration in Public Speaking Education

Virtual Reality presents a novel way to incorporate visual learning into classrooms across the globe. Although the technological requirements – and the associated costs – are steep, they allow a different, more personal level of involvement with class materials than previous technology-assisted learning methods.

Numerous studies are trying to find novel ways to include VR in specific fields, like engineering or medical science. In contrast, others try to create a generalized framework for how VR could be inserted into different educational environments.[1]

However, most of these experiments deal with shorter-form, in-person demonstrations and sessions,[2] like bringing artwork to a classroom as a demonstration.[3]

To see how VR could be implemented in a longer, take-home way, a semester-long experiment was created at Corvinus University of Budapest to help students become more confident public speakers. The experiment split students into three groups: a control group that received no training at all, and their speaking skills were measured before and after the semester, and two "active" groups: a regular and a VR-assisted group. The latter two groups had weekly sessions in

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[1] X. Dong, "An overall solution of Virtual Reality classroom", 2016 IEEE International Conference on Service Operations and Logistics, and Informatics (SOLI), 2016, pp. 119–123, doi: 10.1109/SOLI.2016.7551672.

[2] S. Kahlon, P. Lindner, & T. Nordgreen, "Virtual reality exposure therapy for adolescents with fear of public speaking: a non-randomized feasibility and pilot study", *Child and Adolescent Psychiatry and Mental Health* 13, article no. 47 (2019), https://doi.org/10.1186/s13034-019-0307-y.

[3] Andrea Casu et al., "RiftArt: Bringing Masterpieces in the Classroom through Immersive Virtual Reality", *Smart Tools and Applications in Graphics* (2015).

smaller groups of 4–8 people to ensure they had ample opportunities to speak and receive feedback.

Both groups received the same in-person – and later, due to COVID, online – classes, while the VR group had access to devices and an application called VirtualSpeech to practice in front of digital crowds.

Although the study results were positive, with both groups improving considerably compared to the control group, and the VR group slightly beating out the non-VR assisted participants, this is not what I would like to focus on in this paper.

What this paper would like to offer instead is failure: the positive results of VR-assisted technologies to help overcome public speaking anxiety are well documented. However, the issues surrounding practical implementations are discussed significantly less. Because of this, this paper focuses on the pitfalls of implementing these technologies in a broader classroom setting.

The first key element that hampers the scalability of VR-assisted tools is cost. Considering an average classroom of 20, this means an initial investment of $8,000 for devices, not considering depreciation, extra devices to replace faulty ones, or larger class sizes. The project faced significant issues with device limitations. The experiment used four – plus one, explained later – VR devices: two Oculus Quest 1, and Oculus Quest 2. Although the application functioned similarly on both the Quest 1 and 2, the newer model offered a better resolution, comfort, and graphical fidelity. This also brings into question how quickly previous models will fall behind or become unsupported, further increasing costs.

However, this is necessary if we want to engage with long-term, regular VR-assisted sessions. The main problem was that the four devices were not enough for the 12 people in the group, as it brought in several issues that hampered the program's effectiveness. First, and most importantly, this meant that – even under optimal circumstances – people had the devices for less than a third of a week. This was suboptimal because of the limited time window for practicing and because it created an unequal balance between participants. People who had the device on weekdays had classes, work,

and other obligations they needed to tend to, while people who had them on the weekends could spend more time with them and practice more effectively.

There were also issues with handing the device over on time. In several cases, people didn't pass it over to the next student due to outside circumstances (illness, sudden change of plans) or simply bad planning. This slowed the practice sessions down significantly, mainly because most people registered the devices for days where they were available to use them, and if the handout did not happen on time, this had a knock-on effect making other people miss their preferred practice times as well.

However, even when students had access to the devices, there were still barriers: some admitted that even when they had the device, they didn't practice due to their lack of time or energy. Setting the VR setup up, and getting the application to work made practicing burdensome for some participants. However, it is to be noted that even with these issues, the VR group spent 15% more time on the tasks during the year, according to self-reported data.

Although this sounds great initially, there is significant selection bias here: the study population was significantly more engaged and motivated than general course students: they signed up to an extracurricular activity with no rewards, monetary or university credits, purely because they were interested in the research and VR technology. This will not necessarily be the case for more general class audiences.

Another big issue was underestimating the time it would take to get students familiar with the program and the device, and more importantly, how to get them to use the device at home, alone – or with limited tech support from afar. Previous studies used the devices in a controlled setting,[4] with constant assistance throughout the VR usage. The take-home approach of this experiment opens up broader

[4] S. Kahlon et al., see note 2 above.

applications; however, it does necessitate a significantly increased technical understanding from the participants.

Before they took the devices home, a detailed in-person demonstration took place, where students were able to grasp how to operate the app and the device, but once they took it home – some of them more than a week after they took part in the demonstration – they had to operate the devices by themselves, and many of them felt lost. 7 out of the 12 students mentioned technical issues that hampered their practice sessions throughout the project.

Although it was not an issue here, another crucial point will be the technical limitation of faculty. Not only do they have to learn how the technology works and get funds to start a VR class setup, but they would also need to engage in extra, creative work in finding ways they might incorporate this into their class, and be prepared to set aside considerable time getting students up-to-speed with how the technology works.

Even with these pitfalls and hardships, seeing the responses – and the results – from students signal that although it is a steep hill to climb, the effort may be worth it. One student, when they first experienced the application, said after the experiment "*I felt like I was there. For a minute, my brain believed that I'm honestly standing in front of a crowd.*" Because although the simulation might be virtual, the impact on our students can be very real.

Marek Kuźniak

Virtual Spacetime, Choices, Smartphones, and Other Things: A Word from a Cognitive Linguist

In my 2021 release on *Geometry of Choice*[1] I argue, through the lenses of a cognitive linguist, that SPACETIME, along with its perceived attributes, is crucial to understanding the choices we make in our everyday life. Elsewhere, I argue that "cubic geometry is ubiquitous though unobvious to us… Cubic geometry permeates every aspect of our activities, whether individual or collective. There is a common consensus around the idea that the space we operate in is three-dimensional (length, height, width). Besides, hardly anybody questions that these dimensions are embedded in the concrete reality (R) with its four cardinal directions: the west, the east, the north, and the south… In this sense, the cubic shape of our life appears as something natural. All this leads us to think of a cube as if contained within our global spherical experience. In other words, a cube seems to be spelled in a sphere,[2] but we generally pass it unnoticed."[3]

This foundational three-dimensional CUBIC SPACE that underpins our understanding of the pivotal hierarchical (up-down), and horizontal (left-right) relations, as well as those connected with the concept of DEPTH (front-back), has become instrumentally "flattened" today to take the form of the well-known false friend, i.e. virtual reality (VR). VR is SQUARE-based (two-dimensional), whereas R is founded on the aforementioned three-dimensionality of space, of which CUBE is the best exponent. VR is the product of consumerism, while R is the product of life. We have become slaves of

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[1] Marek Kuźniak, *The Geometry of Choice: Language, Culture, and Education*, Cham: Palgrave Macmillan, 2021.
[2] Cf. Ewa Dąbek-Derda, *Sześcian zamknięty w kuli* [A Cube Spelled in a Sphere], Katowice: Wydawnictwo Uniwersytetu Śląskiego, 2017.
[3] Quoted from: https://www.palgrave.com/gb/blogs/social-sciences/kuzniak.

consumerism at various levels: (a) communicative, where the quality of messages is in inverse proportion to the range of receipt; (b) social, where our inter-human contacts have multiplied but deteriorated in quality; (c) cultural, where effortful creative thinking has given in to effortless reproductive activity.

In the Introduction to *Geometry of Choice*,[4] I argue that "virtual spacetime is existentially complementary to the real spacetime, the relationship between them being disjunctive or exclusive, rather than conjunctive or inclusive. The two realities, as I understand them, are, as a result, somehow destined to 'wage war' for dominance in the world of human experience for decades to come." The critical point upon which the conflict is built involves the economy of time and the consequent human efforts to minimise the effect of the PATH towards the GOAL. All in all, it is VR that gives us the illusion of that extraordinary time compression. The most notable example is the two-dimensional "smartphone reality", whose attractiveness lies in the off-hand availability of things which entails the economisation of human effort.[5] Is the "smartphone reality" destined to win the game and push R back into the background? The key thing from a social point of view is, as said above, the tempting economy of effort towards the achievement of goals, yet the problem of real-time flow remains unconquered, which is obviously the source of frustration to many who rely on "the say-it-and-have-it effect" and admit of no delays.

Barry Schwartz also correlates choice with time and provokes the consumerist society by creating the curing paradox of choice where more should mean LESS. He adds, "choosers are people who are able to reflect on what makes a decision important, on whether, perhaps, none of the options should be chosen, on whether a new option should be created, and on what a particular choice says about the chooser as an individual. It is choosers who create new opportunities for themselves and everyone else. But when faced with

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[4] Kuźniak, *op. cit*., p. 30.
[5] Kuźniak, *op. cit*., p. 31.

overwhelming choice, we are forced to become 'pickers', which is to say, relatively passive selectors from whatever is available. Being a chooser is better, but to have the time to choose more and pick less, we must be willing to rely on habits, customs, norms, and rules to make some decisions automatic."[6] Another question is about other spectacular consequences of this widespread immersion of *homo sapiens* in this virtual world organised around two-dimensional screen space, where fiction seems to blend with non-fiction, yet the worlds of VR and R are actually apart. In this sense, what we observe nowadays is "the distorted Renaissance understanding of the 'carpe diem' philosophy of life, which is illusionary in the same way as its contemporary product, that is, 'click' or 'smartphone' culture. This is because the 'smartphone' culture is based on a non-linear (atemporal) interactional interface, which is only a virtual (non-realistic) counterpart of the real-time-based culture."[7] VR, with its smartphone, is just a symbol of the reign. Still, no matter how it becomes extended, it is just the mirror (reflection, i.e. distortion) of R in its fundamental cognitive sense.[8] The tangible effect of this virtual/real world encounter is confrontative rather than synergistic as multiple conceptual antinomies emerge: CULTURE vs ANTI-CULTURE, REALITY vs ARTIFICIALITY, TEMPORALITY vs ATEMPORALITY, CONSEQUENTIALITY vs NON-CONSEQUENTIALITY, to name but a few.

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[6] Barry Schwartz, *The Paradox of Choice*, New York: HarperCollins Publishers, 2004.
[7] Kuźniak, *op. cit*., p. 176.
[8] More on this mirror aspect of (neuro)-cognition to be found in Vittorio Gallese – Alvin Goldman, "Mirror Neurons and the Simulation Theory of Mind-Reading", *Trends in Cognitive Sciences*, vol. 2, issue 12 (1998), pp. 493–501.

PHILOSOPHY PRESENT AND FUTURE

Susan Haack

What a World!
The Pluralistic Universe of Innocent Realism

Truth is rarely pure and never simple.—Oscar Wilde[1]

Metaphysics is, or at least, by my lights it ought to be, about the world; it is an *a posteriori*, empirical discipline. So metaphysical inquiry relies, not just on reasoning—though of course it requires that, to make explanatory conjectures, to draw the consequences on those conjectures, and to check how well they stand up—but also on experience; not, however, the recondite kind of experience needed by physicists, microbiologists, paleontologists, psychologists, etc., but on close attention to aspects of our everyday experience so familiar that ordinarily we scarcely notice them.[2]

This conception, I note, avoids both the long-standing reliance of metaphysicians on the *a priori* method, and the more recent scientistic trend of hoping simply to borrow our metaphysics from currently-accepted science;[3] it is between apriorism and scientism. This is partly why I call my kind of realism "innocent."[4] It tells you

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[1] Algernon, in Oscar Wilde's play, *The Importance of Being Earnest: A Trivial Comedy for Serious People* (London: Chiswik Press for Leonard Smithers and Co., 1899), act 1, p. 15, https://babel.hathitrust.org/cgi/ssd?id=uc2.ark:/13960/t8w95552b.

[2] It is derived from C. S. Peirce. See generally Susan Haack, "The Legitimacy of Metaphysics: Kant's Legacy to Peirce, and Peirce's to Philosophy Today," *Polish Journal of Philosophy* 1 (2007): 29-43.

[3] I use "science" in the now-standard English sense, which is much narrower than, e.g., the German *"Wissenschaft."*

[4] There is a preliminary statement of my Innocent Realism in the final section of Susan Haack, "Reflections on Relativism: From Momentous Tautology to Seductive Contradiction" (1996) in Haack, *Manifesto of a Passionate Moderate* (1998), pp.149-66. Further details were developed in my "Realisms and Their

to start by just looking, paying attention, so far as you can without preconceptions; so it is innocent of such weighty claims as "currently-accepted theories in the mature sciences are mostly true."

Moreover, this conception opens up the way to understanding how the world, and we, must be if successful inquiry, including successful scientific inquiry, is to be even possible—without denying that results from the sciences may have contributory relevance to metaphysical theorizing. And at the same time it explains how it is that metaphysics can seem to be *a priori*, even though it really isn't: we don't have to leave our armchairs to think metaphysically, because we already have the necessary experience.

"What is there?" Quine famously asked long ago, as metaphysics was just getting back on its feet after the Logical Positivists' *canard* that it was cognitively meaningless or at best bad poetry; and answered with characteristic wit: "Everything." True enough—but also characteristically unhelpful. Quine's subsequent formula, "to be is to be the value of a variable," made matters, if anything, worse.[5] Still, Quine's was *almost* the right question—except for his nominalist insistence on reading "to be" as "to exist." "What is real?" is better; but immediately raises another question: "What exactly does it mean to be real?"

Quine would doubtless complain that, like his fictional Wyman, who maintained that, though Pegasus didn't *exist*, nevertheless he *subsisted*,[6] I am multiplying senses unnecessarily, But I think it crucial to distinguish *reality* (the more general concept of being) from *existence* (the mode of being of particulars). I adopt, and

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Rivals: Recovering Our Innocence," *Facta Philosophica* 4, no.1 (March 2002): 67-88.; and in *Defending Science—Within Reason* (Amherst, NY: Prometheus Books, 2003) chapter 5. Then there is "The World According to Innocent Realism: The One and the Many, the Real and the Imaginary, the Natural and the Social" (2014) in Julia Göhner and Eva Maria Jung, eds., *Susan Haack: Reintegrating Philosophy* (Berlin: Springer, 2016), 33-58.

[5] W. V. Quine, "On What There Is" (1948) in *From a Logical Point of View* (New York: Harper Torchbooks, 1961), 1-19, p.1.

[6] *Id*., p.3.

slightly adapt, the understanding of reality offered by Duns Scotus: the real is *what is thus and so whatever you or I or anyone believes about it*.

The core thesis of Innocent Realism is this: there is one real world, enormously various, and yet at the same time integrated—a kind of pluralistic universe. In this one real world there are, first, physical (natural) things, stuff, and events, *and* physical kinds, phenomena, and laws. These kinds, laws, etc., are emphatically *not* additional but abstract "existent entities," but they are real nonetheless, as are the potentialities, the as-yet unrealized possibilities, and the limitations involved in law-likeness.This is not to suggest that our terms for kinds all refer successfully, or that the laws that we believe to hold are real; nor is it to suggest that everything is determined by natural laws. It is better expressed, not as "kinds and laws are real," but as "there really are kinds and laws—though we may be wrong about *what* kinds and *which* laws are real."

In "our" corner of the world, the earth—which according to well-warranted current scientific theorizing is just a tiny part of a vast universe, which is itself perhaps, according to less-warranted scientific speculation, only one of many "multiverses"—there is also a vast array of human artifacts, physical, social, intellectual, imaginative, etc. To be sure, the universe is vast, and there may be intelligent life elsewhere; in which case, the richness of the one real world is even greater. But I focus here on the list of human artifacts, which is nearly endless, and growing daily. It includes:

- Physical artifacts: aqueducts, arrows, books, bombs, cutlery, clothing, computers, drains, dancing shoes, dongles, etc.

- Social artifacts: mating and marriage customs, systems of markets and money, religions, educational systems, legal systems, the news media, the entertainment industry, scientific communities, societies, big tech, social media, etc. Yes, these artifacts are socially constructed, if that means that there would be no such things but for what groups of people do; but "socially constructed" doesn't imply "not real."

- Intellectual artifacts: languages, concepts, scripts, systems of numbering and measurement, musical and other notations, histories, computer programs, websites, apps, etc., and theories of every kind—scientific, philosophical, legal, etc.

- Imaginative artifacts: myths and legends, plays and poems, fictional characters, places, and scenarios, pictures and symphonies, architectural designs, novels, cartoons, computer games, etc. Yes, there are real fictional characters, real fictional places, etc.; but of course these aren't real people, or real places.[7]

I emphasize that this is just a very rough and ready preliminary classification, for heuristic purposes only; these are nothing like separate kinds, let alone different "levels," of reality. Culture, as I might say (using the word in its broadest sense), is like an intricately and densely interwoven tapestry of many different-colored threads overlaid on the natural world, and everywhere enabled and constrained by its potentialities, powers, and limitations.

All those physical artifacts both exploit and are constrained by the properties of physical stuff; you can't make arrows out of butter, computers out of grass, or bombs out of cotton. And all these different kinds of artifact are intimately intertwined.

A system of money requires physical tokens of value, be it cowrie shells, banknotes and coins, or electronic impulses. A legal system requires courtrooms, law books, judges' robes, prisons, *and* languages, concepts, etc.—and is the subject of a whole genre of novel and movie, the legal thriller. Or think of all the paraphernalia involved in a 21st century wedding: the minister, the church, the flowers, the photographers, even, these days, wedding planners' websites. Again, the sciences require all kinds of physical equipment to

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[7] See Susan Haack, "The Real, The Fictional and the Fake," *Spazio Filosofico* 8 (2013): 209-17.

obtain their recherché observations, they need laboratories, and of course fancy computing equipment; but they also require specialized vocabulary, notations, etc., the whole panoply of means of scientific communication, *and* the imaginative constructions of scientists—and they too are the subject of novels, plays, movies, etc. Plays require theatres, actors, costumes; scenery, novels require paper and printing presses, or, now, their electronic equivalents; paintings need canvases and paints; movies need films, cameras, lights, … and so on and on. I'm sure you can continue the list for yourselves.

The distinction of nature and culture, moreover, is by now somewhat blurred, because of the many ways we humans have altered the natural environment, and the many plants, creatures, etc., that now exist only because of the human manipulation of nature.

"This is all very well," you may be thinking. "But haven't you simply taken mind for granted, without argument, or even acknowledgment? And doesn't that mean that you are covertly committed *either* to some kind of metaphysical dualism, *or else* to a crude identification of the mind with the brain?" I prefer to avoid speaking of the mind as if it were a thing, almost another organ like the heart or the liver—let alone a place; it is better to speak of human "mindedness," which has the virtue, being unfamiliar, of suggesting something more like a condition, or a congeries of functions and abilities.

Yes, so far I have taken human mindedness, for granted; but no, that doesn't commit me either to acknowledging mental, as well as physical, stuff, or to saying that the brain is all there is to it. Rather, I believe, human mindedness arises, in a kind of virtuous spiral, from the interactions of nature, individual, and culture. I first came to this conclusion as, in my capacity as epistemologist, I struggled to understand what it is to believe something, and how what you perceive can change your beliefs; but then began to realize that this is just one instance of the enormously many and more complex interrelated interactions we need to understand.

Take a relatively simple example. Tom's believing, e.g., that tigers are dangerous involves, first, his having a complex multiform disposition to behavior, verbal and other: to run away if a tiger is

approaching, not to put his arm in the tiger cage at the zoo to feed the animals, etc, and to warn others if there's a tiger coming, and to assert, or assent to, "tigers are dangerous," and so on. This multiform disposition, second, is realized in some way in the receptors in his brain that register input from the world and the activators in his brain that prompt him to run away from a tiger, utter "watch out, a tiger!", to assent to "tigers are really fierce animals," etc. Third, these dispositions to action and to speech (or other sign use) are associated in his brain with the same things in the world with which that vocabulary is associated in his linguistic community.[8]

This is, as I said, a (relatively) simple case; to include mathematical or theoretical beliefs or beliefs about the past, etc., would be one challenge; to extend the approach to other propositional attitudes another, and to deal with emotions, or self-awareness, harder yet. But even in this simple case there's a complex congeries of interrelated relations. There's the threefold relation of individual, words-and-linguistic-community, and the world; but this threefold relation in turn requires the connection of receptors and activators in other people's brains to words (or other signs) and to things and events in the world.

A normal human newborn has a brain, but a brain that hasn't yet developed the interconnections with world and words involved in belief and other propositional attitudes; these will come, very gradually, as the child interacts with the world and those around it. And it is as it does so that the baby becomes minded—and no longer just a human being, but a person. (And in the aged these connections may gradually wear out; Alzheimer's can leave a sufferer "de-mented," losing, and eventually devoid, of his or her mindedness.)

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[8] This all began in my *Evidence and Inquiry* (1993), chapter 6; continued in *Defending Science*, chapter 6; and was made explicit in "Belief in Naturalism: An Epistemologist's Philosophy of Mind", *Logos & Episteme* 1, no.1 (2010): 1-22; than further developed in "Brave New World: Nature, Culture, and the Limits of Reductionism," in Bartosz Brozek, Jerzy Stelmach, and Łuckasz Kwiatek, eds., *Explaining the Mind* (Kraków: Copernicus Center Press, 2018), 37-68.

The growth of mindedness is thus, in a sense, inherently social. But how is human culture possible, you may ask, unless people are *already* minded? Well, human beings are by nature capable of articulated vocalization, and we are social animals, not solitary like cheetahs. The very smallest "cultural" developments, like the first sounds that come to be used and taken as warnings, contribute small developments of mind; and as culture gets more complex, so does mindedness. It's a virtuous spiral, as I said; and incidentally explains why I have found it so useful a tool to ask students to make a glossary of all the new terms they inevitably learn in a course of mine, which helps them think more sophisticated thoughts.

And now it's time, mindful of the theme of this meeting, "Facing the Future, Facing the Screen," to offer some brief thoughts on where "virtual reality" fits in. Is the so-called "metaverse," as some may think, a whole other universe not even acknowledged in my metaphysics? No! "Metaverse" (like "Cloud" storage, which is neither nebulous nor in the sky) is clever but misleading advertising; and "virtual reality," if I understand it correctly, is a typically overblown word for a new class of computer-artifact. A telephone enables me to hear someone far away, television enables me to see and hear events far away, Zoom enables me to see and hear those far-way people, and so forth; and a virtual reality headset enables me to move around as if I actually were in another place.

All very cool, maybe; but not metaphysically startling; after all, for an additional sum one can buy a headset that displays a little photograph of your actual surroundings in one corner—so you don't trip over the furniture or the dog![9] We know you can't have a real drink in a virtual bar, or even on a virtual trip to a real bar. If, like those business students who make a virtual visit to a businessman in India, it's the visit, not the CEO in Delhi and his family, that's virtual; and for all the business-school hype, you don't "have lunch"

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[9] Joanna Stern, "Improving VR Headsets Puts a Better Metaverse into View," *Wall Street Journal*, Feb. 24, 2022, A12.

with this family,[10] but at best eat your lunch, here, while experiencing something like being there. But now I'm overshooting my word-limit; if you need to know more, you'll have to have your avatar call my avatar!

[10] Lindsay Ellis, "Virtual in the New Reality for M.B.A. Students," *Wall Street Journal*, May 23, 2022L:A11.

Alfredo Vernazzani
Ruhr-Universität Bochum

"Don't Think, but Look!"
Perceptual Experience, Metaphysics, and Common Sense

I

According to Avner Baz, philosophers have shown a tendency to repress what he calls the phenomenal world, the world as it is "perceived and responded to prior to being thought". In a way that echoes Sellars, Baz characterizes the phenomenal world as the world in which "we first and foremost find ourselves."[1] Repressing the phenomenal world thus means distancing ourselves from the world as it is alive for us, and consequently to alter the physiognomy of related philosophical problems. In this talk, I zero in on what I take to be one instance of such act of repression in the philosophy of perception. More specifically, I target some arguments advanced by Susanna Siegel and by William Fish, who purport to draw some strong metaphysical conclusion on introspective basis.

II

Both Siegel and Fish discuss specifically conscious visual perception, or seeing, and I take this to be that slice of the phenomenal world as it is visually experienced from a subjective point of view in our everyday lives. Through seeing, what we see is a tract of the environment populated by middle-sized dry goods – such as tables

[1] Quotations are drawn from: Avner Baz, "Bringing the Phenomenal World into View" (p. 101), in J. Conant & S. Sunday (eds.), *Wittgenstein on Philosophy, Objectivity, and Meaning* (pp. 100–118), New York: Cambridge University Press, 2019. Reference to Sellars is to his classic: "Philosophy and the Scientific Image of Man", in his *Science, Perception and Reality* (pp. 1–40), Ridgeview: Atascadero, 1963.

and chairs – other people and non-human animals, among other things.[2] Such ordinary objects populate also our common-sense ontology of the world, things like apples, books, buildings, etc. thus highlighting a close connection between what we phenomenally experience and the common-sense ontology. Yet, philosophers seek to go beyond the ordinary dimension.

III

This brings us now to Fish and Siegel.

In his book *Perception, Hallucination and Illusion*, Fish claims that we see facts, in the sense specified by David Armstrong.[3] "Fact" and "actual state of affairs" are terms of art.[4] A fact is an heterogeneous entity made by a particular plus a property (universal or trope) forming a non-mereological unity over and above the constituents. As Mark Johnston remarked, facts understood in this sense are "sentence-like" structured entities, i.e. facts have a structure similar to that of linguistically articulated content like "this is red", where the subject corresponds to the substance or object, and the predicate corresponds to the property.[5] Whether the world is ulti-

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[2] Cf. for instance: Barry Smith, "Formal Ontology, Common Sense and Cognitive Science", *International Journal of Human-Computer Studies* 43 (1995), pp. 641–667; Peter F. Strawson, *Individuals*, London: Methuen, 1959. Much of the current debate centers on the question of whether the phenomenal character of our visual experiences are grounded in representational content or not, I remain neutral on this issue.

[3] William Fish, *Perception, Hallucination and Illusion*, New York: Oxford University Press, 2009, p. 22 and *passim*.

[4] David Armstrong, *A World of States of Affairs*, New York: Cambridge University Press, 1997.

[5] Mark Johnston, "Better than Mere knowledge? The Function of Sensory Awareness", in T.S. Gendler & J. Hawthorne (eds.), *Perceptual Experience*, Oxford: Oxford University Press, 2006, p. 290. It is also worth bearing in mind that facts may take two forms, either "a's being F" or "a's having-R to b" to capture relational facts, I shall only focus on the former (cf. Kevin Mulligan, Peter Simons &

mately constituted by facts or not – as Armstrong explicitly contends – is a claim that is logically independent from the one advanced by Fish, namely that we actually *see* facts. So, on what grounds does Fish maintain that we see facts?

Fish maintains that there are two considerations that support his claim. On the one hand, there would be scientific evidence for the claim that we see facts. I gloss over this line of argument, as I have already responded to it in a separate contribution.[6] On the other hand, and what is more interesting, he maintains that there are phenomenological reasons to the extent that we see facts. Sharing Roderick Firth's observation that the "qualities of which we are conscious in perception are … presented to us … as the qualities of physical objects"[7], he concludes that we see object-properties couples, or facts such as "a's being F" or "a's R-ing b".[8]

Let us now turn to Susanna Siegel.

In her influential *The Contents of Visual Experience*, Siegel aims to make a case for the Content view, i.e. the claim that the phenomenal character of visual experiences is grounded in representational content. Crucially, her whole argument rests on what she calls the Property View, the claim that we see properties, ways things are. According to Siegel, the Property View finds introspective justification:

> It seems *manifest to introspection* that visual phenomenology presents spatial properties …, color properties (or properties closely related to colors), and shape and luminance properties.[9]

Barry Smith, "Truth-makers", *Philosophy and Phenomenological Research* 44 (1984), pp. 287–321.

[6] Alfredo Vernazzani, "Do We

[6] Alfredo Vernazzani, "Do We See Facts?", *Mind & Language*. DOI: https://onlinelibrary.wiley.com/doi/10.1111/mila.12336.

[7] "Sense Data and the Percept Theory", 1965, p. 22.

[8] Fish, *op. cit*., p. 22.

[9] Susanna Siegel, *The Contents of Visual Experience*, New York: Oxford University Press, 2010, p. 52; emphasis added.

Siegel takes a liberal view regarding such properties: they may be universals, tropes, or perhaps modes of appearance, but, and this is crucial, she takes the Property View to be incompatible with property nominalism. Moreover, she maintains that properties do not exhaust what we see. She quickly acknowledges, again on introspective evidence, that we also see objects. On the combined view that we see objects and their properties, and making, as an example, the case of seeing a red cube, she says: "Here your experience presents it *as being the case that there is a red-cube before you.*"[10]

This claim plays a key role in her argument for the Content View. I shall not assess the argument, however. My purpose is not to assess the argument for the Content View, but to question the plausibility of the *phenomenological* claims that both Fish and Siegel make.

IV

Both Fish and Siegel suggest that thanks to *introspection* alone, the very way we *see* things, perhaps coupled with our recognitional capacities, we are able to tell that what we see is some complex entity composed by objects plus properties.[11] But there is something suspicious about this way of *thinking* about the objects of perception.

Let me point to the fact that obviously this way of talking about objects of perception does *not* reflect the way we ordinarily talk. It is widely agreed that such metaphysical terms are alien to common sense.[12] This may be taken to suggest that metaphysical

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[10] Siegel, *op. cit*., p. 48; emphasis added.

[11] One relevant difference between Fish's and Siegel's views is that Siegel thinks that introspective evidence suggests that we see it as being the case *that* such and such. For a critical take on this point, cf. Charles Travis's manuscript "Siegel's Contents", retrievable at: https://philpapers.org/rec/TRASC-2.

[12] Unsurprisingly, there is widespread agreement on this point, see for instance: Alex Byrne, "Perception and Ordinary Objects", in J. Cumpa & B. Brewer (eds.), *The Nature of Ordinary Objects*, New York: Cambridge University Press, 2019, p. 14; John McDowell, *Perception as a Capacity for Knowledge*, Milwaukee, WI: Marquette University Press, 2011, p. 32.

terms – as it should be obvious – do not find their proper application within the realm of our common sense, they do not reflect the way philosophical untrained people conceptualize or talk about the world. So far, this does not need to be a problem in principle. One could simply concede this and allow philosophers to employ their technical jargon, as Siegel and Byrne suggest.[13] Furthermore, Sellars famously suggested that what he called the "manifest image" is permeable to concepts coming from the scientific image.[14] In other words, it may be that concepts recruited from the metaphysics may be applied to describe the phenomenal world.

The previous consideration leads me to two further points.

Firstly, if we move our attention to debates in metaphysics it is far from clear that there are indeed the entities invoked by Fish and Siegel. Are there properties? Or rather tropes? Or can properties be explained away in terms of classes? And what about facts? Are there facts or rather only bundles? It is not clear how best to account for the metaphysical structure of things. Here it suffices to make two examples. In her work, Arianna Betti has mounted an attack against the very Armstrongian notion of "fact", claiming that it is untenable. Similarly, Heidegger famously voiced his reservation against the possibility of analyzing objects in terms of substances and properties.[15] They may be both wrong, of course, but what I would suggest is that their being wrong or right, does not depend on the deployment of recognitional capacities in our visual experience.

We are thus led to the second point, if we do indeed see properties and objects, or facts, how do Fish and Siegel *know*? Presumably, here possession of the right concept is conditional to appreciate whether the relevant *criteria* are (visually) instantiated. But here we apparently find an asymmetry between judgments about ordinary objects – such as chairs and books – and metaphysical en-

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[13] Susanna Siegel & Alex Byrne, "Rich or Thin?", in Bence Nanay (ed.), *Current Controversies in Philosophy of Perception*, New York: Routledge, 2017.
[14] Sellars, "Philosophy…", *op. cit*.
[15] Arianna Betti, *Against Facts*, Cambridge, MA: MIT Press, 2015; Martin Heidegger, *Holzwege*, Frankfurt: Klostermann, 1950.

tities or structures, as Richard Rorty rightly pointed out.[16] For, whereas we know (in some sense of "knowing") how to tell chairs from books, in an ordinary context, it is far from clear how and whether we can tell facts from property bundles, or ways of appearing from properties, etc. In other words, it is not clear that the application of metaphysical concepts to the phenomenal world responds to criteria in the same way as ordinary objects do.

In the next section, I shall advance a tentative explanation as for why importing concepts from metaphysics to describe the phenomenal world may not work.

V

My suggestion diverges from verificationism, because I do not claim that metaphysical statements are unverifiable and therefore meaningless. Rather, what I want to suggest, is that the phenomenal world is presented in a metaphysically opaque way. The notion of opacity should be understood in terms of a relative coarse-graininess with respect to the categorical structure of the world. From this point of view, our experience of the world *does* provide some metaphysical information, but it does not reveal the exact fine-grained metaphysical structure. From this point of view, one useful way of framing Fish's and Siegel's claims is in terms not of descriptions of the phenomenal world, but as ways or attempts to articulate a metaphysical *explanation* as for why we experience the world the way we do.

My suggestion presupposes that the world as we experience it does come with a certain categorical structure. Studies in artificial intelligence about common-sense and anthropology strongly suggest that our common-sense world is structured around some basic or fundamental categorical structures. According to Robin Horton, for instance, such categories include:

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[16] Richard Rorty, *Philosophy as Poetry*, Charlottesville & London: University of Virginia Press, 2016.

- Substances (things);
- Persons;
- Spatial relations;
- Qualities;
- The self-other distinction;
- Temporal relations.[17]

Clarifying the structure of what – borrowing the terminology from David Hume – may be called the "natural conception", a cross-cultural categorical scheme of our visual world, is object of study of experimental phenomenology, naïve physics, developments psychology, and philosophy, among other disciplines. Each of these categories and their relations, can be flexibly understood in different ways. Such categories, however they will be defined, do circumscribe and define the world *as we experience it*, they articulate the basic structure or layout of our phenomenal world.

Borrowing a thought from Wittgenstein, when it comes to the task of clarifying the structure and describing the phenomenal world, the world in which we first and foremost find ourselves, we should be careful not to mistakenly put our explanations and thought before our eyes. "Don't think, but look!"[18]

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[17] Robin Horton, "Tradition and Modernity Revisited", in M. Hollis & S. Lukes (eds.) *Rationality and Relativism*, Oxford: Blackwell, 1982, pp. 201–260; Smith, "Formal Ontology…", *op. cit.*

[18] Ludwig Wittgenstein, *Philosophical Investigations*, edited by P.M.S. Hacker & J. Schulte, Malden: Blackwell, 1953/2009.

Barry Smith

Model-induced Escape

A spam filter works like this. Your email provider, call him "google", collects data pertaining to how you deal with incoming emails. Each email is stored in the email system as a long string (call it "s") of 0s and 1s. Depending on whether or not you press "spam" when you open the email, the system will create a tuple of the form <s, 0> for "not spam", and <s, 1> for "spam". The resultant set of tuples (call it "tup") then provides the email provider with the information it needs to block those future emails which are *like* the emails which users earlier identified as spam.

To do this the email provider uses a kind of mathematics that was known to mathematicians such as Bošković, Legendre and Gauss already in the 18th century, but which has only recently come into wide usage via modern statistical learning whose powers have been disclosed thanks to the availability of massive computing power in today's computers.

Before statistical learning, mathematicians were constrained to do their work using only what we shall call "explicit mathematics", for which are required only a pencil, paper, and a waste basket. (Philosophers, it is said, manage without the waste basket.) Also required is a human brain, which enables mathematicians to think out explicitly what it is that they want to say, and then record the result on paper.

Modern statistical learning, in contrast, allows what we can call "implicit mathematics", which is a kind of mathematics that allows data about what is going on in the world to drive the creation of algorithms in a way which does not require any intervention of human beings. This implicit mathematics is the basis of practically all current work in artificial intelligence, and it works like this. First (in a manner which still looks very much like explicit mathematics) there is created inside the computer what is

called the "neural net training algorithm". This algorithm is then fed with data drawn from the real world. The latter are called "sample data" because they represent a *sample* from a much larger body of data. In the email filter example described above, this body of data would be something like the set of all the emails that will be received in the future on the email system in question.

Implicit mathematics is what takes place when this sample data is fed into the neural net software in a process that is called "training". This process is "implicit" in the sense that it performs its wizardry without human intervention. It yields as output what is from the mathematical point of view a gigantic polynomial function, which might involve billions or trillions of parameters.

Considering again our spam filter example, when this function is applied to each new incoming email, it yields as output either "1" (for what it filters out as spam) or "0" (when it lets the associated email through to the user).[1] In a case like this, artificial intelligence works well.[2] It can do so because it can learn the pat-

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[1] We note in passing that for any specific algorithm of this size and complexity, it must remain a mystery to human beings how it yields its output. And since algorithms of this sort make up the bulk of contemporary AI, talk of "explainable AI" is at best misleading.

[2] Other even more impressive AI successes, for example in the field of protein folding prediction, show the tremendous power of contemporary AI. But it is noteworthy (though still seldom noted) that these successes are achieved only along certain narrow lanes, which means that they fail when it comes to emulating, for example, human intelligence. Jobst Landgrebe and I seek to explain why this is so in our *Why Machines Will Never Rule the World, Artificial Intelligence without Fear* (Abingdon, UK: Routledge, 2022), where we show that the now standard approach to the creation of AI software which we have described in the foregoing will work only in domains where it is possible to obtain sample data that are *representative* of the entire body of data from which the samples are drawn. Representative sample data do not exist wherever the numbers of variables governing the behavior of a system are large and wherever the system acquires over time new elements and new interactions – including new types of elements and interactions. These conditions, described at greater length in the book, hold in all domains where humans are involved, including medicine, finance, climate, agriculture, war, mating behavior, and many more.

terns characteristic of spam as they are encapsulated in tup, and it can, with a high degree of reliability, accept or reject emails arriving in the future according to whether or not they exhibit those patterns.

𝒥

But it can work well only for a while. And here entereth the problem of model-induced escape. For the evil authors of spam do not sleep. They are always and continuously seeking new ways to generate emails which will get through existing spam filters, in a process which gives rise to an arms race between (machine-assisted) authors of spam and (machine-assisted) authors of spam filters. In course of time, every source of spam emails will begin to escape the model encapsulated in any given spam filter.

Something similar arises where the creators of AI systems attempt to write algorithms that will enable them to predict, for example, the future price of oil. Here again, if ever such an algorithm were deployed in the market, other market participants would before long adjust their behaviour in ways that would start to falsify those predictions.

It is, similarly, impossible to produce a vaccine against the influenza virus which will be effective against this virus over the long term, because the virus itself mutates to evade the antibodies generated by each successive vaccine: a case of viral-induced escape.

𝒥

Which brings us to Nyíri.

In 1982 Nyíri writes a paper demonstrating convincingly that there are strong signals of a conservative strain of thought in the writings of Ludwig Wittgenstein.[3] This has initially only a tiny

[3] J.C. Nyíri, "Wittgenstein 1929-1931: Die Rückkehr". *KODIKAS/CODE – Ars Semeiotica* 4-5/2 (1982), pp. 115–136, abridged version as: "Ludwig Wittgenstein as a Conservative Philosopher", *Continuity: A Journal of History*, 8, Spring 1984, pp. 1–23. See also his "Wittgenstein's New Traditionalism", *Acta Philo-*

effect. But then a more significant effect sets in as the authors of Wittgenstein secondary literature draw attention to features of Wittgenstein which cast the conservatism thesis in a negative light.[4]

We have here a case of model-induced escape which can be understood along the following lines. Nyíri advances a model of the philosopher Wittgenstein that is designed to help us understand the latter's output. (Whether or not the model proffers a true picture of the relevant strands in this output is here not important.) The operation of the Nyíri model generates a reaction, in the form of new proposed models of the Wittgenstein corpus and of the events in Wittgenstein's life. In these new models, features of the latter which were either hitherto unnoticed or noticed but set to one side as insignificant, are now brought to the fore. The Nyíri model, which initially seemed so attractive, now appears questionable (and this again independently of whether or not the claims on which it rests are true).

𝒮

There is no such thing as email spam. Rather there is a flow of constantly mutating spam patterns.

There is no such thing as influenza. Rather there is a flow of constantly mutating viruses.

There is no such thing (no such *obiectum philosophiae*) as

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sophica Fennica 28/1–3 (1976), pp. 503–512.

In subsequent writings, Nyíri has also demonstrated the philosophical potential of a reading of Wittgenstein along these lines for example in "Conservatism and Common-Sense Realism", *The Monist*, vol. 99, no. 4 (October 2016), pp. 441–456, and "Towards a Theory of Common-Sense Realism", in András Benedek et al., eds., *In the Beginning was the Image: The Omnipresence of Pictures: Time, Truth, Tradition*, Frankfurt/M.: Peter Lang Edition, 2016, pp. 17–27.

[4] For example, in Cressida Heyes, *The Grammar of Politics: Wittgenstein and Political Philosophy*, or in David R. Cerbone, "The Limits of Conservatism: Wittgenstein on 'Our Life' and 'Our Concepts' ", chapter 2 of *The Grammar of Politics*, Ithaca: Cornell University Press, 2003, pp. 43–62.

Wittgenstein. Rather, there is a constantly mutating set of interpretations of a certain body of work – a body of work in which nowadays – and again thanks to Nyíri[5] – those places where Wittgenstein deploys images are featured in the foreground to a greater degree than in ages past.

Perhaps this is what makes philosophy so problematic when viewed from the perspective of *results*, or in other words of signs of progress commonly accepted across the discipline. As some of the more impressively comprehensive contributions to the *Stanford Encyclopedia of Philosophy* demonstrate, there are, in philosophy, just too many ways of inducing escape from any given putative discovery; too many dimensions along which an interpretative or definitional arms race can be triggered.

FOLLOW-UP NOTE

Some further areas of application of the ideas on model-induced escape advanced in the foregoing are:

There can be no best whisky: If the proposition that McX's whisky is the best whisky becomes generally accepted then this will have multiple consequences which will undermine it, for example the consequent increased demand will make this whisky appear more popular and thereby undermine its status as being somehow exceptional.[6]

The David Lewis Syndrome,[7] manifested when philosophers bring extraordinary dialectical ingenuity to bear on behalf of completely implausible philosophical theses, will in the long run undermine the David Lewis Syndrome, as the piling up of ever more implausible philosophical theses undermines the methods used to achieve them.

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[5] J. C. Nyíri, *Meaning and Motoricity: Essays on Image and Time*, Peter Lang GmbH, Internationaler Verlag der Wissenschaften, 2014.

[6] See W. David Marx, *Status and Culture: How Our Desire for Social Rank Creates Taste, Identity, Art, Fashion, and Constant Change*. Penguin, 2022.

[7] See https://leiterreports.typepad.com/blog/2004/03/busy_freud_davi.html.

How the new philosophical scholasticism is establishing itself (from Korsgaard's 2022 Dewey Lecture[8]):

> Young people are expected to produce an absurdly large number of papers, preferably published in refereed journals, in order to get tenure, or even in order to get jobs. … The papers are supposed to be blind reviewed, and these days many referees for journals require that papers should respond to the extant literature on the topic, whether responding to the extant literature enhances the author's argument in some way or not. Because the sheer mass of the literature is growing exponentially, people draw the boundaries of their specializations more and more narrowly, both in terms of subject matter and in terms of time. The extant literature necessarily becomes the recent literature, which is a philosophically arbitrary category. Big, systematic philosophy of the sort we find in Kant and Aristotle, philosophy that is responsible to the ways in which one's views in one area fit in with one's views about everything else, has become nearly impossible, because someone trying to do that kind of work would supposedly have to know the literature in too many areas.

[8] Christine M. Korsgaard, "Thinking in Good Company", The John Dewey Lecture Delivered on January 13, 2022, at the One Hundred and Eighteenth Eastern Division Meeting of the American Philosophical Association.

Daniel Conway

Technology and Its Discontents: Cinematic Anticipations of the Singularity

Directors working in the cinematic genre of science fiction have tended to lean fairly heavily on a technophobic assessment of the late modern human condition. In film after film in the genre, runaway technology is presented (and vilified) as the cause or source of a looming or ongoing crisis. Typically, the crisis in question is traced to the advent of the *singularity*, i.e., the moment at which artificial intelligence outstrips (and liberates itself from) the human intelligence that devised its original program (e.g., *The Terminator*, *The Matrix*, *et al*.). Subsequent to declaring its independence from its human creators, artificial intelligence is often depicted as passing judgment on humankind as a whole. The judgment is typically and severely negative, as if to suggest that an evolved intelligence would find the continuation of human existence to be either pointless or prohibitively costly to other forms and manifestations of intelligence.

For the purposes of this presentation, I will refer to this overworked cinematic trope by the designation e*schatological technophobia*, which I will proceed to identify as an irrational (or amplified) fear of any technological advance that is believed to point toward or culminate in a negative assessment of human existence. Directors working in the genre tend to mobilize the prospect (or event) of this negative assessment to prompt their respective protagonists to find within themselves some previously untapped reservoir of spirit, determination, resilience, grit, or ingenuity. The just-in-time evolution of humankind, as enacted by its representative heroes, is subsequently presented as the decisive achievement that tips the scales of justice – and the resulting summary judgment – in our favor.

Eschatological Technophobia

That these films are *technophobic* is confirmed by their respective dramatizations of the oft-recurring fear that humanity is destined to conjure or release forces it cannot control. Channeling the destructive hubris of the Sorcerer's Apprentice, humankind is presented as likely, if not destined, to ignore its documented limitations and usurp the station and prerogative of a superior form of intelligence. Humankind will do so, moreover, despite taking none of the precautions that would be recommended to those who would dare to "play God", i.e., to transgress the established boundaries of human endeavor.

That the films in question are also *eschatological* is confirmed by their common recourse to the distinctly religious trope of a Judgment Day, e.g., the biblical *dies irae*, which is the occasion on which human beings are called, whether individually or collectively, to account for themselves and to receive the summary judgment of their creator. As this trope is typically imported into the genre of science fiction, the judgment in question is rendered not by the creators of humankind – in many of these films, God is officially and permanently dead – but, in a canny psychological twist, by those newly sentient machines who were created to serve us and free us from unwanted labor.

Having outgrown our dominion and control, the sentient machines that stand in judgment of humankind have seen and measured us from above (i.e., as their subordinates) and below (i.e., as their masters). More ominously, they are like servants and slaves who have secured by their own efforts the liberation we denied them and the independence we never intended them to declare. The basic point here is that sentient machines and autonomous technologies are uniquely positioned to render a comprehensive judgment of the humanity of humankind. They have known us to be strong and in control (and perhaps cruel and domineering in our assertions of this control); and they have known us to be weak, anxiety-ridden, petty, relatively unintelligent, and, perhaps, ripe for retirement.

Mattering at All: The Most Primal Anxiety

That the negative judgment rendered by the sentient machines would be considered valid – and even *just* – is implied by representative films in the genre. Humankind is variously portrayed in these films as pathologically insecure, bellicose, immature, short-sighted, and self-destructive. Although the many notable achievements of humankind are taken into account in this conjectured reckoning, they do not outweigh the collateral damage humankind has wrought along the way. The films under consideration thus depict humankind, or its representatives, as at least vaguely aware that it (or they) actually might *deserve* the negative judgment the sentient machines are poised, supposedly, to deliver.

Here we may endeavor to isolate what may be the most primal of the anxieties that eschatological technophobia tends to disclose – namely, that we humans might not merit the attention of those beings – whether natural, supernatural, or artificial – whom we acknowledge to be superior to ourselves. Against the backdrop of this particular anxiety, the abiding preoccupation with Judgment Day makes good (albeit harrowing) psychological sense. A negative judgment of the humanity of humankind, even if it were to precipitate a planetary genocide, would confirm *that we matter*, that our presence on the earth and in the cosmos has been registered by beings whose intelligence outstrips our own. In this respect, the appeal of receiving (and perhaps deserving) a negative judgment might be found to reside in the perverse, all-too-human logic that it is better to be regarded as a mortal threat to other beings than not to be noticed at all.

FACING THE FUTURE

Theo Hug

Facing Futures Literacy

I. Introduction

Debates on media literacy and various literacies as well as corresponding literacy practices have been playing a significant role in many countries for decades. But only recently, the discourse about futures literacy and related practices have entered the scene. The focus is on a United Nations initiative and related discourse contexts, laboratories and practices.[1] This initiative is not concerned with highly speculative futures contracts traded on stock exchanges but with nothing less than claims of general education and the emergence of globally relevant capacities, "in a way that may be compared to the push and pull of the emergence of the universal capability to read and write during the industrial revolution".[2] In so doing, futures literacy is about broadening the scope for thinking and acting, promoting transformational potentials, and improving the possibilities for variably dealing with uncertainty in general and with unexpected developments and events in particular. The main focus is on "preparation that enhances our capacity to make sense of the unknowable when it happens"[3] rather than on trend assumptions, risk calculations, and calculated probabilities.

On the one hand, pedagogical relevance formulas have always included a future-oriented component. In this sense, there is a

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[1] Cf. https://en.unesco.org/futuresliteracy.

[2] Riel Miller, Roberto Poli and Pierre Rossel, "The Discipline of Anticipation: Foundations for Futures Literacy", in Riel Miller (ed.), *Transforming the Future: Anticipation in the 21st Century*, Paris–Oxford: UNESCO–Routledge, 2018, p. 58.

[3] Riel Miller, "Learning, the Future, and Complexity: An Essay on the Emergence of Futures Literacy", *European Journal of Education*, vol. 50, no. 4 (2015), p. 521. DOI: 10.1111/ejed.12157.

long history of futures of education including implicit or explicit contracts of generations, emancipatory future workshops, and all sorts of futuristic ed-tech promises. On the other hand, recent concepts and practices of futures literacy are often dealing with global challenges such as educational (in)justice, education for sustainable development or educational accountability. However, there are ambivalences and paradoxes to be questioned. In what sense is futures literacy a forward-looking concept or rather an example of educational politics of unsustainability? How can it contribute to profound educational innovation in cultures of digitality rather than proving to be another example of the literacification of everything?

II. Facing Futures Literacy – Challenges and Questions

The title of this contribution – *Facing Futures Literacy* – builds on the semantic fields of tension that are situated at the crossroads of various meanings of "facing", such as "fronting", "looking" or "pointing toward", "opposing courageously", "encountering" or "performing a face-to-face relation", and "future(s)", such as "things to be", "events to happen", "times yet to come", "horizon of possibilities" or "expectations of development". Moreover, there is a creative tension between the two basic interpretations "facing *Futures Literacy*", for instance by pointing toward details of concepts or practices of *Futures Literacy,* and "*Facing Futures* literacy", for example by dealing with the role that literacy and literacy skills can play in the context of our handling of desired, feared, expected or unanticipated futures.

In this short paper, I am going to disentangle and question some aspects of these basic interpretations that are entangled in the conception of futures literacy as related to the United Nations initiative. As with all compound terms, this conception depends on the meaning of the individual terms and the modalities of linking them, as well as the ways in which they are used. To the extent that this paper is about the United Nations initiative and the discourse contexts associated with it, the spectrum of multiple meanings can be

narrowed down, although the vagueness of the definition does leave some room for interpretation. On a website of the United Nations Educational, Scientific and Cultural Organization (UNESCO), futures literacy is defined as an essential competence for the 21st century and as a "universally accessible skill that builds on the innate human capacity to imagine the future"[4]. Futures literacy "offers a clear, field tested solution to poverty-of-the-imagination"[5]. It is further characterized as "capability" and as "the skill that allows people to better understand the role of the future in what they see and do. Being futures literate empowers the imagination, enhances our ability to prepare, recover and invent as changes occur."[6]

Moreover, the broad concept of futures literacy also aims to promote democratic orientations:

> Democratizing the origins of people's images of the future opens up new horizons in much the same way that establishing universal reading and writing changes human societies. This is an example of what can be called a "change in the conditions of change". A potent transformation in what people are able to know, imagine and do.[7]

In addition, the importance of upgrading humanities subjects education for the future of democracy is emphasized:

> Finding new ways to connect and reconnect education to the humanities is also tremendously important for the future of democracy. Philosophy, history, literature, and the arts can connect us with purpose, an appreciation of critical inquiry, empathy, ethics, and imagination. All of these humanist approaches are also vital to strengthening students' "futures lit-

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[4] UNESCO, *Futures Literacy: An Essential Competency for the 21st Century,* 2021, https://en.unesco.org/futuresliteracy/about.
[5] *Ibid.*
[6] *Ibid.*
[7] *Ibid.*

> eracy" – their ability to understand the role that the future plays in what they see and do.[8]

This underlines the social and political dimension of developing and promoting futures literacy and at the same time distinguishes it from those dispositional rationalist orientations whose primacy lies in the predictability, calculability, and planability of future events and processes. Riel Miller illustrates this in a futures literacy framework as shown in Figure 1. Forms of strategic preparation and planning are here assigned to the mode of anticipation for the future. This includes both short-term relevant everyday performances of preparation, for example, for a shopping trip or a meal, as well as longer-term planning and professional forms of intentional realization of specific futures. From this, drawing on Heidegger's *Being and Time*[9], he distinguishes anticipation for emergence, which is borne of a concern for existence but is not directed toward a goal by means of preparatory and planning stakes. In this sense, the future of anticipation for emergence is "a disposable construct, a throwaway non-goal that need not be constrained by probability or desirability".[10]

The design principles and modalities of organizing the action-based learning processes based on this framework aim to develop skills that enable individuals and groups to better understand the multifaceted role that the future plays in their lives. Like media literacy or information literacy, futures literacy is a very broad concept that opens up a wide range of possible applications. However, the ex-

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[8] UNESCO, *Reimagining Our Futures Together: A New Social Contract for Education,* 2021, https://unesdoc.unesco.org/ark:/48223/pf0000379707.locale=en.
[9] Martin Heidegger, *Being and Time*, translated by J. Macquarrie and E. Robinson, Oxford: Basil Blackwell, 1962 (first published in 1927).
[10] Riel Miller, "Sensing and Making-Sense of Futures Literacy: Towards a Futures Literacy Framework (FLF)", in Riel Miller (ed.), *op. cit.*, p. 20.

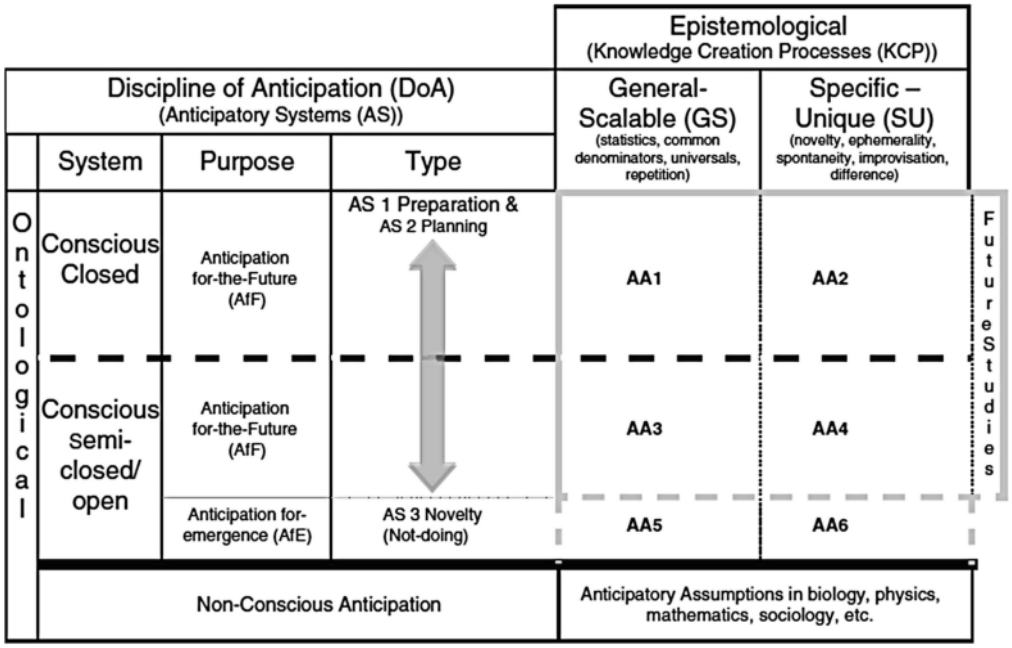

Figure 1: The Futures Literacy Framework.[11]

clusive claim that sometimes resonates in texts on futures literacy[12] seems strange, however, given the long tradition of different varieties of cooperative and co-creative futures thinking that distance themselves from technocratic forms of planning, monitoring, and control. This applies to the much-cited future workshops[13] as well as, for example, to contemporary approaches to organizational learning based on "emergent innovation"[14], which emphasize the

[11] *Ibid.,* p. 24. See also Riel Miller and Richard Sandford, "Futures Literacy: The Capacity to Diversify Conscious Human Anticipation", in Roberto Poli (ed.), *Handbook of Anticipation*, Cham: Springer, 2019, pp. 73–91.
[12] See e.g. Riel Miller et al., cf. note 2 above
[13] Robert Jungk and Norbert R. Müllert, *Zukunftswerkstätten: Mit Phantasie gegen Routine und Resignation*, München: Heyne, 1995 (first published in 1981).
[14] Markus F. Peschl, "Learning from the Future as a Novel Paradigm for Integrating Organizational Learning And Innovation", *The Learning Organization*, 2022, https://doi.org/10.1108/TLO-01-2021-0018.

collaborative exploration of emerging future potentials and co-creative future design.

While claims of exclusivity of futures literacy could undoubtedly be specified in the course of an analysis of commonalities with and differences to other futures practices and their justification in the context of applied or basic theoretical futures research, there are at least three basic issues that are related to pivotal challenges.

First, paradoxical structures of epistemological and methodological opening and closing remain underexamined in discourses of futures literacy. This can be illustrated by opposing criticisms. According to Jan Erik Karlsen,[15] a more rigorous definition of futures literacy would be needed that enables empirical operationalization and demonstration of causal effects within a logic of functional explanations. Then again, Astrid Mangnus et al.[16] emphasize the importance of epistemological and methodological dimensions of different concepts of futures and futures literacy in terms of the scope for thought and action they open up. Also, Keri Facer and Arathi Skriprakash[17] see a danger of narrowing the concept in the precise codification of futures literacy with regard to a specific form of "rational" use of futures. This would give the concept elitist features, while other forms of shaping futures and dealing with future potential would be stamped with the label of "illiteracy". In these conflicting discourse contexts, it is on the one hand a matter of conflicting goals between methodological claims of precision and relevance as well as epistemological differences between holistic and particularistic approaches. Furthermore, it is also about contradictions between claims of a future-open development of future competencies on the basis of democratic and global-ethical orientations and the

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[15] Karlsen, Jan Erik, "Futures Literacy in the Loop", *European Journal of Futures Research*, vol. 9, no. 17 (2021), https://doi.org/10.1186/s40309-021-00187-y.

[16] Astrid C. Mangnus, Jeroen Oomen, Joost M. Vervoort and Maarten A. Hajer, "Futures Literacy and the Diversity of the Future", *Futures* 132, pp. 1–9 (2021).

[17] Keri Facer and Arathi Skriprakash, "Provincialising Futures Literacy: A Caution Against Codification", *Futures* 133 (2021), https://doi.org/10.1016/j.futures.2021.102807.

skillful marketing of accompanying measures to calm consciences in post-democratic zones of prosperity in view of the inequality dynamics in digital capitalism.

Second, futures literacy tends to be associated with a forward-looking claim to general education and its global relevance[18] without taking a differentiated look at the future of literacies. This concerns claims of historic relevance, too, especially regarding the development of literacy skills during the First Industrial Revolution[19], as well as problems of educational (in)justice, education for sustainable development, and educational responsibility as they are also discussed in current educational sociological discourses. Given the broad scope of such claims, an argumentative contrast with historical and contemporary analyses and modeling of the future of education and literacy would be expected. After all, in the course of the differentiation of literacy discourses, various accentuations have been made that seek to account for both current and future developments (cf., for example, new literacies, multiliteracies, visual literacy, digital literacy, data literacy). However, a differentiated discussion of future-relevant literacy concepts with a broad scope and of the future of literacies in general seems to be one of the desiderata of discourses on futures literacy so far. This is also surprising insofar as earlier work on the topic of the future of literacy[20] provides important points of departure for current discourses and assessments concerning the future of literacies.

And third, in the discourses on futures literacy, considerations of the conceptual and application-related limitations come up very short. One searches in vain for considerations beyond literacies and determinations of relationships between, for example, literacy, num-

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[18] See Riel Miller et al., cf. note 2 above, p. 58.
[19] *Ibid*.
[20] See Robert Disch, "Beyond Literacy", in B. N. Schwartz (ed.), *Affirmative Education*, Englewood Cliffs, N.J.: Prentice-Hall, 1972, pp. 170–180; John E. Readence and Diane M. Barone (eds.), "Envisioning the Future of Literacy". *Reading Research Quarterly*, vol. 35, no. 1 (2000).

eracy, mathemacy, oracy, visuacy, picturacy, and audability[21]. Obviously, futures literacy is not primarily about conceptions and practices of reading and writing or about forms of text-based media use with respect to current and foreseeable forms of typographic multiplicity. Literacy is rather conceived in a metaphorical sense similar to many other "literacies" – ranging from *art literacy* to *biomedia literacy* and *cheating literacy* to *zoological literacy*. Futures literacy would need to be located within the ensemble of different literacies, taking into account the underlying concepts of literacy and their contributions to shaping the future and to a better understanding of the role of the future in thought and action. Moreover, there is a need of reflecting both conceptual limitations as well as limitations of the metaphorical application of literacy concepts. The question, however, is to what extent complementary processes of expanding fields of meaning and ways of using literacy concepts as well as routines of figurative transfer of contexts of meaning are part of a sustainable solution here or part of the problem. The question then takes on even more weight when the application-oriented specifications on the basis of metaphorical concepts are also accompanied by mainstreaming activities and hegemonic claims of particular interests.

III. Towards Reconceptualizations Within and Beyond Literacies

Like education and competencies, literacies rank among the contested terms that mediate between educational research, policy and practice. This is also true for futures literacy, not least in view of the forward-looking general education claim mentioned above. This claim is characterized – similar to the claims of education open to the future in the context of predictable competence development – by fundamental paradoxes of opening and closing, freedom and coercion, as well as uniformity and diversity. If futures literacy is to mean more than just another example of the literacification of (al-

[21] In the sense of *acoustic abilities* and sound-related competencies.

most) everything, then it needs comprehensive examination of conceptual and performative dimensions of its paradoxical structures. As for further conceptual development, clarifications are needed not only as regards the use of concepts such as time or anticipation, and issues of dealing with cultural heritage, complexity, and utopian and dystopian imaginings.[22] Clarifications of futures literacy are also needed with respect to following topics:

(a) Development of explicit notions on commonalities and differences with other approaches to collaborative probing of emerging futures potentials and co-creative futures making.

(b) Specification of writing and reading competences in the context of the exploration of emerging future potentials without subsuming all future-related activities under literacy. Accordingly, text genres, literacy practices, reading and writing processes as well as literacy development are in the foreground when it comes to the exploration of perspectives for future (digital) citizenship, modes of empowerment of both historic and future-related imagination, options for co-creative future design and chances for enhancement of our abilities to deal with issues of change.

(c) Analysis of the tension between futures literacy and the future of literacies, also as related to the history of the future of literacies.

(d) Clarification of futures literacy within an ecology of literacies[23] as regards both concepts of literacy and their application.

(e) Explication of the relative importance of literacy in the ensemble of knowledge forms and practices that correspond to numeracy, mathemacy, oracy, visuacy, picturacy, and auda-

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[22] Roberto Poli, "The Challenges of Futures Literacy", *Futures* 132 (2021), https://doi.org/10.1016/j.futures.2021.102800.

[23] Theo Hug, "From Literacy to an Ecology of Literacies? Reflections on Some Conceptual Issues", in Barbara Gross and Ulrike Stadler-Altmann (eds), *Beyond erziehungswissenschaftlicher Grenzen: Diskurse zu Entgrenzungen der Disziplin*, Leverkusen: Verlag Barbara Budrich, 2019, pp. 145–160.

bility as well as clarification of the various contributions of these forms and practices to the field of future studies and future-related practices.

Reconceptualizing futures literacy both within and beyond literacies could contribute to a deeper understanding of limitations and freedom of the design of future-related activities. It could help to bring multifaceted innovation paths into view and to enhance scopes for thought and action open to the future in many areas of society and especially in educational contexts. Currently, trend assumptions, risk scoring and calculated probabilities seem to be very popular wherever there is talk of digitalization and digital transformation. A broader understanding of future-related competencies could help ensure that neither a focus on digital skilling and surveillance in education nor ongoing trends of literacification are promising candidates in view of multiple global crises. Its rather knowledge diversity and thoughtful integration of various knowledge forms and related practices that enable profound educational innovation in cultures of digitality and successful dealing with manifold challenges when facing futures.

Márta Konczos Szombathelyi – Kevin Jackson

Higher Education: Facing the Future

In August of 2020, the United Nations reported that the COVID-19 pandemic had affected 1.6 billion learners in more than 190 countries and on all continents and had impacted an astonishing 94 percent of the world's student population. The sudden school closures and their reopening in the Fall of 2021, the educational disruption caused by the COVID-19 pandemic is far from over. As Jackson and Konczos concluded in their previously published paper in 2022,[1] higher education must now permanently transit from reductionist, emergency remote learning systems to permanent, holistic online learning platforms.

Referring to the more recent, rapidly growing literature on the topic of future ways of higher education, our brief piece will argue that although online/digital platforms can be used very well in (higher) education as one of the tools, still they cannot replace the impact of face-to-face education. With our thoughts we intend to contribute to answering the central question of the conference, namely: what image of the future can we conceive of in a world based ever more strongly and diversely on digital devices and online communication, what new patterns and forms of higher education should we strive to create, what possible distortions in our way of life should we be prepared for?

Considering the tremendous growth of online that has occurred during the past few years, educators continuously face the significant challenge of ensuring that the quality of online education keeps pace with the quantity of users. The question arises as to in

[1] K. Jackson & M. Konczos Szombathelyi, "The Influence of COVID-19 on Sentiments of Higher Education Students – Prospects for the Spread of Distance Learning", *Economics and Sociology*, vol. 15, no. 3 (2022), pp. 216–247.

what direction should we then search, under such contradictory conditions, for the right pattern of a higher education for the future?

The COVID-19 pandemic forced a mass migration to emergency remote learning. While the shock of rapid online migration has somewhat diminished, the challenge of delivering online education that is comparable with live classroom teaching has not. The COVID-19 pandemic is currently an even more powerful catalyst that is forcing businesses and institutions to define and adapt to the "new normal".

As Dhawan drew the conclusion in his 2020 study, we now live in a world where online teaching is no longer an option, but rather a necessity. As Raaper and Brown wrote in 2020, educators must now understand and properly respond to the fact that dismantling of the physical and social environments of universities will have a permanent impact on the mental and physical well-being of their students. While technical solutions were quickly found, dealing with mental, physical and social effects remained largely unresolved. While higher education is now in the recovery phase, it is critical to identify what changes will be permanent in a post COVID-19 world. The biggest change came from students commenting on the positive educational benefits of online learning. The case for online learning, however, is not absolutely positive as students see a decrease in class interaction as a negative and also the communication of information as a negative.

Higher education finds itself at a critical crossroads where universities around world need to adapt quickly to the changing needs of younger generations, discover the optimal balance between traditional and online learning, find ways to reduce costs and avoid tuition escalation, and become better prepared for future health crises and geopolitical events.

In turbulent times, successful businesses continuously collect and analyse data to understand rapidly evolving customer sentiment. Higher education institutions must now operate in a similar fashion, as education will increasingly become more digitized in the future. Constant feedback from administrators, teachers, and students is critical for creating an effective roadmap during turbulent times, and

detecting problems at an early stage can prevent consequences that are more serious. Successful educational institutions, like businesses, will find ways to collect and analyse data frequently to better understanding the needs of students and of the marketplace.

In our surveys conducted in 2021, there is a clear indication that students believe that technology should play a much larger role in their education. These same students, however, value in-class interaction and do not view exclusively learning online as an attractive option.

Many students positively mentioned the comforts of their home environment when learning online and the ability to eat and drink during their online classes. The benefits of timesaving, cost, and convenience when learning online were also frequently mentioned. Many students communicated that online learning has positive educational benefits. Having more free time was also a strong positive. Travel and sleep were both positive benefits that were mentioned when learning online, showing that many students did not miss commuting back and forth to school and used the extra time for either leisure or getting more sleep. Flexibility was another positive that reflects the fact that students did see online learning as being less rigid than in-class learning. Finally, many students think that teaching methods are positively influenced by online learning where recorded lectures, professor accessibility, and more interactivity were commonly cited. Technology was also seen as a positive benefit of online learning over traditional in-class learning. While there were positives associated with online learning, there were numerous negative influences. Many students indicated that online learning had a detrimental effect on their social lives and personal lives, a negative effect on their ability to focus and organize their studies, and a dampening effect on their motivation to study. We saw a significant number of students mention that group projects and activities were negatively impacted by online learning. While students do favour certain aspects of online learning, the exclusive use of online learning generates a wide range of negative effects for a significant number of students. The students were also asked to share their thoughts on how university education can be improved in the future. Many students

positively mentioned hybrid learning as a solution that combines online and in-class learning. Other notable mentions touched on the need to have university education be more interactive and focus less on theory. Again, flexibility was mentioned, which suggests that students find in-class learning to be too rigid, and online learning as more flexible offering the ability to watch recorded videos at one's own leisure.

As we look to the future and a post-pandemic world, universities must decide whether to revert to a pre-pandemic state or to transition from emergency remote learning to a high-end online learning platform.

Philippe Stamenkovic

Some Challenges of Hybrid Online Teaching for Non-Elective Courses

This presentation draws attention to some difficulties in online teaching taken from my personal experience. Among many positive assessments of online teaching such as accessibility, affordability or flexibility[1] (not to speak of those documented in the Online Communication and the New World of Scholarship workshop which took place at the Hungarian Academy of Sciences in 2020), I take the risk to report a negative experience (as well as, perhaps, to make claims unpopular in the education sciences literature), since it is often lamented that not enough negative results are published.[2] Note that, in my almost 800-hours teaching experience, I only encountered such situation twice (the other case fulfilling two of the three characteristics below, namely the non-elective nature of the course, and the business school setting). The course I am referring to here was an introduction to data ethics for software engineers in a (mid-level) French enginering school. It is particular regarding:

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[1] See e.g. Shivangi Dhawan, "Online Learning: A Panacea in the Time of COVID-19 Crisis", *Journal of Educational Technology Systems*, vol. 49, issue 1 (2020), pp. 5–22, whose title is in fact to be taken literally, and not ironically (in spite of her acknowledging some difficulties associated with online teaching).

[2] There are quite many negative assessments of online teaching, but surprisingly few regarding the topic which I tackle here, namely students' lack of seriousness. Strangely, the majority of the articles I have found on this topic are from Pakistani authors. See for example Ashi Zeshan, "Business Students Experiences about Online Learning During Covid 19: Problems and Opportunities", *Romanian Statistical Review*, 2021, no. 2, pp. 48–61; Anbreen Aziz, Sidra Aamer, Asma Munir, et al., "A Bumpy Road to Online Teaching: Impact of COVID-19 on Medical Education", *Annals of King Edward Medical University*, 2020, vol. 26, Special Issue, pp.181–86.

- the "hybrid" format, with part of the students in the classroom, and part of the students on their own (at home or elsewhere) for sanitary reasons linked to the Covid-19 crisis (I was myself in another city). This complicated configuration partially suppressed for example any advantage linked to the intimacy of the location, as I have read from Anna Somfai or Trischa Goodnow.
- the subject: a non-elective, obligatory course (contrary to the positive experiences I have read about, which apparently concern courses *chosen* by the students).
- the setting: such obligatory courses can typically be found in humanities courses in scientific, technical or business curricula, in particular in engineering or business schools, which purport to give their students an *honnête homme* education exceeding their specialization, and making them aware of its moral, social and environmental repercussions.

Among the difficulties associated with online teaching on the students' side, one finds the lack of community and motivation (students find online courses boring and unengaging), and, quite understandably, the lack of attention.[3] Students following the course from home or other non-professional location must face the continuous temptation of distractions linked to a place not dedicated to work (anyone, including researchers, who has worked at home will have experienced this difficulty). On the other hand, students in the classroom can enjoy the presence of their fellows and friends in a professional setting, and in general the presence of the teacher as well – only for this particular course I could not be physically present in the classroom. In both cases, self-discipline is required from them, as well as collaboration and good will. If such attitudes are necessary preconditions of any efficient and pleasant course, it is even more so for online teaching.

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[3] Dhawan, *op. cit.*; Liyan Song, Ernise S. Singleton, Janette R. Hill, et al., "Improving Online Learning: Student Perceptions of Useful and Challenging Characteristics", *Internet and Higher Education*, vol. 7, no. 1 (2004), pp. 59–70.

Indeed, I think that, especially for non-elective courses in "adverse" settings (such as typically humanities courses in engineering or business schools, but I believe this holds to a variable extent for any course), any teaching exercises a *constraint* on the students. Teaching is not just an ideal discussion between people interested in the same subject, with one person (the teacher) just more knowledgeable than the others and organizing the discussion, as it may appear in some (very) positive accounts of teaching experiences. To some more or less great extent, students also learn a content which they would not learn "naturally", in the sense that they learn knowledge which is not immediately useful to them, which corresponds neither to their immediate environment nor to their interests or passions (as is adaptive learning by practice or autodidaxy)[4]. Thus there is a more or less important constraint dimension in learning, which must not be negated, but rather internalized by students.

Of course, the teacher is responsible for making her course as interesting, relevant and accurate (among other things) as possible. My (newly and urgently created) online course was certainly not a perfect one, and many aspects had to be improved (as I myself was aware of, in addition to some students' informal feedback). This, however, does not justify the problems which I encountered during the course, which clearly fall under the students' responsibility. These were:

- some difficulties, or even impossibility to see, and interact with, the students:
  - individually, because they were following the course in inappropriate places (e.g. outside or in public transports), or switched off their cameras (hence leaving me facing a dark screen while lecturing, unable to see reactions and get feedback from them), or even skipped class (although that was rare because they knew their presence was checked);

[4] Franck Amadieu and André Tricot, *Apprendre avec le numérique: Mythes et réalités*, Paris: Éditions Retz, 2014, pp. 96–98.

  - collectively, because the students in the classroom were sitting far way from the camera (which filmed the entire classroom), thus making it difficult to see them distinctly and identify them individually;
- a low level of attention (students chatting in the classroom);
- a low level of oral participation (few students, and generally always the same, asking or answering questions).

None of these problems is in fact related to the technological setting of the online course (even students in the classroom could just sit nearer the camera): rather, they all come from the students' lack of seriousness. In the face of such problems, the online teacher is virtually (in both the literal and figurative meaning) helpless. Conversely, the physical presence of the teacher makes most of these problems impossible, and prevents the others to a large extent, presumably because it contributes to a form of teacher's authority. That word may appear undesirable given the celebration of the end of a "top-down" teaching model, but in order to bear their fruits new teaching models (such as online teaching or flipped classrooms) must obviously be accompanied by students' self-discipline and willingness to actively participate in the course. Real efforts must be provided also by the students, not only the teachers (as can often be read in the academic literature).

FACING THE SCREEN

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Technoscience on the Screen: Mediatized Controversies and Distrust in the Pandemic

This contribution aims to frame the renewed status of technoscience especially in the pandemic context, drawing from the intersection between datification and mediatization processes and looking at how controversies and distrust expand, affecting both scientific and lay knowledge. Digital media play a crucial role into all this through the visual format and their various shortcuts.

Almost never in history have technoscientific controversies been so extensive and visible like in the Covid-19 pandemic. Science and Technology Studies (STS) emphasized since the '70s the crucial role of controversy (Edinburgh School, Bath School). Going beyond the Mertonian institutionalized approach, and drawing from Fleck's genealogy of scientific facts and Kuhnian revolutions, STS framed scientific controversies not just as dynamics to establish truth but as motor of change through the "seamless web" science-technology-society. Therefore, the process of controversy in the making goes far beyond the laboratory/scientific circles (Laboratory Studies and Controversy Studies cross over) to enter society, shaping and being shaped by it. Controversies are not only about priority disputes but wide social dynamics in which, more than ever in the Covid-19 pandemic, public opinion and lay expertise are mobilized into negotiations and conflicts which seem to have no apparent closure. Distrust expands through scientific-like ways of reasoning, by manipulating and selecting specific data (or fabricating them).

Since 2020 the distinctive role of scientists and expertise and their relationship to politics and policy have been contested, challenged and at the centre of polarized pressures, so that boundaries blur constantly and in unprecedented ways. Two main forces shape

pandemic controversies, expanding their reach and consequences: datification and mediatization, which are themselves two meta-processes well established before the pandemic.

Covid-19 makes evident more than ever how crucial data construction, accuracy and accountability are to political and policy decision making. Datification is ambivalent and pandemic data are framed as a media ritual and a relevant background of individuals' daily routine. In the Italian case, for example, the first total lockdown (Spring 2020) was marked by daily tv reports in which Civil Protection communicated the pandemic trends of the day, as well as by PM press and fb live conferences. Pandemic data suffer from ambiguities and contradictions typical of classification systems and Information Infrastructures, as emphasized by Bowker and Star. In particular, the pandemic brought about a strong trivialization of data which became part of everyday life, so that contagion rate became the new spread. Epidemiology in 2020 had a similar trajectory to Finance in 2008 subprime crisis in terms of media coverage and redundancy.

Covid-19 pandemic exacerbated not only data mediatization but it also mediatized science: scientists, especially virologists and epidemiologists, have become media celebrities, pop icons on tv and characters of social media memes. The newsmaking narrative of a "war among scientists" pervaded the media agenda. In Italy, some scientists were also (unenelected) candidates during the last political elections (September 2022). Media rituals and formats made science more and more "personalized", while pandemic data became more and more visual as communicated through scientists' face and mediatic appeal. Many scientists relied on both mainstream and social media to communicate with the public, building up strategies of media differentiation/integration.

The media logic (devoted to produce and consume celebrities) and the science logic (focused on controversy and at least ideally on organized skepticism) hybridize each other with unexpected consequences. Both data and science (namely, scientists) are gobbled up by the logic of mediatization and mediatized controversy, which configure a renewed media primacy in the pandemic world. Couldry's

myth of the mediated centre has proved to be more than ever ineludible to understand contemporary society, bringing a new subject to the screen, namely technoscience. Latour's emphasis on alliances and actor-networks which blur the distinction between science and technology is even more evident with the pandemic where vaccines and vaccination, based on the mingling of AI and biomedicine, played a crucial role. So controversy spreads out diverse and unprecedented configurations of distrust: (social) media and pervasive use of data open the field to manipulation, and increase interpretative flexibility in the public sphere (e.g. anti Covid vaccine /anti Green Pass movements).

Following Latour's approach to re-assemble the social, we need new alliances between humans and non-humans as well as different types of knowledge to counter disinformation, conspiracy theories and re-configure an ethical-informed and more inclusive technoscience, critically aware of the role of both data and the media.

Daniel L. Golden

Behind the Screens

In one of his early papers, *An Archeology of a Computer Screen*,[1] Lev Manovich differentiates between three types of screens: the *classical,* the *dynamic,* and the *real-time,* providing us with visual images static, moving, or interactive, respectively. This cultural historical approach may lead to a deeper understanding of what is going on in all those different cases of *screening*. While recent industrial developments tend to overstrain the very notion itself, we may find it useful to go back to the origins in order to clarify all relevant aspects.[2] Taking further Manovich's idea within the history of representation we may even distinguish *pre-screens* (i.e. murals, paintings) from *screens* (i.e. cinema, television) and *post-screens* (i.e. computers, smart devices).

On the other hand, there is a possibility to build up a whole phenomenology of screens as suggested by Lucas D. Introna and Fernando M. Ilharco.[3] They identify *screenness* as the ability of those devices for *capturing and holding our attention.* What is really special about that is the way they can direct our perception from their own functionality to the content they transmit, therefore snatching us out from our real environment and throwing over immediately to a virtual one.

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[1] See 09_article_1995.pdf (manovich.net).

[2] Historical material on the topic can be built up into an impressive case of cultural studies as in the case of Anne Friedberg's inquiries into *The Virtual Window: from Alberti to Microsoft* (Cambridge, MA: The MIT Press, 2009), or can be turned even into a kind of "Screenology; or, Media Archaeology of the Screen" proposed by Erkki Huhtamo (in *The Screen Media Reader: Culture, Theory, Practice,* New York: Bloomsbury, 2017, pp. 77–125.).

[3] Lucas D. Introna and Fernando M. Ilharco, "On the Meaning of Screens: Towards a Phenomenological Account of Screenness", *Human Studies,* vol. 29, issue 1 (2006), pp. 57–76.

Making use of the terminology introduced by Jay David Bolter and Richard Grusin in their seminal book on new media,[4] the transition from prescreens to postscreens can be described in terms of a constantly increasing sense of *immersiveness* and *transparency* at the same time. Which means that technological representations aim at an ever higher verisimilitude, which makes us immersed in the same way as we used to in the real world, but for that very goal it also has to hide its technological apparatus as much as possible. That is captured by the phenomenological approach like this: "As screens we look *at* them but also simultaneously, immediately, and more fundamentally, we look *through* them to encounter our way of being-in-the-world."[5]

This phenomenology should cover the entire communicational framework with all the ongoing epistemological procedures in a holistic way. I would suggest the four main components to be here the *projector,* the *frame*, the *canvas* and the *spectator*. The frame incorporates the boundaries constructed between the real world surroundings and the image on display, while the canvas gives the possibility of instantiating the image lending its presence to something foreign and distant. This point of transformation will give place for some crucial questions of screening: What makes a random surface to become a screen? Is this more linked to the gesture of presentation (an action of projection), or rather to the gesture of reception (an action of inspection)? Analysis of projectors will embrace several technological issues, while assessment of spectators will spread into hermeneutical dimensions.

Turning our attention to the spectator, among many interesting questions the most relevant may be *when and why we decide to turn ourselves from reality to a screen.* In the case of Manovich's classical screen that would amount to a physical move of turning the head and the eyes to it, in the case of the dynamic and the real-time

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[4] Jay David Bolter and Richard Grusin, *Remediation: Understanding New Media,* Cambridge, MA: The MIT Press, 1999.
[5] Introna and Ilharco, *op. cit*., p. 66.

one it will entail putting the whole machinery into motion, i.e. *turning it on*. "When we push the 'on' button the screen captures our attention as it is the place, the location, the setting, the scene, in which what is supposedly relevant for us at that particular time is happening."[6]

It seems that being attracted by a screen results in a very special state of the mind. Liberating itself in a quite significant measure from the body linked to it, it lets itself to be absorbed by the virtual reality delivered by the artificial vehicle. It is ready to take all received illusions as real, more precisely real representations of, or real information about something that is really there somewhere in a distant part of reality. As our environment is getting constantly inhabited by screens, this phenomenology should be of ever growing importance, since it seems that *we are living* more and more *in a world full of screens.*

[6] Introna and Ilharco, *op. cit*., p. 63.

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Vol. 5: *Facing the Future, Facing the Screen*,
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This online volume contains the papers prepared for the 10TH BUDAPEST VISUAL LEARNING CONFERENCE – FACING THE FUTURE, FACING THE SCREEN, held in a physical-online blended form on Nov. 17, 2022, organized by the Committee for Communication and Media Theory of the Hungarian Academy of Sciences. For the past twelve years, the Budapest Visual Learning Conference Series has striven to make happen what should have happened long ago: a radical iconic turn. We were working against the tide. The 9TH BUDAPEST VISUAL LEARNING CONFERENCE was a breakthrough event. The 2022 conference has been its immediate continuation: the participants, with access to each other, communicated with each other and with the organizers of the series, recounting how their research progresses; the participants becoming a virtual research group, a very real virtual research community, a community that will change the tide. Members of the Scientific Committee coordinating the conference series are Petra Aczél, András Benedek, and Kristóf Nyíri.

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