Anna Maria Loffredo · Rainer Wenrich
Charlotte Axelsson · Wanja Kröger (eds.)

CHANGING TIME SHAPING WORLD

Changemakers in Arts & Education

[transcript] Media and Design Aesthetics 16

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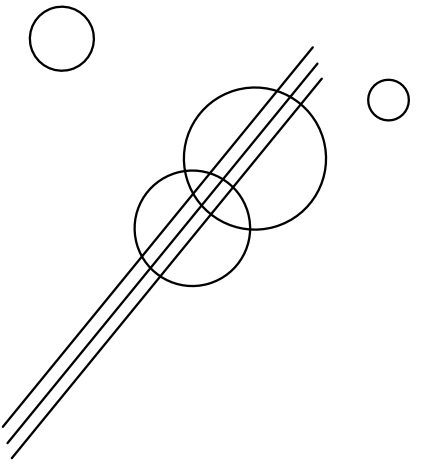
EDITOR'S NOTE

Media productions and design discourses form an aesthetic dispositif that demands rigorous research efforts: Not only do media perceive; they are themselves perceived and become perceptible primarily through the fundamental constellations of their often technical artifacts and the conecpts that precede them – against the backdrop of the resulting design. The book series MEDIA AND DESIGN AESTHETICS explores this field with theoretical and historical works as well as forward-looking, prognostic essays.

The series is edited by Oliver Ruf.

Anna Maria Loffredo
Rainer Wenrich · Charlotte Axelsson
Wanja Kröger (eds.)



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[transcript]
Media and Design Aesthetics 16
edited by Prof. Dr. Oliver Ruf

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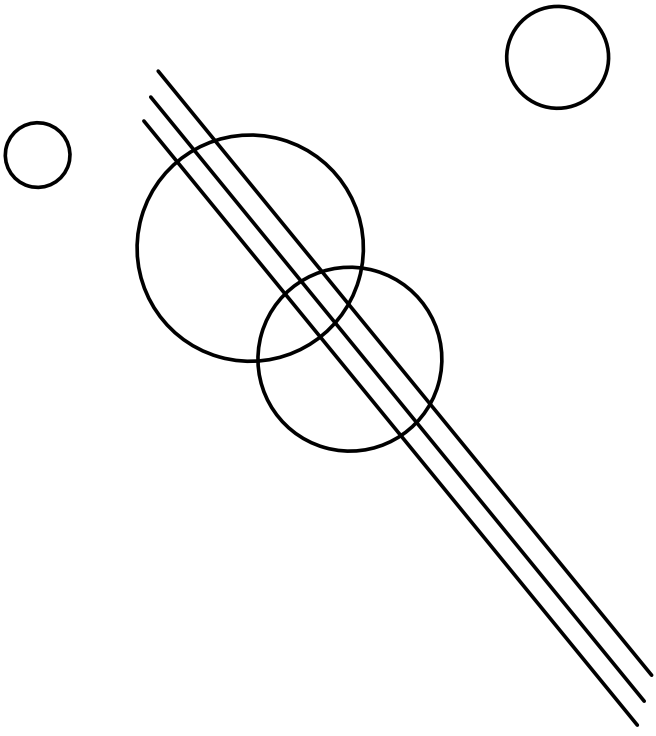
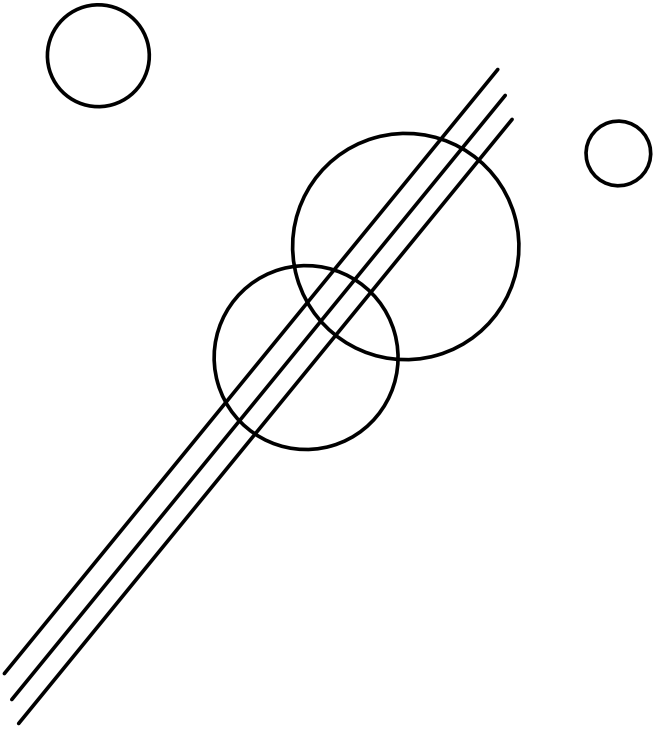
Table of Contents

Methodological Approaches

Change and Design Education





Preface
Joy by Changing: Arts and Education

Oliver Ruf

My interest here lies in 'art' and 'education' as a pair of operations in the context of a procedure able to conceive of both phenomena as two sides of the same coin, as it were. It could even be given what amounts to a rather peculiar name – a term[1] Jean-Luc Nancy evokes in response to a question about desire and the impossibility "of appropriating its object":[2] "because, in *jouissance*, these two questions of object and subject are linked, that *jouissance* can be in such a proximity not only with joy, but also with *réjouissance*, exuberance in general."[3] The *exuberant desire* to conflate 'art' and 'education' once again, anew (or in ever-different ways), *in order to change the world* presumes a promising relationship between two nodes: renewal and pleasure. "I would even say," Nancy writes,

> that the property of *jouissance* is to be endlessly renewed. This is very striking in the case of aesthetic *jouissance*, which we find in works of art, and to which we will return. Because in art as in sexual *jouissance*, we never say we've had 'enough' of it. This idea makes no sense. If people continue to create and *jouir*, it's because desire doesn't stop when it takes one particular form. Because there is a constantly-renewed desire, the desire to make new forms arise, that is, to make a new sensibility perceptible.[4]

1 The French word *jouissance* describes enjoyment in terms of rights and property, but also the sexual fulfillment of desire.

2 Nancy, L. & Van Reeth, A. (2016). *Coming* (trans. by C. Mandell). New York: Fordham University Press, p. 12.

3 Ibid., emphasis in original.

4 Ibid., pp. 15–16, emphasis in original.

This procedure leads us back to both aesthesis *and* aesthetics, when 'art' and 'education' *engage in a joyful, desirous encounter*. It is from the point of their meeting, from their interface that those certain, ever-renewing 'forms' and 'experiences' emerge, as the following contributions explain in theoretical and applied terms. Projects like "Changing Time – Shaping World" assert that wherever art/education operations meet and intersect (possibly even *dissect* one another) in equal measure, they appear as the beginning of a story of transformation, and ideally produce changemakers. This hypothesis stands to be tested, among other things, through the examination of exemplary dispositifs. The epistemological problems that emerge in the course of this and solutions proposed against this background also point to a symptom of this viewpoint: mutual understanding. However, because structures of such reference are always characterized by an inherent aesthetic tension, its driving force remains the mode of critique.

Bonn, winter 2021
Oliver Ruf

Gamechanging Education and Future E-Learning in the Arts

Anna Maria Loffredo, Rainer Wenrich, Charlotte Axelsson, Wanja Kröger

"With the help of art, metaphor and experience,
we can begin to make sense of deep time."[1]
(Roman Krznaric)

"Thinking of education as a preparation for something
that happens later can overlook the fact
that the first sixteen or eighteen years
of a person's life are not a rehearsal.
Young people are living their lives now."[2]
(Sir Ken Robinson)

"And in the future, everyone will envision."[3]
(Vilém Flusser)

A World of Changemakers – this is the outlook for an innovative understanding of education in the hybrid arts for the 21st century. It is a context in which artists see themselves as entrepreneurs in the spirit of art and design 'edupreneurs,' embrace their role as independent agents of change and shapers of civil society, understand co-action and engage accordingly. A diverse spectrum

1 Krznaric, 2020, p. 56.
2 Robinson, 2001/2011, p. 66.
3 Flusser, 1985/2011, p. 31.

of needs is functionally emphasized under the broader vision of a sufficiency-based 'art of living' – a notion that also encompasses social compatibility, summarized as resilience, well-being and solidarity as selected 'supra-educational goals.'[4] With all the multitude of particular interests and normative superlatives, the actual binding and unifying element remains to be clarified. The question of the social toolkit – a concept John Dewey outlined in the form of community-based thinking, thereby already recognizing young people and their social commitment as enormously fruitful in matters of education and upbringing[5] – always requires tracking down the desirable zeitgeist, bringing it to light and engaging in co-creative discourse about it.[6] Here, the arts, particularly in connection with education, have a central role to play in civil society, determining if and how these prove to be gamechangers.

The first historical junctions of art and education – the underpinnings of today's concepts of (visual) literacy – came about in the context of early 20th-century academia in the United States.[7] That environment was the basis for the 1933 founding of Black Mountain College in North Carolina, an institution organized around the educational principles of John Dewey and others.[8] The emphasis on tying thinking about time more to the lived environment[9]

4 Cf. de Botton, 2019, p. 50.
5 Cf. Cummings, 2000.
6 Cf. Dewey, 1925/1998.
7 The analytical views of Walter Sargent, the first chair of the newly-established Department of Art at the University of Chicago in 1923, and Earl Barnes, a historian and educator who held a professorship in education at Stanford University from 1891 to 1897, moved John Debes to outline the concept of 'visual literacy' in 1969 (see Wenrich, 2020, p. 164 for more details).
8 The history of this progressive educational movement calls for some revision under our current zeitgeist and critique, and yes, there was racism and homophobia among teachers and students at BMC as well (cf. Fisher, 2014; Wilkins, 2014). Aladin El-Mafaalani specifically points to a critical attitude toward racism as a pedagogical challenge within the German school system. Strategies of empowerment are intended to break through a self-perpetuating practice of discrimination. This includes a critical review of outdated representations in educational media (cf. El-Mafaalani, 2021).
9 In Dewey's words, "A primary task is thus imposed upon one who undertakes to write upon the philosophy of the fine arts. This task is to restore continuity between the refined and intensified forms of experience that are works of art and the everyday events, doings, and sufferings that are universally recognized to constitute experience"* (Dewey, 1934/2005, p. 2).

reflects the driving motivation of pragmatism as compared with the European history of ideas, which its proponents found too remote.[10]

The question is, what understanding of the arts,[11] including design, could best set a framework for the concerns of "Changing Time – Shaping World," create a context in which theory- and research-based impulses[12] raise problem awareness for multilevel and multidimensional change processes ranging from knowledge production to knowledge application, to the forming of networks and interaction between academic contexts and civil society in (art) universities?[13] The following comparison offers a possible approach:

> When I speak of art, I am referring to a theory and praxis that as a matter of principle is affected by science and technology. And when I speak of the sciences and their special ability to experiment, I envisage a concept that is porous and exhibits a marked curiosity about the arts. If these prerequisites are not given, there is no point at all in reflecting on the importance of research for the arts (and sciences). If our focus is on the arts, then we do not need just any kind of science. We need science that is poetic and with the capacity to think poetically; we need science that is capable of imagining art, science that can even take on experimental forms itself which might be characterized as poetic.[14]

As Vilém Flusser pointed out as early as the mid-1980s: "Philosophy ought to be danced more than written."[15] This almost crackling moment, along with its called-for translation work into other inherent logics of knowledge cultures and traditions, can lead to new perspectives and insights. Illuminating the patio of the Peggy Guggenheim Collection in Venice is a work by Maurizio

10 Cf. Wenrich, 2020, p. 164.

11 The term 'art' is used in the plural in the further course as a general term that expresses itself in fields of study such as art and media sciences, industrial design, art didactics, acting, classical and modern dance, photography, music, interactive design, game design, textile and applied arts education, fine arts and so on as studied at the institutions involved in this initiative, such as the KU Eichstätt-Ingolstadt (Germany) and the ZHdK (Switzerland).

12 "Without some conjecture as to how facts are related, it is impossible to conduct meaningful research. That is what Leonardo da Vinci meant when he said that people cannot do anything well if they engage in practice (research, and action based on that research) without theory […]. Theorizing without research is about as useful to science as exercise without movement is useful to the human body" (Brym, 2015, pp. 132–133).

13 Cf. Carayannis & Campbell, 2012.

14 Zielinski, 2010, p. 294.

15 Flusser, 1985/2011, p. 297.

Nannucci[16]; the words "Changing Place, Changing Time, Changing Thoughts, Changing Future" have been shining out of its neon tubes since 2003 (Fig. 1). Site-specificity creates a particular, charged relationship between the artwork's location and its inherent, medial-thematic properties. Light, space, even color and language *thrive* together, form a visual word-sound and exert a draw that goes far beyond the here and now in their interpretation of the site. This is only true when those regarding it engage with it actively. Construction of place, time, thoughts and future is rhythmized with the topos of a 'vita activa.' One's own doing appears as an ongoing action. Last, but not least, art patron and collector Peggy Guggenheim – whose former home the museum now occupies – appears to have anticipated our current understanding of the 20th-century avant-garde with her venturesome support of artists who had in some cases been disparaged or defamed. As changemakers, these kinds of driving actors spur not only artistic but also or primarily political reflection on events beyond their own existence.

Against this backdrop, the present volume would like to invite the reader to initiate a discursive, formative process of change – from a subject-related definition of the status quo to a transdisciplinary, hybrid rethinking of art and education, as also suggested by the subtitle of the lecture series from whose lectures the individual contributions emerged:

– from now to where, from here to there –

16 Maurizio Nannucci frequently creates linguistic images from words, both as indoor museum installations and as part of art-for-architecture commissions. They are considered 'concrete poetry' and transfer literature to an aestheticized experience of the written word. Contemporary artists working in a similar 'tradition' include Jenny Holzer, Barbara Kruger and Joseph Kosuth – all of whom have realized commissions in various buildings and areas around the German Bundestag, Germany's main site for democracy education. Nannucci's "Blauer Ring" ["Blue Ring"], for example, a 1998/2003 installation in the rotunda of the library at Elisabeth-Lüders-Haus, makes explicit reference to Hannah Arendt's observation that *"Freiheit ist denkbar als Möglichkeit des Handelns unter Gleichen/Gleichheit ist denkbar als Möglichkeit des Handelns für die Freiheit"* ["Freedom is conceivable as the possibility of action among equals/equality is conceivable as the possibility of action for freedom"] (https://www.bundestag.de/besuche/kunst/kuenstler/nannucci/nannucci-199050 [5 Nov. 2021]). In this example, his artistic idea becomes a coagulated democracy-education experience in a symbolic place.

1. from analogue and/vs digital to *analogue/digital-virtual-fluency*
2. from linearity to *simultaneity and circularity*
3. from material- and technique-based art production to *hybrid art-making*
4. from monologue to *polylogue*
5. from multicultural to *transcultural art mediation*
6. from locked-in self-referencing to *participative, engaging art experience*
7. from single-use to *cloud-based art experience*
8. from monotone to *diverse, connected makerspace*
9. from convergent to *divergent thinking strategies*
10. from mixed-methods to *hybrid and flipped-classroom teaching*
11. from ego to *service-learning concepts*
12. from isolated knowledge to *responsive teaching*
13. from curriculum models to *learning analytics*
14. from hegemonial art history to *global art image science*
15. from manufacturing to *appreciation culture*
16. from now to beyond *artistic research*
17. from technique-only to *rounded embodiment spirit*
18. from artist-genius to *playful "tiki taka"*[17] *in cultural leadership*

...

Besides creatorship, one of the essential signatures of the creative person in contemporary aesthetic-cultural processes, it is early adopters – those trans-disciplinary thinkers and actors – who perceive, refine, and adapt ideas across media.[18] This critical mass is able to channel key impulses and exercise design competence not only artistically, but also in terms of shaping society, putting it into a meaningful composition that shows the playful potential of a charged and expanded relationship between tradition and innovation as enjoyably as possible. After all, the paradigm of openness – the guiding principle not only for creativity, but for change processes as well – ultimately appears as two sides of the same coin, one that calls equally for tolerance and the ability to engage in dialog and democracy: "Open societies enable consolidation and division in equal measure."*[19] Scientific ambition and reality borne in the actual practice of action drift apart. Consequently, the important, cross-cutting task for art

17 Cf. Loffredo, 2018, p. 49.
18 Cf. Reckwitz, 2016; Ullrich, 2016; Krznaric, 2020, p. 13.
19 El-Mafaalani, 2020, p. 258.


CHANGING
PLACE
CHANGING
TIME
CHANGING
THOUGHTS
CHANGING
FUTURE

Fig. 1

and design at universities is to find a value-oriented and dialog-promoting key to the future we want.[20] This key might lie in a groundbreaking restructuring of academia, the kind of change for which the sort of curriculum reform we experienced more than five decades ago, among other things in connection with the 1968 protest movement in West Germany, would be far from sufficient. The foundations for it can already be seen in transfer initiatives, in the promotion of civic engagement, and in the implementation of socio-politically relevant fields that transcend disciplinary boundaries.

A multi-perspective and knowledge-oriented examination of such influencing variables and parameters as globalization and migration; digitization and inclusion; phenomena of media democracy; increasingly non-national citizens or those with multiple identities; the changed, mediatized socialization of children and young people; unequal distribution of power and resources between genders, generations or regions; human rights, etc., served to articulate the purpose and concerns of "Changing Time – Shaping World" as a cooperative, interdisciplinary online teaching offer. The education context also always implies an educational ambition in school, university, and lifelong learning contexts; associated diplomas or certificates lead to further questions about standards and their verifiability.[21] At this point, it becomes apparent that there is a need to convey appropriate, complex educational pathways with breadth and depth, providing a forum with facilitatory formats to anticipate, weigh, and (in a connectable way) reflect on groundbreaking discourses, practices, and dimensions of these against the backdrop of so-called 21st-century skills.[22] This calls for a discussion of coherent literacy models that settle the distinction and associated conflicting schools of thought about *Bildung* on the one hand and education on the other. These, in addition to subject-specific points of emphasis, would include such horizontally-connecting, multi-causal interpretive brackets as multiliteracy, the future, spirituality or even data, perhaps also something along the lines of a co-habitat literacy – in the arts, this would mean working within the same, ongoing discourse characterized by the intertwining of affectation and cognition in the context of artistic creation. Common to all is the orienting function of empowering people. Important frames of reference for didactic derivation and justification in

20 Cf. Wenrich & Knebel, 2021.
21 Cf. Wenrich, 2006, p. 278.
22 Cf. Harari, 2018/2020, p. 402.

general and in the arts are the UNESCO and OECD frameworks for educational institutions and their actors.[23] Fanning out behind them is a multilateral understanding of cultural leadership from a postmodernist perspective:

> Cultural leadership can then be understood firstly as a (usually hardly further defined) term for leadership of or in cultural organizations, but secondly also as a term that refers to a cultural leadership role of individuals or organizations for society or even international dialogue in the sense of the canon of values of, for example, the UN Human Rights Charter or the Sustainable Development – for instance in the context of 'cultural diplomacy.'*[24]

Referring to Arnold Gehlen's sociological view of institutions, the university is basically a manifest element in the educational system.[25] It is bestowed with necessary constructions and bundles of meaning in complex circumstances with a clear control function. The so-called '68 movement in Germany brought about a formative caesura in dealing with university functionaries: "Parallel to the expansion of education, there was an expansion of reflection with considerable effects on social routines."*[26]

Similar demands can be heard in the current questioning of structural interpretive sovereignties and value orientations. Their partly justified push for the reorganization of learning and living environments (albeit also as an exertion of influence with its defamatory features) remains to be seen in their intended narratives. University education as knowledge production and -distribution entered a volatile context even before the COVID-19 pandemic, a situation compounded by competitive pressure from other providers, as so many social media channels with appealing edutainment character demonstrate. Distance learning courses from private providers offer structures of a study-life balance that seem better suited to individuals in rural areas, those with family obligations or professional parallel contexts in a lifelong learning situation. The role of the arts in this context, or of the universities where art is taught, may be to experimentally develop a sense of playfulness that does not devolve into something pale, self-focused, and devoid of community spirit. Picking up on this introductory motif of 'change,' the Willem de Kooning Academy (WdKA) in Rotterdam draws its institutional understanding from

23 UNESCO, 2019; OECD, 2021.
24 Zierold, 2019, p. 9.
25 Cf. Gehlen, 1956.
26 Nassehi, 2020, p. 103.

the basic artistic attitude of its namesake patron, even spells it out in diagonal lettering installed on its building facade (Fig. 2). The painter, who was a faculty member at Black Mountain College along with his wife Elaine, said: "I have to change to stay the same."[27]

Fig. 2

27 Ferrara (2012), himself an artist and de Kooning's assistant for many years, quotes him on the MoMA website, though there the sentence begins with 'you' instead of 'I' as it appears on the facade of the academy in Rotterdam (see also https://www.blackmountaincollege.org/elaine-and-willem-de-kooning-the-summer-of-1948/ [5 Dec. 2021]).

An essential goal must be to remain open to contemporary reform of curricula and formats and to strive forward – better yet, in many different directions – with an exploratory attitude.[28] Being ahead of one's time in some places is part of a sustainable understanding of education that is as forward-looking as it is risk-taking, and that focuses on design as social responsibility in a participatory sense.[29] Global players in the arts can be museums, opera houses, philharmonic halls or art universities, which is to say institutions whose municipal or state-organized support apparatuses enable them to operate with the greatest possible financial security. However – and in contrast to the exclusive gallery- and art market business – the everyday business of 'art' is more a matter of individual actors organizing themselves in initiatives and influencing democratic consensus-building from the ground up. It follows that the many freelancers and self-employed individuals working in the arts need structural empowerment if they are to anticipate and concretize truly clever, constructive solutions as changemakers.

The intensified lines of discourse on what Universitas is today and could be tomorrow are met constructively, and less confrontationally, with a cultivated culture of debate of the kind described by Hannah Arendt in the digital public sphere, also with the aim of recontextualizing Jacques Derrida's vision of a deconstruction that takes up his notion of a 'university without condition.'[30] The multichannel discourse format of "Changing Time – Shaping World" consequently entails a transformation of digital teaching with a view to the – at times prophetic – considerations of the 'digital university' as outlined by Oliver Ruf.[31] The methodological approach presupposes a scenario technique that thinks in terms of possibilities and in the plural, one that can expand and just as easily abandon itself. Flusser, in turn, warned against this as much as he beckoned it: "*Utopia* means groundlessness, the absence of a

28 Cf. the study reform to minor/major models at the ZHdK: https://www.zhdk.ch/studium/major-minor-an-der-zhdk-10089 [6 Nov. 2021].

29 Sustainability, for example, is one of the strategic goals in the ZHdK's 2019–2023 development plan. In addition, the Zurich Knowledge Center for Sustainable Development (ZKSD) was founded by four universities in the Canton of Zurich together with the Hamasil Foundation 2021, aiming to promote the 2030 Agenda of the UN Sustainable Development Goals (https://www.zhaw.ch/de/ueber-uns/aktuell/news/detailansicht-news/event-news/zuercher-hochschulen-gruenden-zentrum-fuer-nachhaltige-entwicklung/ [26 Nov. 2021]).

30 Cf. Arendt, 1958; Derrida, 2001/2003.

31 Cf. Ruf, 2021.

point of reference."[32] Associative word chains like those found in his remarks on the 'techno-image' show routes of an imaginary journey that can be used to practice an approach to the formation of ideas: universe, three- or four-dimensional, made for future, re-engage for shaping, superior force of the new, dreaming state of mind, a (kaleido)scope, mosaic-like combinations of particles possible, galactic spirals, cosmic brain … A voyage of discovery like this one does not think in terms of linear time axes but presupposes an approach – even more so in the arts – fueled by the ability and desire to engage in "mental time travel."[33] It speaks to a circular understanding of time.

"After all, universities are places of reflection first, and providers of solutions second."[34] The Zurich University of the Arts – an institution that is (also) well known in the field of e-learning – joins the multi-part structure of a Digital Teaching and Learning Lab (DigiLLab) on the Catholic University of Eichstätt-Ingolstadt campus. They act (in the outlined context and as the real foil of this volume) as hubs and satellites in equal measure, feeding into the necessary discursive platform both technically and in terms of content: "It's a puzzle that needs to be put together – in real life and in technical code."*[35] In doing so, the editors of this publication attempt to use it as an example of sustainable scholarly communication that meets the multimodal and -lingual demands of an inclusive educational mission in the arts. Educational processes require an outline and structure to isolate different stages, steps, and areas before melting them back into an overall structure and, yes, making them quite precious. At the same time, they are used to create an educational good, as it were, that learners gladly share with one another. This, in economic terms, is the output. In a pragmatic sense, it is also the meaningful aspect of education. Scientific texts were therefore modally varied for the previous lecture series format, taking the form of podcasts and modcasts[36]; this, too, is meant to open a new, creative point of access to education in and with the arts – access that is to be established internationally in the future and ideally creates an impact

32 Flusser, 1985/2011, p. 3, emphasis in original.
33 Krznaric, 2020, p. 30.
34 EUA, 2020, p. 31.
35 Ruf, 2021, p. 151.
36 Modcasts lead like an audiovisual walk through stations of discourse, independent of the synchronous point in time when the lecture takes place. Focusing on qualitative characteristics of scientific work, they can provide a framework for the participatory, artistic-scientific mediation of knowledge, skills and attitudes (https://modcast.zhdk.ch/t/CTSW [12 Jan. 2022]).

that will then be shared. The concept of collaboratively developing a sustainable e-learning offer should therefore also be submitted to a – larger – scientific community in an open access way, with the present publication offering insights into both that and associated didactic possibilities in higher education institutions. Conceived as part of the original event series, it drew in a first planning step on a framework program with eleven keynotes featuring a combination of asynchronous (abstract as podcast) and synchronous parts (impulse lecture with subsequent discussion). In the second planning step, modcasts were prepared and didacticized in terms of science communication on the basis of the lectures that actually took place – a decision meant to set nodes in what amounts to a thicket of different narratives.[37] Thus the domain we created for that lecture series, www.changingtime-shapingworld.com, explicitly appears as a 'scientainment' platform – as a result of knowledge transfer on the one hand and out of the desire to engage the senses in digital learning spaces on the other, i.e. in an effort to express the sensuality of knowledge as a shared experience.[38] Education is deemed beneficial at its core when it self-monitors its artistic-scientific teaching with empirical saturation, and transfers this knowledge to further strategic-conceptual processes in a critical, evolutionary way.[39]

At this juncture, we ought to briefly touch on our reasons for launching an open access publication after a lecture series like the one described above, particularly as the latter has already been sustainably captured and addressed in the modcasts. We would further like to elaborate on our conceptual motivations for doing so, as they might indicate changing times in terms of what might be considered enhanced capabilities in higher education, either currently or in the future. The aim of this anthology is not only to rethink (art) didactics, but also to expand our own perspective and understanding of it with and through contemporary scholarly insights from the field as well as

37 Cf. Walsh, 2019.

38 Cf. Huber, 2007, p. 321; Axelsson, 2020, p. 21.

39 Cf. Berner & Loffredo, 2021a, p. 188. In contrast to the usual procedure, which typically involves following up with participants at the end of such a series of discussions with a view to gaining an overview of feedback (ex-post evaluation), this teaching concept gathers feedback 'on time' before the start of, during, and after each keynote. The evidence-based motivation has to do, on the one hand, with ensuring sufficient data (because the respondents are present); on the other hand, milestones in the overall design are to be checked against the extent to which the efficacy experience is significantly related to the outcome-oriented e-learning units.

from other disciplines – thereby demonstrating interdisciplinary connectivity without straying too far from our own subject of focus. A comparable approach can already be found at a number of individual universities in Germany, which appoint professors and chairs that then conceive and re-establish a general study program known as "Liberal Arts and Sciences." Other examples, particularly in the international context, include so-called *Studium generale* or *Studium universale* programs, which is to say those that encourage students to engage in networked thinking beyond the bounds of their specific discipline. This (open access) publication is meant to offer those who are interested in more explicit insights into how something similar can be applied not only to individual disciplines, but to entire universities; it also differs from the lecture series in some respects, particularly with regard to its thematic sequence. In building a consistent reading of higher education concepts in the area of e-learning, we began by expanding the thematic impulses of "Changing Time – Shaping World" to include our own editorial contributions to the series and established topical groups or clusters throughout. Our goal was to reorganize in the interest of creating a coherent overall view.

Anna Maria Loffredo and *Rainer Wenrich* provided space for young academics from the editorial team to participate in the discourse and lecture series, a decision owing partly to the already tight lecture schedules and also to the fact that, given the different class periods at universities in Germany and Switzerland, they essentially have to coordinate within a semester. *Charlotte Axelsson's* work and research focus as Head of E-Learning – which in turn forms its own organizational unit within the Education section of Teaching, called "Dossier Lehre" in Switzerland, of the Zurich University of the Arts (ZHdK) – illuminates a possible path for agile change management in art and educational institutions. Accompanying the innovative cooperative project was *Wanja Kröger*, Head of ZHdK's Education section mentioned above, whose administrative evaluation of metastructural aspects both within his organization – with a view to the further development of European (art) universities – opened to us the necessary realm of possibilities. His discipline-nonspecific perspective and many years of experience bringing cultural change to administrative and organizational processes bolstered the editorial team's multi-perspective approach.

Following its release on a specially-created website (which also contained podcasts), the initial lecture series concept found a receptive audience in other relevant, potentially connected academic fields. Consequently, series editor *Oliver Ruf* integrated that same didactic approach to higher education into

the broad area of media and design aesthetics. This specific genesis allows Ruf to add further insight in an appreciative foreword to the present publication, a text in which he shows how the arts and education (learn to) interconnect and relate to one other. He has also contributed to a concluding outlook together with Anna Maria Loffredo and Rainer Wenrich.

The present volume provides a look at the wide-ranging initial theoretical considerations behind the choice of specific speakers and topics. We find Nicole Kirpalani's essay, for instance – a contribution that does not explicitly address didactics and thus the connection may not immediately be apparent to readers – to be valuable input, specifically from the perspective of an economist who studies the interdependencies at work in local and global purchasing power decisions in the context of the fashion industry. Her contribution's contemporary, forward-looking call – namely to consider sustainability not only in terms of individual, personal lifestyle, but as a cross-sectional competence to be taken up in all subject areas and disciplines across higher education and school education (ESD) – points to a humanistic concept of education in which the individual must learn to weigh his or her actions both ethically and aesthetically. Didactic content demands first and foremost cutting edge, up-to-date specialized scholarly knowledge, which itself can only be cultivated in interdisciplinary dialog. It also calls for specialized scholarly content and an adequate, subsequently-developed mode of communication with which to convey it. A comparative look at Kirpalani's modcast and her essay in this volume shows rather quickly how, from our own viewpoint as educators, we responded with a 'nudging' approach aimed at translating these ideas from the abstract to the concrete perspective of the arts and education. The modcasts can thus be said to represent an entirely new form of a debate culture – one in which the project initiators can contribute their expertise to discreet but not insignificant effect. Although there are a number of vivid, very entertaining yet instructive examples of 'nudging' in practice, written essays can by their nature reflect only part of the genuine experiential and epistemological character of these kinds of video-based teaching examples. Bearing this in mind, we would like to take this opportunity to invite readers to view the lectures in modcast form and, if necessary, to use them selectively in their own lessons as media-based open educational resources (OER; Fig. 3).

Fig. 3

By contrast, the shifted timeline of work on the book has also allowed us to expand the range of contributing authors: inspired by the individual lectures (only Charlotte Axelsson and Mela Kocher had been listed as co-speakers and co-authors in the program from the start), Shashi Matta's lecture included a 'call for papers' or 'call for collaborations' as a kind of 'didactic trick' aimed at translating his presented framework's theoretical concept for idea formation into specific projects. Respondents included students in his study program, who could opt to do so in lieu of taking a test. Similarly, Barbara Holzer involved Andrea Reiter, her assistant at the architecture firm, in the writing of her essay for the book.

For the volume to best convey the entire breadth of topics included in our lecture series, we have grouped thematically-related contributions in the following order:

1. Theoretical Perspectives
2. Methodological Approaches
3. Change and Design Education
4. Change in Arts and Cultural Education

The first cluster of essays finds *Michael Reder* and *Philipp Hübl* drawing theoretical insights from change as understood from a philosophical standpoint. Reder's democracy-oriented view of education touches on a wide array of topics: assessing from the challenging perspective of society as a whole, he argues that democracies mutually enable and condition changemakers' world-shaping ability in an effort to live up to their own ambitions for the future. In doing so he points to Robert E. Goodin's "all-affected principle," which roots personal agency in precisely this expanded understanding of democracy. This is in turn crossed with inclusive and participatory aspects, which potentially give rise to new forms of social normativity and solidarity. Hübl, for his part, elaborates on the relationship between creativity and morality. His understanding of creativity is of particular interest to us, as he identifies creativity as a marker of progressiveness and qualifies his observations with evidence from the World Value Survey – a collection of survey-based data said to measure moral and social progress.

The second topic area addresses methodological approaches, including that of the aforementioned contribution by *Shashi Matta* and his students from the WFI Ingolstadt School of Management at the Catholic University of Eichstätt-Ingolstadt. In it, they present a practice-oriented tool for idea gen-

eration and demonstrate creativity par excellence. This anthology also finds the student perspective represented, as Matta demonstrates a resonant grasp of teaching-and-learning 'at its best.' *Ruth Mateus-Berr* introduces physicist Karen Barad's notion of 'entanglement' to art education teaching practice, thereby accomplishing a transformation important to our concern: she sees the other, engages with it in a nuanced way, and transfers it to her own discipline, i.e., she 'entangles' while simultaneously reflecting on entanglement. *Anna Maria Loffredo* takes up the question of good teaching, since the fostering of and challenge to creativity are not exclusive to the arts. In a context of growing geopolitical uncertainty, she proposes a transformation design based on *ikigai*, a Japanese concept that involves cultivating a sense of purpose in life. In a lifeworld of seemingly endless, accelerated digitization, East Asian principles of self-awareness and self-respect are gaining relevance as a means of developing a lasting sense of 'well-being' on the part of learners and teachers. A similar focus on cultivating social cohesion through education can be found in the essay by *Charlotte Axelsson* and *Mela Kocher*, a text that elaborates on their higher education concept PHEW. The concept follows on from marketing and consumer-oriented gamification while also going beyond it with a number of playful suggestions. Taking a cue from Johan Huizinga's *homo ludens* concept of play, the authors look at ways to make the joy of experimentation – a hallmark of the arts – the central feature of effective teaching and learning. *Rainer Wenrich* turns his attention to art and design forms in a contribution that reveals dance and fashion to be a synergistic connection between Merce Cunningham and Rei Kawakubo. Both 20th-century protagonists break with conventions to initiate change in and between the arts. Their histories and the aesthetic principles they engendered find reflection in a corresponding environment marked by other visionaries including John Dewey and the faculty at Black Mountain College. Wenrich's example sketches a historical consciousness as impetus for future-shaping possibilities overall.

The third topic area looks at change and design education, for which *Barbara Holzer*, in collaboration with Andrea Reiter, designs a proverbial architecture of thought. The authors call for a redefinition of architects' occupational profile in view of the need to respond to climatic, pandemic, but also socio-cultural change. Such a shift would entail a change to how architecture is taught in a higher education context, a necessary step to fulfilling the societal demand for living and working environments that manifest diversity and inclusion. In a similarly practice-oriented way, *Johannes Braumann* propos-

es an objectified engagement with so-called 'algorithmic thinking.' The construction and use of robots (in the arts) are bound to become more relevant in future teaching-learning environments than they have been until now. He highlights the design-educational aspects of our interdisciplinary endeavor to enable learners to merge artistic and technical thinking and apply that approach in the future. Similar cross-connections appear in the essay by *Nicole Kirpalani*, to the extent that the same problem is addressed from different angles and with different interests, albeit from an economics perspective. Her essay on 'fast' versus 'slow fashion' provides an overview of the fashion industry's economic influence, with an eye to the parameters that designers in particular but also anyone in the field – i.e. anyone involved in the many steps of the production chain – should include in their considerations as changemakers. The contribution illuminates the highly complex cycle from the corporate and consumer perspectives, with the aim of seeing the changes needed to bring more sustainability to the sector.

The fourth topic area gathers contributions on change in arts and cultural education. *Henry Keazor* takes the multifactorial perception of cultural identity as an opportunity to examine the personal and national identity issue in the applied field of music. Focusing on the music video as an object of media-historical analysis along with the founding history of the American music channel MTV, he traces a pop-cultural alliance wherein particular (and especially US-American) narratives are perpetuated and produced between music and politics. Insight into art and media history enables deeper reflection on how memories (re)write history and the future. *Elif Ucan* of *Spoke Context* addresses her mission of empowering young people and reinforcing a sense of cultural identity and community through works of art in public space. Ucan co-initiates these currently mostly US-based projects with artists and develops them in tandem with local schools. We appreciate her confident teaching of practical 21st-century life skills to teenagers and particularly her non-governmental project management style – one she explains step-by-step in terms of a didactic approach, a method-based one, and a best-practice example. Ideally, her essay will inspire readers to get creative and launch similar projects of their own. The structuring of partial contributions is meant to highlight both the individual in relation to the whole and the importance of the specific in the context of the general. It also allows contemporary discourses to be developed prospectively on the topic as opposed to remaining confined to the typical papers within one's own field of study. It is about engaging in a necessary re-

think of one's own discipline with a view to tomorrow, and about putting the previous form to the test. Although the modcasts already attempt to meet the OECD requirement for OER, all essays in the book will uniformly be published in English. This has been done in the interest of promoting international comparability.

A further important aspect involves the fact that publications of this sort continue to constitute the gold standard of achievement in academic circles. Inclusion in anthologies such as this one is also essential to attracting third-party funding – another hurdle on the way to scholarly success. The format allows us to put the various (shifting) modes and cultures of learning at our disposal, particularly in the field of didactics. Modcasts have the advantage of providing a low-threshold, alternative point of access for learners. Their context of use could be expanded to include work with high school students, for example, or university-level learners with particular interests. It could just as well benefit an academic community looking to develop its digital teaching and learning culture. The modcasts also show additional, illuminating cross-connections, as initiated and drawn from supplementary academic and interdisciplinary content related to our field or from our local perspective. The point, in other words, is connectivity. It is a process we have committed to as 'content creators,'[40] a specialized interplay made possible by links to websites, videos, archives, etc. Learners can decide for themselves how they wish to interpret the material and are free to choose where they wish to turn their attention from the main argument and momentarily delve into partial aspects. Scholarly publications typically rely on footnote references for in-depth contextualizations in a given argumentation – something a 20-minute lecture cannot do. Neither form is better or worse than the other, neither can replace the other, but the wide range of synchronous and asynchronous, traditional and innovative parts evokes other aspects of didactics and speaks to learners' various receptive channels. Compounding this is a self-critical attitude toward university educational offerings, the quality of which must withstand comparison with that of non-formal education providers (including YouTube and television formats). We believe that universities and their stakeholders have

40 Digital content creation (DCC) in the form of videos by Berner & Loffredo (2021b), for instance, has been presented as a best-practice example of e-learning. Taking its cue from their field of art education, it has been brought into the general discourse on higher education didactics.

a duty to act accordingly and to be at least as good or to offer something more concise than what those providers are able to present.

This leads us to another motivation for our higher education considerations, namely the translation of media-specific peculiarities and characteristics of educational offerings, and placing these in relation to one another. Speaking and writing about the modes chosen in this lecture series requires a complementary translation effort both formally and in terms of content. Consequently, our wish for our own further development would be to add to the previously noted "from now to where, from here to there" the following words: "from print to enriched PDF." The incorporation and encouragement of interactive elements in scholarly publications – like those integrated in the modcasts, for example – would be a well-timed step toward a future of teaching and learning. This also includes how publication projects can become research projects in higher education by enabling precisely these kinds of cross-media connections, quite literally in the sense of user experience design in teaching-learning contexts.[41]

Such an approach opens up innovative spheres of trend research in which universities actively declare their visions of good teaching rather than simply allow them seep through their gears, as it were, depending on whatever education policy happens to be fashionable in a given legislative period at the national level.[42] One could therefore say, "Design is thus also a profession, but beyond that, it is an 'attitude': a stance and position toward this formability of the living world, one that 'allows projects to be seen not in isolation but in a relationship,' as Bauhaus master László Moholy-Nagy put it."*[43]

New paradigms are created; they don't just appear out of nowhere. They are mined from existing elements and remixed or combined into something

41 Flash mobs, for instance, represent a concrete example of media-dependent perception and translation. Writing about them is something different than being able to click on a direct link to various examples with a specific plot, as is the case in a modcast. Such a concept would have to be pushed over the long term in a scholarly book format – one all the more tied to art and design-related content – before being supplemented with other, possibly AR/VR elements involving various hardware and interface formats (e.g. tablet, reader, computer, smart phones). Here, too, we find a chance, purely in terms of media, to grant readers or users freedom of interpretation and autonomy in the spirit of *Bildung* as we understand it.

42 The association New Education Circle (NEC, 2000), for example, is indicating an attitude that would consider design as a new driver of education (cf. https://www.designtag.org/2020/12/new-education-circle/ [23 Nov. 2021]).

43 Kosok, 2021, p. 28.

new. The new emerges from what is already there. It just has to be seen. This kind of seeing requires practice; it requires different sensibilities. It comes from a sense of something to which we turn out of curiosity, something to which we extend our antennas, as it were, in order to locate it. And if locating it on our own becomes difficult, there are networks of different satellite stations to navigate. These can boost creativity exponentially, since a "swarm of networked collective intelligence forms the cognitive landscape in which the new polymath must resonate."[44] Importantly, the nomadic wandering of an imagination questioning where this journey might ultimately lead is viewed as a communication practice that is not to remain isolated in an academic bubble, or needlessly create artificial concepts removed from the lived environment.[45] The underlying motivation is to engage in connectable interface work such that changes in civil society become visible, large or small:

> The digital university as a horizon of university is to be thought between such future cases – as present future as well as future present, consequently as projection (utopia or blueprint) as well as technological orientation. The digital university experiments with the future of university [education] and provides an imponderable space of possibilities. It is in this space, ultimately, that the university of the future resides. It is no coincidence.*[46]

44 Falconer, 2015, p. 397.
45 Cf. Manovich, 2015, p. 139.
46 Ruf, 2021, p. 180.

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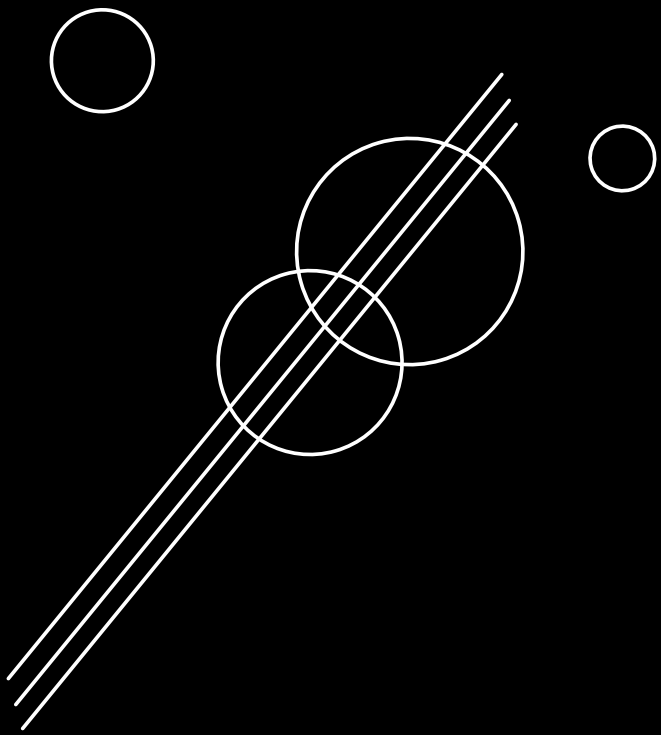
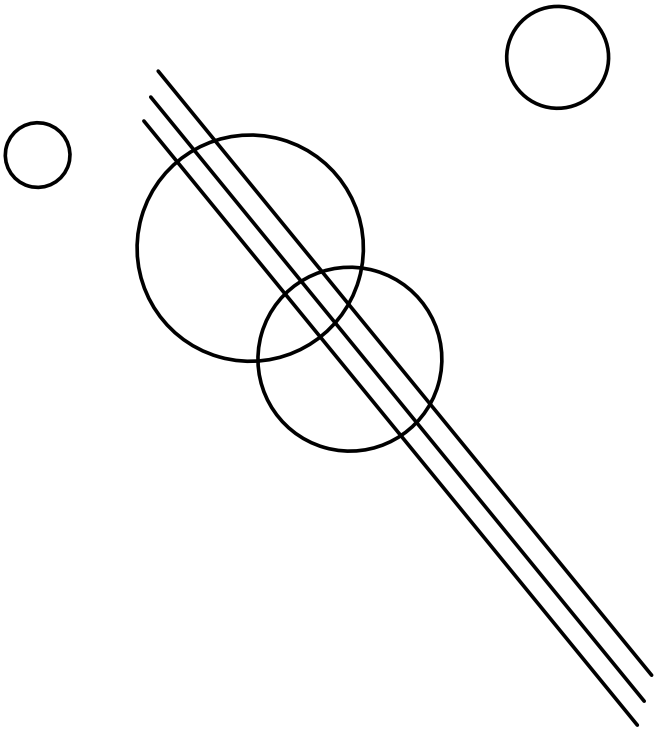
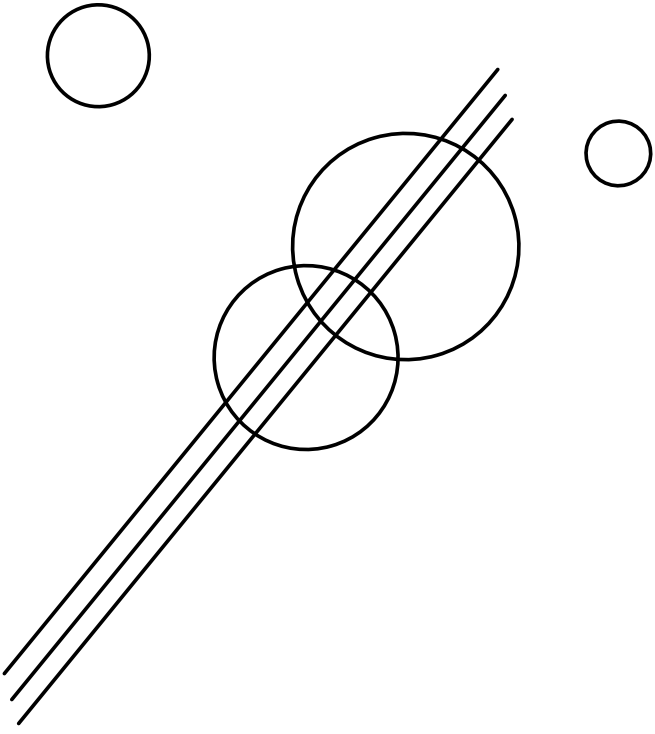
Figures

Fig. 1: Maurizio Nannucci, Changing Place, Changing Time, Changing Thoughts, Changing Future, 2003, Neon Tubes Private Collection, Stetten, Germany. Long-term loan to the Peggy Guggenheim Collection, photo © Anna Maria Loffredo.
Fig. 2: Facade of the Willem de Kooning Academy in Rotterdam, photo © Ossip van Duivenbode, https://www.wdka.nl/ [13 Feb. 2022].
Fig. 3: QR-Code modcast.



Theoretical Perspectives





Democracy as a Promise: Leading from Here to There

Michael Reder

Philosophical research can in principle make anything its focus. In the language of Immanuel Kant, it can ask, among other things, what humans are, what they can know, what they should do, or what they may hope. As these four questions already make clear, philosophical inquiry draws on the whole of (human) reality. Though based on concrete experience, it also analyzes human reality from an abstract meta-perspective. Its aim in doing so is usually not only a reconstruction of reality, but a critical distance as well: Where are contradictions, aporias, or tensions that need to be pointed out and critically discussed? These critical perspectives suggest a utopian potential of philosophy to make human reality its subject and, by doing so, affect possible change in the future.

With its critical (and at times utopian) perspective, philosophy has always had an impactful influence on social dynamics as well. Philosophers have reflected on the present and explored new paths of living together on a theoretical level, and their thoughts have gone on to resonate in practice. Take, for example, the various manifestations of the contemporary technical-scientific world. These, too, are based on philosophical considerations, which (by virtue of being a socially-impactful force) enabled that particular perspective on reality in the first place. Or the ancient philosophers who contemplated democracy as a possible form of coexistence consisting of equals among equals – long before democratic structures were considered and tested in complex, modern-day societies.

Philosophy has always been a changemaker: it has helped shape the world (of tomorrow). And yet it also has a conservative streak, as pragmatist phi-

losopher John Dewey and others have pointed out.[1] After all, philosophical thinking always only begins when people have already acted or tried out something new. As Hegel put it: The owl of Minerva (i.e. philosophy) takes flight only at dusk – that is, 'at the end of the day.'[2] As such, it does not always succeed in creating critical distance; on the contrary, it often tends to reproduce prevailing social structures and opinions and legitimatize them intellectually through philosophical reflection.

This conservative aspect of philosophical thought manifests in its fixation on the present, for example. The French philosopher Jacques Derrida intently considered the extent to which the basic disciplines of philosophy – ontology or metaphysics – have, in their reflections on reality, always concentrated on the present of reality, thus implying a fundamental narrowing of focus.[3] According to Derrida's analysis, philosophers contemplate *Sein* [being] and are inclined to make the most general possible statements about it. Yet in doing so they forget that their general statements about being refer only to the *present* of being. Precisely due to its abstractness, the temporal dimension of being has often been (and continues to be) overlooked. Other philosophers including Martin Heidegger have drawn attention to this fact.[4] Heidegger's thesis posits that being as *Dasein* [being-there, or presence] is always conditioned by the past and tied to the future, especially death. Yet philosophers such as Heidegger are the positive exception. However, Heidegger's philosophy was mostly apolitical, which is why his thinking also implied a conservative streak.

The philosophical mainstream has often seen the truth of being in the present tense. Derrida, by contrast, argues that even a glance at our language shows that every word is bound up with historical references that derive from the past and simultaneously always imply a reference to the future.[5] Consequently, the meaning of terms cannot be fixed in the present, as the occurrence of language is constantly changing. This is a fundamental indication of the structural temporality of being – a consideration to which philosophy has devoted far too little attention. If one is to reflect on how the changing world might be shaped, then it is crucial to focus first and foremost on the temporality of human reality. Bringing this question to the fore strikes me as one of

1 Cf. Dewey, 1928/2003, pp. 79–93.
2 Cf. Hegel, 1820–1821/1986.
3 Cf. Derrida, 1999, pp. 31–56.
4 Cf. Heidegger, 1927/1986.
5 Cf. Derrida, 1996.

the most urgent and important tasks of philosophy. The following contribution will do exactly that with a view to political philosophy in general and to democratic theory in particular.

Democracy's Fixation on the Present

The question of democracy constitutes a key topic in current political philosophy. In this sense, philosophy can be said to react to current political developments in which democracy appears ill-prepared to meet all arising trends and crises. These structural problems with democracy are particularly serious in light of the global and ecological consequences of political action. It is obvious, after all, that today's political decisions have an impact on people in many other regions of the world. But there is more: any decision by democratic states can also have massive consequences for future generations, as is evident not least in the example of climate change and its effects. But in both respects it is difficult for democracies to process these global and temporal situations. It seems democracy, too, is fixated on the present. Faced with short election cycles and given the nation-state framework of democratic action, democracies are ill-equipped to factor the global and long-term consequences of their actions into decision-making.[6]

From a philosophical point of view, however, this contradicts an important core characteristic of democracy: not only does it constitute a way of living together that is as fair and just as possible for the demos that lives at present, it also always does so with a binding reference to the future. Democracy wants to make the world better. Again, as Derrida put it: Democracy is a fundamental promise toward the future; the world of tomorrow is to be better than the world of today. For him, democracy is therefore always in the making, that is, there will never be a complete or ideal form of democratic institutionalization. Rather, democracy is challenged to constantly evolve in order to provide appropriate answers to the crises of its time. In this sense, it is an open promise for both the near and the distant future. As such, and for that very reason, it is imperative to question democracy's fixation on the present, and to find new forms of democratic action. A philosophy that places temporality at the center of its inquiry draws particular attention to that fact.

6 Cf. Reder, 2018b, pp. 81–97.

In view of the global and ecological long-term consequences, one basic mode of democracy elucidates this particularly well, namely representation.[7] Representative democracy has become the accepted form of government in most countries. In essence, democracy means that citizens elect representatives with whom they have a reciprocal relationship. The representatives, in turn, are accountable to those who elected them. These circumstances make it difficult to conceive of the representation of people beyond democracy or of future generations. This is especially true of the latter, where there is no reciprocal relationship to speak of. Future generations cannot vote, and representatives have no direct counterpart to whom they can be accountable. The consequence of this is that the demos of democracy is often limited to citizens who are currently alive and, thus, eligible to vote. In fact, it is often even limited to ruling, wealthy groups in a society.

A philosophy that wants to rethink temporality and shape the world of tomorrow is therefore challenged to critically reflect on such structural limitations. The past ten or more years have seen a great deal of intensive discussion around the *All-Affected Principle*,[8] for example. The philosopher Robert E. Goodin pointed to this principle in raising the objection that the standard model of representation is too narrow. If democracy means that everyone affected by a democratic decision may also participate in it, then new forms of representation must be sought. For instance, given the massive impact such decisions can have on future generations, they must be adequately represented in democracies – even if they are unable to articulate their interests in the traditional sense. Political philosophy scholars are currently discussing what specific forms this kind of representation might take. Possibilities include changes to the right to vote (e.g. children's or parents' suffrage), anchoring the interests of future generations in the constitution or establishing ombudspersons with the power to veto laws that do not adequately consider the impact on future generations.[9]

There is as yet no final answer to these questions, let alone any one mode of representation that has prevailed in this context. In the sense of Dewey, it is rather about an experimental further development of this basic mode of democracy. Under the heading '*creative democracy*,' he drew attention to the

7 Cf. Tamoudi, Faets & Reder, 2020.
8 Cf. Goodin, 2007.
9 Cf. Köhler, 2017.

fact that democracies are always continually challenged to creatively advance and develop their institutions and practices with a view to newly-emerging crisis experiences.[10] It is incumbent upon all citizens, equally, to participate in this process. For him, the basic characteristic of democracy is therefore its open, experimental development. Accordingly, he also views this adaptation and openness to new democratic modes in terms of a promise for the future. Against this sketched theoretical background, the following formulates four critical insights toward the possible philosophical spelling-out of this broadening of the democratic idea.

Expanding the Democratic Idea for a World of Tomorrow

It we are to think philosophically about the aforementioned expansion of democracy, and in order to develop a model of democracy capable of shaping the future, it is important to ask *firstly* what the social basis for this is in the first place. Noteworthy in this regard is the fact that many theories dealing with democracy and the future are rooted in a methodical individualism in the sense of liberalism. The basic unit of liberal theorizing is the individual. Social and societal contexts always emerge only in the second and third steps. This is also the basis for the normative core demands of liberal theories, which aim, above all, for the freedom and autonomy of the individual.[11] Not least, however, this focus on individualism as a basic theory of society leads to interpreting future relationships as subordinate.

To counter this, one might propose a model that focuses more on the social relationality of people in the tradition of Georg Hegel or Jean-Jacques Rousseau. As Dewey puts it, associations, i.e. relationships, are the primary constitutive element of the social.[12] It is relationships, interactions and networked practices that have a formative impact on people and society, and these always exist in the plural. This means that, especially in a globalized world, relationships result not in homogeneous units but in a dynamic, ever-branching network of relationships.

Such a relational social concept would also enable a more adequate consideration of temporality. After all, relationships always have a history. People develop out of these historically grown and future-open relationships and are

10 Dewey, 1939.
11 Cf. Reder, 2018a.
12 Cf. Dewey, 1928/2003, pp. 79–93.

therefore fundamentally related to them. Consequently, relationships always have a diachronic character. If democracies are understood more through this lens, namely as a relational concept, then it also becomes clear that they are always embedded in temporal relations and must be thought diachronically. Such a social concept can serve to release philosophical thinking about democracy from its fixation on the present and shift focus to the future.

Secondly, in normative terms, contemplating democracy on the basis of a relational social concept is less a matter of justifying abstract principles than one of reconstructing the specific, crisis-informed experiences that initiate the formation of shared values. This can be seen very clearly in the example of climate policy. People all over the world are already experiencing the consequences of climate change, which pose an imminent threat to their current way of life. This will be all the more true of their children and grandchildren. It is precisely these experiences that give rise to such values as climate justice. Philosophy should start with a reconstruction of the diverse range of experiences, by making audible experiences that are heard too little or not at all. Central to this, from a normative perspective, is the experience of being at risk, and that of vulnerability. Democracy, at its normative core, aims to take these experiences seriously and to find forms of participation that would include the most vulnerable groups and, in doing so, rewrite the idea of equality among equals.

Against this background, it is only too understandable that a political philosophy should not set its sights on abstract principles – those of climate justice or intergenerational justice, for example. Such principles are always in danger of becoming too far removed from reality, and of negating the diversity of experiences in a top-down model or hastily subsuming them under an abstract generality. It is rather a matter of looking at the plurality of values in their overlaps and interdependent relationships, and in doing so, understanding how new normative foundations for democracy can be developed.

The context also calls for a critical discussion of existing, seemingly unquestioned distinctions. One such distinction would be that of the generations living today versus those of the future. A precise analysis shows that future climate policy is usually understood as affecting a period of 80 to 100 years at the most. This means that climate policy is ultimately about our children, who have already been born or are about to be born. Future generations are not a static entity that can be compared to a currently-living group of people. On the contrary, future generations grow out of the current world community as it exists moment-to-moment and, because of this relationship, must al-

ways be considered both normatively and politically. Consequently, it has less to do with what we owe these generations at a later date. Instead, normative claims emerge from a dynamic, diachronic relationality, which must therefore be articulated and politically formed.

From a normative perspective, this insight might *thirdly* be conceptualized in the notion of solidarity, which seems particularly important for the future of democracy. It is, after all, the concept of solidarity that highlights the misleading nature of the kind of rational voluntarism often represented in liberal theories. Moreover, people are always already involved in a complex and dynamic web of social relationships and interactions. Solidarity means nothing more than recognizing that people live in social relationships, and it is these relationships that give rise to normative claims.[13]

That said, debates around solidarity have also revealed a dark side to the emphasis on it. In some cases, solidarity is interpreted as a closed formation, e.g. in the sense of an essentialist concept of culture or a strong sense of community. And yet it is exactly at this point that relationality fades from view, particularly at the margins. This blind spot is also evident in current discourse surrounding the consequences of the COVID-19 pandemic: in quite a few places, the demand for solidarity refers primarily to a (more or less) closed community and ignores the manifold references beyond this community. The coronavirus pandemic's impact on the poorest people in the Global South or the unequal global distribution of vaccines is rarely addressed.[14]

Inherent to solidarity is always the understanding that one must to go beyond the borders of one's own community or nation. Much of it has to do with comprehending the consequences of political decisions and action undertaken by countries in the Global North, and yet (many) people in completely different regions think in terms of global solidarity.[15] In the sense of a pragmatic theory of solidarity, the demand for global solidarity implies that people at different nodes of the relational network feel solidarity with other people (or living beings), and thus bring their concerns into the political field of vision. Solidarity also means not falling into a presentist thinking of the political, which again is inherent in many liberal political theories.[16] Ultimately, the re-

13 Cf. Lessenich, Reder & Süß, 2020, pp. 310–326.
14 Cf. Reder & Stüber, 2020, pp. 443–466.
15 Cf. Gould, 2007.
16 Cf. Tamoudi & Reder, 2018.

lational structure upon which the demand for solidarity is based in social theory can only be meaningfully conceived as dynamic-diachronic.

Solidarity in this politicals form pays particular attention to the crises of the time and seeks transformative solutions.[17] By referring to political solidarity, we ask what potentials societies might have to respond to these crises; how, for example, political commitment can be awakened beyond institutional solutions, and how fierce commitment to the poor, the precarious, the excluded – in short, particularly vulnerable people and groups – can be strengthened. In this respect, political solidarity is critical of existing conditions. It wants to work in a transformative way toward the society of the future, and hence is a fundamental and far-reaching critique of existing political and economic conditions.[18] Thus understood, solidarity is a suitable normative category for transforming the relational approach into a globally – and also temporally sensitive – model of the democracy of the future.

Fourth, linked to such a normative understanding of normativity and solidarity is an alternative conception of *the* political, one oriented on the demos as a voice of the excluded and vulnerable, as Jacques Rancière, for example, puts it.[19] The demos of democracy is neither the sum of rationally acting citizens nor a homogeneous group. Instead, given the deeply far-reaching, global and temporally intertwined consequences of political action, it will have to be continually redefined. Thus, the key question becomes: Who is particularly affected by the decisions of democracies and therefore also belongs to the democratic demos? Democracy as a promise for the future, one that aims to shape the world of tomorrow in a utopian sense, is an open discussion about exactly this question. Who should be heard and considered, and therefore also be allowed to participate in political processes? This is also a query that can never be answered.

The question shows once again how urgently a global expansion of the democratic idea is needed at present. Though many theories of democracy continue to strongly evince a nation-state context, the major questions of the future are obviously of a global nature. Consequently, there is a need for increased recognition of and engagement with global relationality. Only then can we create a basis for understanding the democracy beyond the na-

17 Cf. Scholz, 2008.
18 Cf. Adamczak 2017.
19 Cf. Rancière, 2002.

tion-state framework. This is the great challenge for the future, both philosophically and politically.

Education, as Dewey understood it, is a central element of the political sphere. Education must not be understood as a subordinate task in the sense of educating offspring.[20] On the contrary, democracy is the critical examination of people's diverse experiences and the start of an experimental learning process. The goal of education is the collective processing of experiences, and the search for suitable ways to critically address the democratic frameworks, e.g. the limits of the demos, again and again. This thesis presupposes that democracy must not be reduced to its institutional arrangement. Democracy means that citizens and political decision-makers question their decisions anew every day and that everything is up for discussion anew. Democracy is constant renewal. Here, too, the global and temporal dimension must be more firmly integrated into the diverse educational processes at all levels.

Conclusion

Philosophy has a conservative streak, one that becomes especially apparent when it simply reproduces existing structures on an abstract level. And yet it also has a progressive character, which is important when it comes to contemplating what form the world of tomorrow should take, and how that change should be affected. In this context, it is above all a matter of looking critically at existing formations of democracy. It is precisely this critical stance that gives rise to new forms and modes (for example, with regard to representation) that can then be tested in creative, experimental ways. New forms of an institutionalization of the democratic idea, e.g. representation for future generations, will not by themselves help to shape the world of tomorrow in any concrete-utopian sense. For this, as Gramsci explains, current hegemonic structures – a capitalist world order, for instance – are given far too much importance. We see this in the persistent tendency of almost all democracies around the world to externalize costs, for example.[21]

A critical attitude in the sense of a broadening of the demos, a creative self-education and a global expansion of democracy have the ability to take such hegemonic structures to task, notwithstanding the persistence. This democratic attitude is interested in an open future that can be shaped. De-

20 Cf. Dewey, 1916/1964.
21 Cf. Reder, 2018a.

mocracy in this sense is a social potential of resistance – one that must be continually re-activated, one that constitutes the promise of democracy at its core. Democracy aims for solidarity as a social structure and critique of existing conditions. To shape the world of tomorrow in solidarity is to deal critically with the present and to open experimental paths for the future. Such an undertaking requires a philosophy that is creative, and that impacts and engenders new ways of thinking and acting beyond traditional boundaries.

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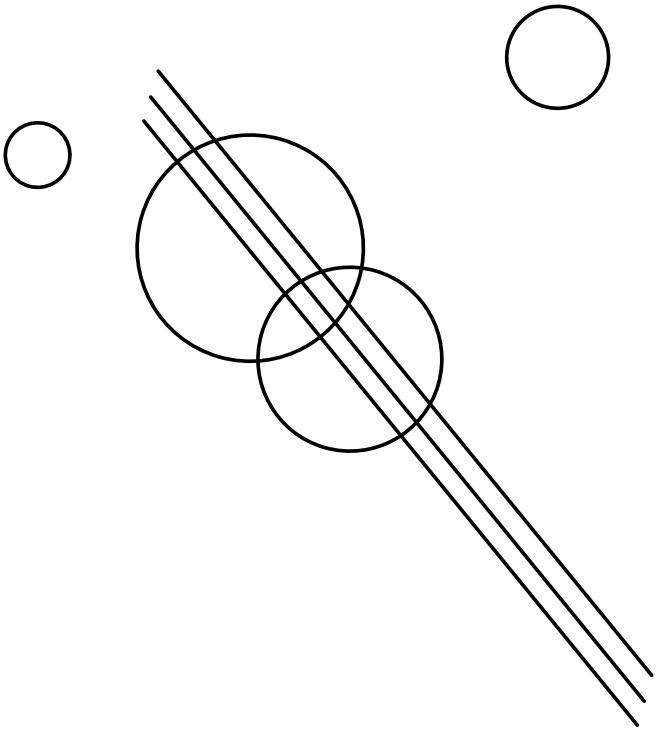

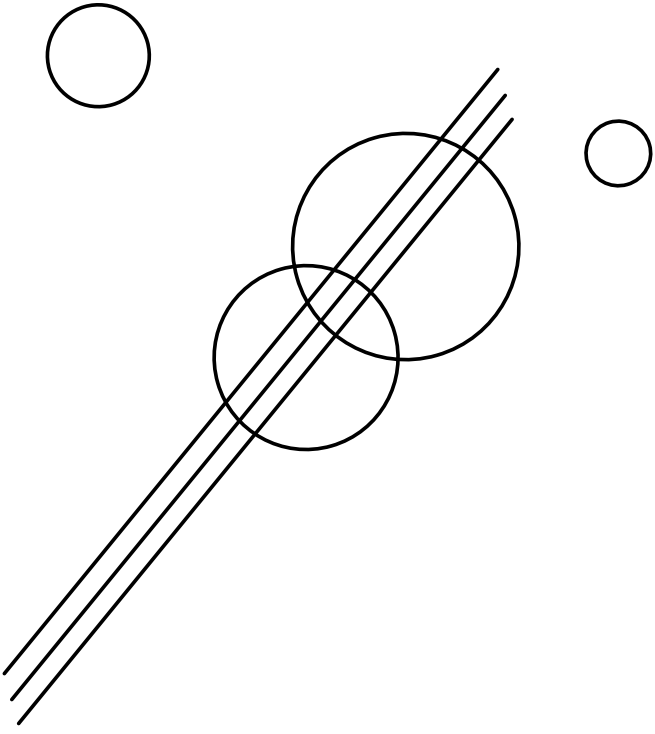

The Culture of Openness: How Creativity Fosters Moral Progress

Philipp Hübl

The major political upheavals of recent years have invariably followed the same pattern: rapid progressive change generates an authoritarian backlash. This could be observed after the Arab Spring movement, in the case of Brexit, Donald Trump's election as U.S. president, and the successes of right-wing populist parties in Europe. Each of these instances found younger, forward-looking urban voters – who demand progress and emancipation – clashing with older, rural, occasionally even reactionary conservatives intent on preserving the status quo.

This polarization between progressives and conservatives appears in many variations and is the subject of many fields of study. While the terminology and cases differ to some extent, the basic features are more or less the same. Two basic ideal-typical perspectives are opposed to one another: that of cosmopolitans and that of traditionalists. Or, more generally, an open mindset versus a closed one.

Drawing on worldwide research, Jonathan Haidt and Jesse Graham propose a *moral foundations theory* that introduces six emotion-based principles of everyday morality, so-called 'moral foundations' that shape our moral actions and judgments.[1] Widespread principles in Western industrialized countries,

1 To qualify for principle status, mental mechanisms of moral evaluation must meet five criteria: First, they appear globally in normative judgments about others. Second, they trigger emotions (such as outrage, disgust, or compassion) upon which moral value judgments are based. Third, they are culturally pervasive. Fourth, there is evidence of an

particularly among liberals, include *care* (i.e. compassion for the weak), *fairness* (which manifests itself in our sense of justice), and *liberty* (that is, the desire to live without oppression and pursue autonomy, understood as self-realization). In the rest of the world and among conservatives in the West, these three principles are joined by three other, more or less equal-ranking ones: *authority* (i.e. a clear, vertical social hierarchy); *loyalty* (group membership and distrust of strangers and outsiders); and *sanctity* (the idea that when it comes to such issues as sex, life, and death, some things – such as heterosexual marriage, for example – are considered 'sacred,' 'pure' and 'natural,' while others – such as homosexuality and abortion – are deemed 'unholy,' 'impure' and 'unnatural.')

Michele J. Gelfand and her colleagues draw a similar distinction between progressive *rule breakers* and conservative *rule makers*. They have shown that people are more likely to behave according to rules when they live together in poorer regions and in confined spaces, have limited food availability, and are at risk of violence or suffering the effects of natural disasters such as drought and floods.[2] So-called *tight* countries or cultures are those in which people tend to be collectivist, dutiful, cautious, and more controlled, and where more self-control is expected of individuals in social situations such as a school or workplace setting. By contrast, the more affluent *loose* countries are those in which people are more individualistic, permit a more diverse range of behaviors and expect less self-control. They see little problem in people singing at the top of their lungs in the street, for example, or children laughing during school lessons.

Randy Thornhill and Corey Fincher come to similar conclusions in a meta-analysis of global attitudes, where they distinguish between *collectivists* and *individualists*.[3] Collectivists harbor more distrust of strangers, form a strong group identity, and think little of individualism and self-realization. Individuals in these cultures see themselves more as part of a group. Collectivist countries have significantly more gender inequality than individualist countries, and sexual morality is rather strict. People are very religious, tradition-conscious, and tend to see little value in intellectual autonomy.

innate, basic disposition for the emotional response in question. Fifth, they fit into evolutionary models of human cooperation (cf. Graham et al., 2013; Haidt, 2012).

2 Gelfand collected data from 6,800 people from 33 nations (cf. Gelfand et al., 2011; for a discussion, see Gelfand, 2018).

3 Cf. Thornhill & Fincher, 2014, pp. 88–89.

A recent comparative study of polarization in Europe (Germany, Poland, France and Sweden) points in the same direction. So-called *defenders* have a more ethnic idea of national belonging, feel threatened by foreigners (especially Muslims and refugees), are dissatisfied with democracy and feel unrepresented by the state.[4] The reverse is true for *explorers* on the progressive fringe. The study's findings are compatible with David Goodhart's analysis of the situation in England, where more conservative *somewheres* (who are more locally and regionally oriented and critical of immigration) contrast with more progressive *anywheres* (who are more mobile, educated and open to immigration and diversity).[5]

More general considerations from evolutionary psychology and biology suggest that traditionalism and cosmopolitanism express two basic working mechanisms of organisms. Paul Rozin describes the phenomenon, which is now known as the "omnivore's dilemma." Since the earliest humans were omnivores, it was advantageous to be neophobic, as new foods might be toxic or contain dangerous germs. At the same time, it was also advantageous to be neophilic, as the earliest humans were forced to try and adapt to new foods as soon as sustenance became scarce. Both attitudes were potentially deadly. This dilemma continues to resonate in the distribution of our dispositions: the segment of the population that can be characterized as *neophile* likes to try new things, while the *neophobe* segment prefers to stick with what they know.[6] Even more generally, it could be about two basic biological principles, namely *stability* and *flexibility*. Stability ensures that an organism maintains its functions. Flexibility is expressed in an organism's need to gather new information about its environment.[7]

A summary of these approaches reveals the following, rough picture: closed-minded individuals are traditional, conservative and neophobic. They prefer clarity and simplicity, order and collectivism, duty and rule-following, and tend to opt for more authority. They direct their basic orientation toward the past, the status quo. Open-minded individuals, by contrast, tend to be cosmopolitan, progressive and neophilic; they prefer diversity and complexity, self-determination and individualism, creativity and rule-breaking. They tend to reject authority and are oriented toward the future, which brings the new.

4 Cf. Back, Echterhoff, Müller, Pollack & Schlipphak, 2021.
5 Cf. Goodhart, 2017.
6 Cf. Rozin, 1976.
7 Cf. Hirsh, Deyoung & Peterson, 2009.

The Roots of the Creative Class

Those who see value in the new are likely to view creativity in a positive light. This is hardly surprising, as creativity is the ability to create the new – one could also say the unknown, the different. The 'new' in this sense is not to be understood as *token novelty*, that is, as new individual objects or events, for the reason that every newly created thing is – quite trivially – ontically new, because it did not exist before. Events are likewise unique and new in themselves, as they happen only once at a specific place in space and time. The 'newness' of creativity refers rather to *type-novelty*: creative or, more generally, innovative people create new types. This is creativity in the broad sense. It encompasses straightforward problem-solving that provides an innovative answer to a question, including such diverse technical innovations as scotch tape, the smartphone, urban delivery services, or the sponge city, an urban construction model for flood management. Another aspect of this broad concept of creativity is artistic creativity in the narrower sense, a type of creativity more characterized by 'original' thinking.[8] Artworks in the visual arts, music or literature do not provide innovative answers to existing questions, but brings different, previously disparate elements together in a completely novel way. If creativity is taken to contain both aspects, then it is easy to see why fields as diverse as economics, sociology and cultural studies view creativity as the hallmark of modernity. In his book "The Rise of the Creative Class," Richard Florida observes that modernity is not primarily a technical transformation, but first and foremost a cultural one.[9] To put it roughly, technology does not lead to social change; instead, progressive people meet in more socially-diverse places and then come up with new ideas. By that logic, hipster cafés, an underground music scene and an openly lived gay culture in cities are strong predictors for future cultural and technical innovation. Andreas Reckwitz concurs in his book "The Invention of Creativity,"[10] in which he notes that the creative economy – i.e. industries including media, arts, film, design, music, architecture, advertising and cultural industries as well as digital companies – spearheads social change. Related to this is Gernot Böhme's analysis that we live in an age of *aesthetic capitalism*. The flood of new products we consume are not primarily developed to satisfy people's 'needs' – as most people

8 Cf. Kaufman & Beghetto, 2009.
9 Cf. Florida, 2002.
10 Cf. Reckwitz, 2012.

in industrialized countries have more than they need to live – but to awaken ever-new aesthetic 'desires' in us, whereby the focus is not on commodity value but exchange value.[11]

Nevertheless, the tacit assumption behind these observations is that we want the new because it fulfils our desires. Since the new is appealing in itself, creativity and innovation hold a draw for us and we practice aesthetic capitalism. Yet the assumptions of Florida, Reckwitz and Böhme have three theoretical gaps. The first is about specification: who does the new individually appeal to, and why? After all, as the mentioned polarization between progressives and traditionalists shows, not everyone embraces the new with equal enthusiasm. Secondly, what is the communicative role of an interest in creativity? After all, we consume for more than just ourselves; much of it has to do with our social representation. And thirdly, does a culture of aesthetics cause moral progress? So far, we have only been able to observe a correlation.

Here is my response to the first question: The connection between aesthetics and morality (broadly understood here as our values and norms, including political attitudes and ideas of lifestyle) is no coincidence, as those who exhibit pronounced 'openness' as a personality trait encounter moral, aesthetic and cognitive values in the new. The answer to the second question is that we typically communicate our moral identity. Creativity is the expression of openness par excellence, and openness is in turn a signal of progressive morality. Therefore, creativity is a strong *progressiveness marker*. As to the third question, I claim that progressive morality depends not only on genetic factors and a safe environment, but also on a 'culture of openness' that teaches us through education, peer- and cultural influences how to deal with diversity, ambiguity, and complexity. I will substantiate these three theses in the following.

The Anti-Authoritarian Personality

Creativity goes hand in hand with a progressive morality in which authoritarian, rigid and collectivist thinking – as found especially in religions – is frowned upon. This is no coincidence. After all, openness to moral and aesthetic diversity is more than just a feature of the present; it is also an expression of a progressive temperament, as research in personality psychology and other fields has demonstrated. Studies suggest that personality traits shape not only our aesthetic preferences, but also our moral identity. They show, for

11 Cf. Böhme, 2016.

example, that the five traits of *openness, conscientiousness, extroversion, agreeableness,* and *emotional instability* (also called *neuroticism*) are independent of one another, vary among individuals, and correlate with lifestyle and political preferences.[12] Openness and conscientiousness have been found to be particularly important factors for moral and political dispositions.[13] People with a high degree of 'openness' are *neophiles*, which is to say they like that which is sensorially and cognitively new and special, for example intellectual challenges, surprises, interesting books and new foods. An individual with a high degree of openness values diversity, ambiguity, vagueness, abstraction, uncertainty, diversity and complexity, along with breaking with tradition, old authorities, and the status quo.[14] Also typical of very open-minded people is a style of thinking that, at first glance, combines fundamentally different topics.[15] Perhaps unsurprisingly, very open-minded people hold significantly more progressive values than the population average, as global research shows.[16]

Traditionalists, by contrast, score lower on the openness scale. They are inclined to favor conformity and tradition, are opposed to change, tend to shy away from complexity and prefer clarity and 'closure,' that is the dissolution of tension. Conversely, a high conscientiousness score is an indicator of conservatism. Conscientious people are guided by a sense of duty, plan ahead and prefer stability, order, structure and categorizability.[17]

The Progressive Revolution

For all the apparent differences between open and closed mindsets, industrialization and globalization have, on average, shifted the values of nearly all people toward the progressive side, particularly in Western industrialized countries. In short, the world has become more open. Evidence for this can

12 Cf. Matthews, Deary & Whiteman, 2003; Polderman et al., 2005; Hibbing, Smith & Alford, 2014; Talhelm et al., 2015.

13 The so-called Big Five personality test is one of the most reliable in psychology, even though it is still disputed today whether one should assume more and different characteristics (cf. Paunonen & Ashton, 2001). Whether personality traits form political sentiment or both aspects, personality and political sentiment, have a common cause such as these meta-traits is still disputed today, but irrelevant for the present analysis (cf. Verhulst, Eaves & Hatemi, 2012).

14 Cf. Matthews, Deary & Whiteman, 2003.

15 Cf. Nettle, 2006.

16 Cf. Sibley & Duckitt, 2008.

17 Cf. Mendez, 2017.

be found in the World Value Surveys. For some 40 years, these global studies conducted by Ronald Inglehart and colleagues have tracked the values and attitudes of people in every inhabited region in the world.[18] More than 30,000 publications are based on these data.[19] One important finding is that virtually all countries have seen two progressive shifts in recent decades, which continue to this day: The first is the move from a traditional to a secular-rational society in which religion has little or no influence on politics and everyday life. The second is the shift from a collectivist to an individualist society. People in collectivist societies hold 'survival values' because they are primarily concerned with ensuring material security and sheer survival. However, as economic prosperity increases, emphasis switches to 'self-expression values.' When this happens, people feel a desire to self-actualize as much as possible; they are longing for a sense of purpose, view their jobs, leisure time and consumption as an expression of their personality, and make more universal moral demands of their own lives and society at large. In other words, people become more open not only morally, but also aesthetically and cognitively as they become more affluent.

Yet modernization and globalization have done more than boost openness in the world. Progressives, by definition open and curious, are in return rewarded by globalization, as it introduces the new: not only new capital, but new people, cultural goods, food, customs, and ideas – in other words, precisely what open-minded individuals value anyway. Moreover, globalization dissolves boundaries that progressives find too rigid, such as national borders, for example, but also conventions like distinctions between cultural identities and stereotypical differences between men and women. Until quite recently, conservatism had been a successful strategy for millennia. In an environment that changed little, and with the paramount importance of survival in smaller groups, most were better off if they stuck with the traditional ways of thinking and doing things.

In light of these studies, Thomas Bauer's cultural analysis – namely that our current age lacks 'tolerance of ambiguity' because we tend to 'unify' the world more than previous generations – seems rather bizarre.[20] For one thing, he does not support his claim with quantitative studies, but with anecdotal

18 Cf. Inglehart, 2018.
19 Cf. https://www.worldvaluessurvey.org/wvs.jsp [10 Dec. 2021].
20 Cf. Bauer, 2018.

examples at best. Moreover, it is not without a certain irony that Bauer himself uses the term 'ambiguity' in an ambiguous way, i.e. not only in the usual sense of the word, but also denoting anything that is not clear-cut. By 'ambiguity,' Bauer refers (often without realizing it himself) to generality, variety, undecidability, uncertainty, arbitrariness, and what in philosophy is called 'vagueness,' namely fuzzy conceptual boundaries – precisely those aspects that open-minded people prefer. He also stops short of distinguishing between moral and aesthetic 'ambiguity.'

Either way, the current situation is precisely the opposite of what Bauer claims it to be. The data so far shows that both aesthetic diversity and moral openness are more important values around the world than they were just a few decades ago, particularly in Western industrialized countries. Inglehart and colleagues' research bears this out for moral change. This observation is also evident in the case of aesthetic diversity. Three examples: An average supermarket in Germany had 3,200 products on offer in 1965. By 2015, it had as many as 11,600 items, while the largest stores today display more than 40,000 products.[21] Just a few tens of thousands of new music tracks were recorded each year in 1950; 2015, by contrast, saw more than six million new recordings come to the market, spread across countless subgenres and crossover categories. The film industry reflects the same tendency: In 1895, the Lumière brothers projected one of the first movies in history at a Paris café; by 1906, the first feature films could be viewed in movie theaters. Today, more than 11,000 films are shown in movie theaters every year[22] – not including content from streaming services.

In the area of morality, Bauer fails to recognize the progressive shift because he does not distinguish between progressive values – which are universalizable and correspond to human rights – and conservative values, which tend to be more parochial, rarely universalizable, and often contradict human rights. For example, he considers it an 'ambiguity trick' that Catholic clergy have tolerated child marriage in Armenia in the past, even though it contradicted the Church's guidelines. Yet this has nothing to do with ambiguity tolerance. At best, it reflects opportunism, because child marriage clearly violates human rights – in contrast to such 'victimless' acts as homosexuality, which

21 Cf. https://magazin.spiegel.de/SP/2016/51/148564978/ [10 Dec. 2021].
22 New music and new movies: Rosling, 2018, p. 62.

the Catholic Church and other religions and traditionalists quite unambiguously continue to stigmatize to this day.[23]

In fact, pace Bauer, we are now better equipped to tolerate moral 'ambiguity,' i.e. diversity and different levels of normativity, than ever before. This is shown not only by the World Value Survey, but also by legislation. Homosexuality, for example, was still a punishable offense in almost every country in the world after the Second World War; today, 31 nations allow homosexual couples to legally marry. Or think of intersexuality and transsexuality, which were socially sanctioned or simply disregarded by many world religions for millennia: and yet as of 1 January 2019, German passports can be printed with *divers* (i.e. "diverse" or "various") as a third category next to the gender categories "male" and "female," though it will take some time for society to accept this as a matter of course. The fact that mental illness is now less morally stigmatized than it was just a few decades ago, and that universities, companies and institutions have been explicitly embracing 'diversity and inclusion' for some years now, points in the same direction.

Distinction through Consumption and Morality

Speaking of morals: our behavior is always a form of self-presentation.[24] In his influential study "Distinction: A Social Critique of the Judgement of Taste," Pierre Bourdieu argues that people expect to benefit from the 'distinction' of their conspicious consumption simply by visibly setting themselves apart from members of poorer classes.[25] His study found that in France, university lecturers and professors prefer Bach's "Well-Tempered Clavier," while 'small tradesmen' and even-level lower white-collar workers favored more popular-taste music such as Strauss's "Blue Danube." Whereas upper-class members of the Parisian elite are more interested in abstract photography and avant-garde theater pieces, workers from Provence have no interest in them.

Consumption – to speak generally of Bourdieu's observation – serves as a marker of group membership. Yet in addition to the income-related vertical demarcation as studied by Bourdieu, there is also a morality-based horizontal axis that holds particular importance to people.[26] Indeed, even in Bourdieu's study, it is striking that upper class cultural consumption indirectly express-

23 Cf. Bauer, 2018, p. 22.
24 Cf. Tosi & Warmke, 2020.
25 Cf. Bourdieu, 1984.
26 Cf. Hübl, 2019.

es the personality trait 'openness' via the sub-characteristics 'complexity,' 'abstraction' and 'avant-garde.'

In our current age, cultural consumption is less a hierarchical indicator of socioeconomic status than one of openness and thus of progressive moral status. This is how Richard A. Peterson and his colleagues have described the 'aesthetic omnivore' – as a category that can be regarded as the prototype of the modern neophile, as these individuals are always looking to be surprised anew. This is not to say that aesthetic omnivores are indiscriminately open to everything, it rather means they are open to *being excited* by anything, but only insofar as it is new.[27] Aesthetic omnivores do not distinguish between high culture and entertainment culture. They are as likely to be entertained at a concert by the Berlin Philharmonic as they are at a Kanye West gig; they are as intrigued by an art house cinema Luis Buñuel retrospective as they are by *Far Cry*, the PlayStation game franchise. But the openness aesthetic omnivores express with regard to their consumption also signals their moral attitude.

I consider communicative (verbal or non-verbal) signals to be *moral markers* if they are used to communicate one's attitude, i.e. one's values and norms, to others, whether consciously or unconsciously. A *marker of progressiveness* is a moral marker that communicates one's progressive attitude to others. While this can be done explicitly through a sticker with the words "Nuclear Power? No Thanks!" or "Fuck Nazis," many markers are used implicitly and often tacitly, as in the carrying of a cotton tote bag. Positive progressivity markers can be used to indicate that a person follows the progressive principles of *care, fairness,* and *freedom*, but also express *openness*; by contrast, negative progressivity markers such as those expressing *anti-authority, anti-loyalty,* and *anti-sanctity* can be used to communicate rejection of conservative and traditionalist principles, including extreme forms of the *conscientiousness* personality trait.[28]

For example, the language of progressive Germans can be recognized by their use of the so-called gender asterisk, which removes the typical masculine grammatical gender of generic nouns into an all-gender encompassing noun (showing *care* and *fairness*); they often pursue self-actualization in the creative industry (*freedom*); they prefer to eat tofu curry for lunch (*openness*), a vegan dish that protects animals from harm (*care*) and at the same time saves natural resources (*fairness*). This could be followed by a cold brew coffee (*open-*

27 Cf. Peterson & Kern, 1996.
28 Cf. Hübl, 2019.

ness) made from fair-trade beans (*fairness*). *Markers of conservativeness* are expressed in a similar fashion, albeit with signals going in the opposite direction.

Art and Creativity as a Progressiveness Marker

In the case of personality traits, self-attribution converges with attributions from others.[29] Open or conscientious people, for instance, are commonly seen as such by other people, which shows that we are able to decode indirect signals of moral identity. Openness does not only manifest itself in lifestyle and consumption, but also in progressive morals. One of the strongest indicators of a high score for the openness personality trait is a strong interest in creativity and the arts. If one were allowed to ask only a few questions to determine the level of openness of subjects in a study, one would have to ask whether they like to visit art exhibitions, read books, write poetry, or make gifts for others.[30] The connection between openness and creativity also manifests itself in people's lifestyle choices. In a pioneering study, Dana Carney was able to show that open-minded people also express their neophilia through interior decoration, for example through photographs and souvenirs of travels to faraway places, but above all through works of art.[31] Social media has proved this connection on a global scale. For example, Michal Kosinski and colleagues studied 58,000 Facebook users with a personality test app that simultaneously requested information about the preferences ('likes') of the users.[32] The data show, among other things, that people with high degrees of 'openness' not only enjoy TED Talks (i.e. popular lectures about scientifically surprising findings), they are also more likely than the average person to favor artists such as Salvador Dalí.[33]

Moreover, research indicates that "creative personality types" interested in art and culture score higher than average on creativity tests and are more likely to vote for left-liberal parties.[34] Progressive students also performed significantly better than their conservative peers in practical creativity exercis-

29 Cf. McCrae & Costa, 1987.
30 For an overview, see Hübl 2022.
31 Cf. Carney, Jost, Gosling & Potter, 2008; see also Jost, Glaser, Kruglanski & Sulloway, 2003.
32 Cf. Kosinski, Stillwell & Graepel, 2013; see also Matz, Kosinski, Nave & Stillwell, 2017.
33 Cf. Youyou, Kosinski & Stillwell, 2015.
34 Cf. Tyagi, Hanoch, Choma & Denham, 2018.

es in which subjects produced drawings and photo essays that were evaluated for creative potential by an independent panel of judges.[35]

Even people who say that sometimes listening to music or enjoying other art forms gives them goosebumps (also known as 'aesthetic chills') are expressing their openness, as this aesthetic reaction to art is found in individuals with high degrees of that personality trait.[36]

The creative class also expresses its moral progressiveness through language. The vocabulary of contemporary art criticism, for instance, is a vernacular of openness and thus a marker of progressiveness. In this context, positive words are 'new,' 'innovative,' and 'curiosity,' as well as 'disturbance,' 'ambiguity,' 'diversity,' 'fault lines,' 'complexity,' 'provocation,' 'questioning,' 'surprising,' 'challenging,' 'unconventional,' 'creativity,' 'diversity,' 'interdisciplinary,' 'boundary-crossing,' 'subversive,' 'dynamic' and so on. These new, high-value words as well as the 'vocabulary of fluidity' of the humanities and social sciences, as Mark Lilla has termed it (i.e. incorporating buzzwords from the academic left including 'hybridity,' 'intersectionality,' 'performativity,' 'transgressivity') also express a rejection of the values of the opposite side (i.e. boundaries, clarity, categorizability and rigidity), and thus position the writer or speaker as opposing conservative morality.[37] The same is true of the jargon of companies and business coaches who wish to present themselves as particularly progressive with the use of words including 'agility,' 'dynamic,' 'imagination,' 'innovation,' 'change,' 'future,' and so on. The increasing use of English words in non-anglophone countries is also an expression of openness through cosmopolitanism: English is the *lingua franca* of the creative class. Yet whatever their intentions, progressives often fail to realize or fully appreciate the ambivalence of creativity: Those who emphasize group symbols might (willingly or unwillingly) exclude others who do not understand the terminology and to whom radical forms of openness are not at all appealing.

The Culture of Openness

On the whole, however, there are advantages to the fact that more people than ever before in the history of humanity are open-minded, as this makes them better at handling diversity, ambiguity and anomalies. As with other person-

35 Cf. Dollinger, 2007.
36 Cf. McCrae, 2007.
37 Cf. Lilla, 2018.

ality traits, only half of the variance in individual openness scores can be attributed to environmental factors, so its expression depends to a considerable extent on genetic disposition.[38] Yet it is precisely environmental factors that are both modifiable and causal in determining the development of openness, as global studies suggest. Inhabitants of countries with material security, a low risk of infection, little violence and good health care are on average significantly more open than those of less industrially developed countries.[39] Even if it cannot always be clearly proven, there is much to suggest that environmental factors are not a mere correlation, but play a causal role in both the emergence of openness as a personality trait and in the adoption of a progressive lifestyle. Another contributing factor is a lived 'culture of openness.'[40] This starts with parenting: parents who show 'warmth' toward their children, for example – thereby communicating security and promoting openness – also serve to reinforce their creative tendencies.[41] Peer influence is presumably even more substantial, as many studies on other traits suggest, for example when it comes to helpfulness or a propensity for violence.[42]

Indirect influence via the cultural environment also promotes at least habitual openness. Cities are a promise of progressiveness. Young people are increasingly moving from the countryside to the city for vocational training, higher education or simply because they can no longer stand the narrowness of their towns and villages. Compared to the national average, young city dwellers vote disproportionately often for progressive parties and significantly less frequently for right-wing populists.[43] Academics and journalists (for whom curiosity is part of the job description) are also typically based in metropolitan areas. Cities are a hotbed for new aesthetic trends, and the attire worn there is more often experimental and unisex than in the countryside. Ethnic diversity is becoming the norm in urban environments, and international cuisine the standard. Those who are gay, lesbian or trans can find like-minded people and expect more acceptance in anonymity. Anyone hop-

38 Cf. Polderman et al., 2005.

39 Cf. material safety (Inglehart & Welzel, 2005; Gelfand, 2018), low risk of infection (Thornhill & Fincher, 2014), little violence (Henrich, 2020), healthcare (Schmitt, 2005).

40 Welzel, 2013; for an overview, see Hübl, 2019.

41 Cf. Guo, Zhang & Pang, 2020.

42 Cf. Tomé, de Matos, Simões, Camacho & Alves Diniz, 2012; Liu, Zhao, Chen, Falk & Albarracín, 2017; Malonda, Llorca, Mesurado, Samper & Vicenta Mestre, 2019; Yu, Siegel, Clithero & Crocket, 2021; for an overview, see Christakis & Fowler, 2009.

43 Cf. Hasselbach, 2021.

ing to try things out or reinvent themselves will find their best chance to do so in the city. The larger the metropolis, the less are social roles predetermined by the environment.

The opposite is also true. Cities not only attract open-minded people, they also make their inhabitants more open-minded. People who are confronted with a diverse array of dialects, accents, languages, ethnicities, fashion styles and non-binary gender identities on a daily basis are inevitably forced to learn to deal with it. Thus, it might not be a coincidence that immigration is closely correlated with cultural as well as intellectual diversity (also called 'viewpoint diversity'). In the U.S., for example, immigrants are more than three times more likely than U.S.-born citizens to be Nobel Prize winners, members of the National Academy of Science, or Academy Award-winning directors.[44] Many studies also show that diverse groups perform significantly better than average in creative work groups and in group problem solving.[45] While it is true, as Robert Putnam has shown, that there is initially little trust between ethnically diverse groups in cities, more recent studies indicate that these mixed environments also tend to boost both the willingness to help one another and the expansion of the 'moral circle,' i.e. compassion towards foreigners and strangers.[46]

Yet cities are not the only significant influence in this regard. The arts likewise serve to train us to think progressively and to 'tolerate ambiguity,' among other things because paintings and sculptures, theater and performances, books and films teach us to deal with vagueness and diversity, and to tolerate complexity and incompleteness. Even the most successful U.S. television programs – blockbuster series such as "The Sopranos," "Homeland," "Game of Thrones," "Breaking Bad," "House of Cards," and "Westworld" – feature characters with subtle nuances and stories condensed to the limits of comprehensibility. The – often torn – main characters commit morally ambiguous or even reprehensible acts, and yet the audience continues to sympathize with them. In other words, art education, lessons in creativity, and other aspects of a culture of openness not only serve to make people citizens of the world, they also train and encourage them to think in more progressive ways. Creativity fosters moral progress.

44 Cf. Putnam, 2006.
45 Cf. Webber & Donahue, 2001; Williams & O'Reilly, 1998; Page, 2007.
46 Cf. Nai, Narayanan, Hernandez & Savani, 2018.

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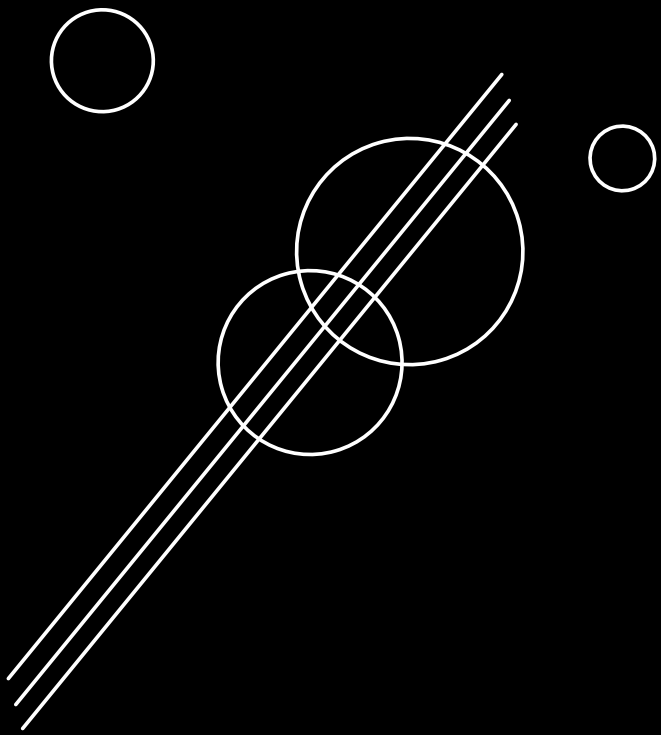
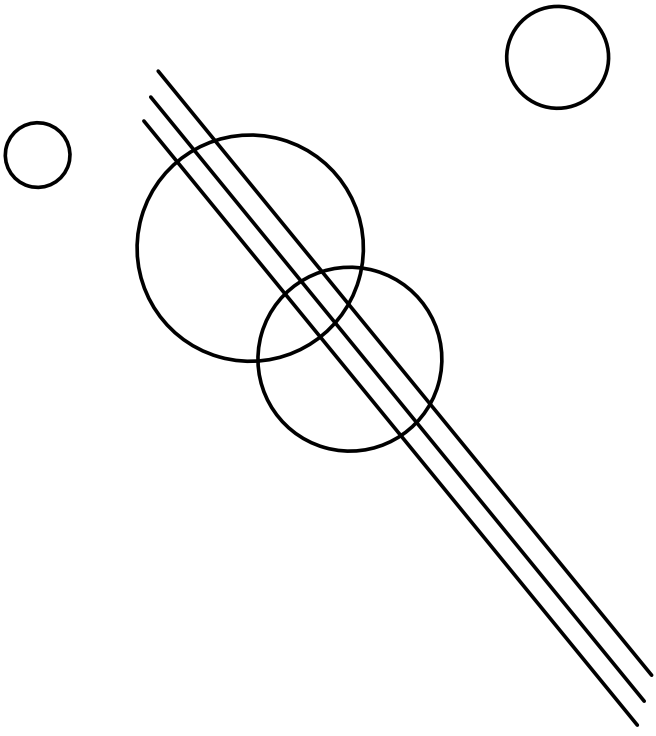
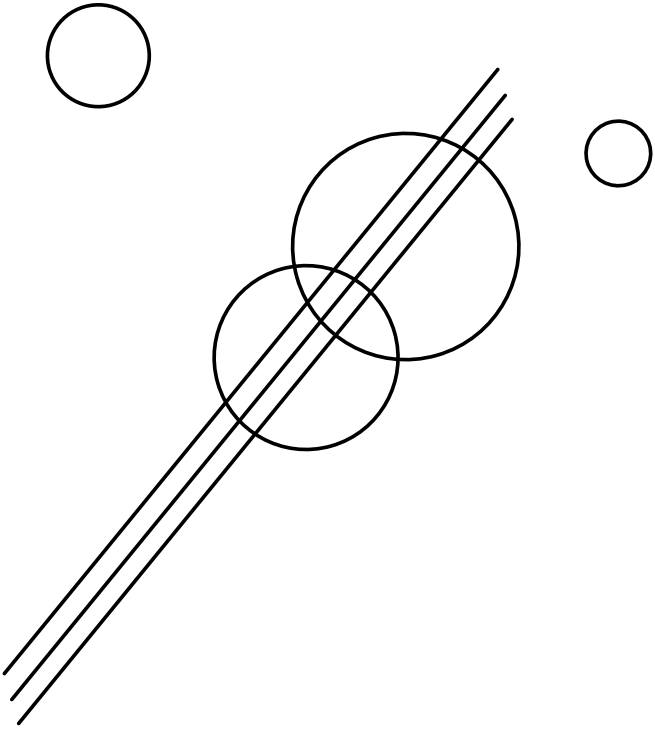


Methodological Approaches





Elevating Ideas – Creating Meaning: A Five-Step Framework from Idea to Reality

Shashi Matta, Claudia Aranibar Chávez, Mahir El, Alina Hansen, Aurore Keller[1]

"There is one thing stronger
than all the armies in the world,
and that is an idea whose time has come."
(Victor Hugo)

Ideas propel us forward as a species. There is no dearth of good ideas, but there is a large gap between those that merely remain ideas and those that become reality.[2] This gap between ideas and their execution has been studied by psychologists in domains like achievement motivation,[3] goal setting, goal pur-

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2 Cf. Belsky, 2012.

3 Cf. Maehr & Zusho, 2009.

suit, goal commitment,[4] implementation intentions.[5] Executing ideas is akin to goal pursuit, achievement, and implementation.

Central to the notion of individual pursuit of goals is 'meaning.' Indeed, researchers have argued that meaningful living is expressed in the form of pursuit of personally significant goals, and that such goal-driven pursuit contributes to a positive life.[6] Meaning and the execution of ideas, or the achievement and implementation of goals, are therefore inextricably linked.

The importance of meaning to human life has been studied by philosophers and researchers in multiple fields for centuries. According to anthropologist Clifford Geertz, "Humans are symbolizing, conceptualizing, meaning-seeking animals. In our species, the drive to make sense out of our experience, to give it form and order, is evidently as real and as pressing as the more familiar biological needs."[7] More recently, psychologists have pointed out that a wide range of psychological motivations are expressions of individuals' impulse to generate and maintain a sense of meaning.[8] Baumeister and Vohs contend that individuals pursue meaningfulness in life, which positively affects their well-being and satisfaction and is instrumental to their constructive cognitions about the future.[9] Indeed, researchers have posited and found that the search for meaning in life is a fundamental human need, and that this 'need for meaning' is associated with intrinsic goals.[10]

Given that goals are a "concretized expression of future orientation and life purpose,"[11] and that the need for meaning is associated with intrinsic goals, we contend that the transformation of our cherished ideas into reality is inextricably linked with the meaning we associate with and attach to those ideas. Further, the content of such meaning is essential to the pursuit and implementation of an idea. The central aim of this article is to develop a framework of the content of meaning that can elevate an idea and help transform it into reality.

The rest of this article is structured as follows. First, we develop a five-step framework based on insights from multiple research streams with the aim to empower those who want to turn an idea into reality. Then the article

4 Cf. Hollenbeck & Klein, 1987; Hollenbeck, Williams & Klein, 1989.
5 Cf. Gollwitzer & Sheeran, 2006.
6 Cf. Emmons, 2003.
7 Geertz, 1973.
8 Cf. Heine, Proulx & Vohs, 2006; Proulx & Inzlicht, 2012.
9 Cf. Baumeister & Vohs, 2002.
10 Cf. FioRito, Routledge & Jackson, 2020.
11 Emmons, 2003.

profiles the application of the five-step framework by four participants. Each of the four participants volunteered to share an idea that is personally significant to them and then applied the proposed five-step framework to their respective idea. They were not only the first ones to apply this framework but also co-authored the present work. In alphabetical order, the second, third, fourth, and fifth co-authors of the essay will then give a first-person account of how they applied the five-step framework to their respective ideas. The article concludes by discussing the theoretical implications of this framework and the implementation of ideas.

A Five-Step Framework to Elevate Ideas and Create Meaning

In order for ideas to be successful, it is essential to transform vision into reality.[12] Whereas psychologists have examined this through the lens of goal achievement and implementation,[13] it is only recently that researchers have linked the pursuit of goals to 'meaning.'[14] Griffith and Graham argue that goal attainment strategies create conditions that allow people to experience meaning.[15]

Our construction of meaning is rooted in how we learn to make sense of stimuli as children. Lindqvist contends that children create meaning in their play, and that, when playing with an object, their imagination is not captured by the object but by the story which gives the object its meaning.[16] This construction of meaning continues to play a significant role throughout our lives, not least in the way we deal with regular uncertainties. Indeed, constructing meaning is crucial for us to cope with personal uncertainty in our pursuit of goals.[17]

This article builds on the link between goal achievement (constructed here as transforming ideas into reality) and meaning. The novel framework developed in this article details five types of meaning that can elevate an idea and help transforming it into reality: physical meaning, emotional meaning, creative meaning, social meaning, and purpose-driven meaning. The following sections describe the rationale for assigning each of these types of mean-

12 Cf. Belsky, 2012.
13 Cf. Hollenbeck & Klein, 1987; Hollenbeck, Williams & Klein, 1989.
14 Cf. Emmons, 2003; FioRito, Routledge & Jackson, 2020.
15 Cf. Griffith & Graham, 2004.
16 Cf. Lindqvist, 2010.
17 Cf. van den Bos, 2009.

ing to an idea and provide practical tips for how to assign such meaning. Figure 1 depicts the five-step framework for elevating ideas and creating meaning.

Physical Meaning

Assigning physical meaning to an idea or goal makes the idea or goal more concrete. It allows for a more elaborate and tangible conceptualization of the idea or goal. Indeed, according to action theory, making goals more concrete by thinking of them in more detail helps in goal implementation and guards against procrastination,[18] and this is especially true for entrepreneurial goals and actions.[19] This assertion is supported by psychological research on construal level theory and procrastination. For instance, McCrea, Liberman, Trope, and Sherman showed that forming a concrete representation of a task reduces procrastination, and that this is independent of any effects of task planning or task comprehension.[20] Congruent with these findings, Hansen and Trope found that individuals primed with a concrete mindset (as opposed to an abstract mindset) experienced time as passing more quickly.[21] This suggests that having a concrete mindset when approaching a goal (or an idea that needs to be implemented) creates a sense of urgency about the goal and helps avoid procrastination.

How can we make an idea more concrete by assigning physical meaning to it? For example by creating a tangible manifestation such as a website or flyer that describes the idea, or a physical object that embodies it and serves as a tangible reminder of it.

Emotional Meaning

It is well-established that our memory for emotional stimuli and events is typically more vivid and accurate than for neutral ones.[22] Therefore, assigning emotional meaning to an idea or goal makes it more vivid in our mind, leading to enhanced accessibility and retrieval of the idea.

How can we make an idea more vivid by assigning emotional meaning to it? Research on how emotional memory is organized may hold a clue. Modell

18 Cf. Frese & Zapf, 1994.
19 Cf. Frese, 2011.
20 Cf. McCrea, Liberman, Trope & Sherman, 2008.
21 Cf. Hansen & Trope, 2013.
22 Cf. Talmi, 2013.

suggests that in the unconscious construction of meaning, the metaphor acts as a pattern detector that helps organize and categorize emotional memory.[23] Metaphor, he says, "is the currency of mind." A metaphor can be described as a comparison that shows how two unrelated things are similar in a particular way. Building on this insight, assigning emotional meaning to an idea could involve thinking of an unrelated stimulus that the idea reminds you of. For instance, does the idea remind you of a person, place, song, book, or other entity? Hence, assigning emotional meaning through comparison or metaphor can make the idea more vivid and more accessible in the mind.

Creative Meaning

Creativity is closely linked to the process of finding patterns and engaging in associative thinking.[24] Thinking creatively about an idea involves these two mental processes – pattern finding and associative thinking – which can enhance our associations with the core idea. Recent research on creativity proposes that 'meaning' is an important (and previously ignored) component of creativity.[25] More precisely, it suggests that meaning is the third component of creativity along with novelty and usefulness, the two main dimensions in judging an object's creativity factor. Hence, our creative thought about the goal or idea and the essential meaning of that idea are closely related. Finally, creativity has been positively linked to the value that an idea can generate.[26] Accordingly, thinking creatively about an idea can enhance its overall value.

So, how can we attach creative meaning to an idea, thereby enhancing its overall significance and value? Smith and Colgate propose that symbolic or expressive value is related to the extent to which perceivers attach psychological meaning and significance to a stimulus object.[27] Furthermore, research from multiple disciplines has linked creativity to symbolic expression.[28] Building on these insights, you can assign creative meaning to an idea by constructing a symbolic representation of it. Examples include drawing a visual that expresses the idea symbolically, or building a model with LEGO bricks that captures that essence of the idea.

23 Cf. Modell, 2005.
24 For a review see Mehta & Dahl, 2018.
25 Cf. Sääksjärvi & Gonçalves, 2018.
26 Cf. Cropley & Cropley, 2021.
27 Cf. Smith & Colgate, 2007.
28 Cf. Gardner & Gardner, 2008; Nowell, 2006; Pope, 2005.

Social Meaning

Human beings are social animals. Extensive research has shown that we derive not just meaning from social interactions,[29] but also meaningfulness.[30] Conversely, social exclusion or loneliness leads to loss in meaningfulness, to an increased perception of life as less meaningful, and decreases self-worth.[31] Hence, assigning social meaning to an idea enhances our perception of how meaningful or important the idea is in our lives.

How can we assign social meaning to an idea, thereby enhancing its meaningfulness? Elaborating on how an idea relates to other people, how it affects people and interactions between them can help assign social meaning to it.

Purpose-Driven Meaning

Research on how people construct meaning in life has shown that purpose – in terms of core goals, aims, and direction in life – is a key component of such meaning.[32] Human purpose has been studied by researchers in numerous fields – philosophy, psychology, sociology, theology, and organization behavior, to name a few. Leider argues that "purpose is that deepest dimension within us – our central core or essence – where we have a profound sense of who we are, where we come from, and where we're going."[33] Elaborating on how an idea fits with what we believe to be our purpose lends this very idea the highest level of meaning in our proposed framework. Purpose-driven meaning elevates the idea by linking it to the most essential question(s) that we strive to answer throughout our lives: who are we and what are we meant to do?

How can we assign this highest level of meaning to an idea? Clearly articulating how your idea fits with your purpose, and how it chimes with the core of who you believe you are or want to be, can help you assign purpose-driven meaning to your idea.

In sum, the novel framework proposed in this essay discusses five types of meaning that can elevate an idea and help transform it into reality – physical meaning, emotional meaning, creative meaning, social meaning, and purpose-driven meaning.

29 Cf. Gabriel, Harris, Carvallo & Troisi, 2012; Gibson, Gibbs, Stanko, Tesluk & Cohen, 2011.
30 Cf. Barick, Mount & Li, 2013.
31 Cf. Stillman et al., 2009.
32 Cf. Martela & Steger, 2016.
33 Leider, 2005.

Overview of the Five-Step Framework Applied to Four Ideas

The proposed five-step framework was first introduced by the first author in an interactive lecture series, "Changing Time – Shaping World: Changemakers in Arts and Education," in November 2021. Four participants of the lecture series volunteered to apply the framework to an idea that was personally significant to each of them. The following sections detail how the framework was applied to each of the four ideas, including an outline of the idea, a profile of their creators, the motivation to elevate their idea, and a description of each of the five types of meaning attached to the ideas. The latter would be implemented in the short term (a yoga festival planned for summer 2022), short-to-medium term (a platform connecting aspiring psychology professionals), medium-to-long term (a mobile application for sustainability transparency), or long term (securing human thought against unethical access). The implementation of the five-step framework is reported in first-person accounts from each of the four creators, who are co-authors of this work.

Idea 1: Yoga Festival at the WFI Ingolstadt School of Management

The main objective of the Yoga Festival at the WFI Ingolstadt School of Management is to nurture well-being in our community by creating awareness and promoting the practice of yoga. It aims to provide knowledge about the physical, mental, emotional, and spiritual benefits of yoga to students, professors, and administrative staff of the university, and encourage regular practice in a relaxing and joyful atmosphere. The festival takes place at the university on four consecutive Saturdays during the summer semester. Each of these days will consist of theory, pure practice, and experience-sharing, all imparted by an experienced, certified, professional yogi. Participants will be provided with a yoga mat and other materials to engage and motivate them to continue their practice beyond the festival. Unlike a mere event, the Yoga Festival aims to create a holistic experience for attendees. The environment is to be distinctive, with sessions taking place outdoors, awakening all senses with scents, textures, ambient music, decoration, and flavors.

Idea Creator and Elevator

I am Claudia Aranibar Chávez, a 27-year-old Bolivian student living in Germany. I attended the German school in La Paz, Bolivia, where I had the chance to learn the German language and embark on a student exchange program with Rostock, Germany. After school, I engaged in a dual career in foreign trade in my native country and began working for the Mediterranean Shipping Com-

pany S.A. at the age of 18. Later, I decided to continue my bachelor studies in business administration while working full time. In the meantime, the company chose me as the first Bolivian candidate to attend a worldwide training program in Brazil focused on the development of soft skills and specific know-how from the maritime industry. During that time, I was able to represent my country and meet new people from different Latin American countries. This is where my passion for supporting people in reaching their full potential through the development of soft skills was born, as I had experienced the same myself and concluded that collective well-being could only be achieved through the sum of all individuals' well-being. I took part in company projects that revolved around digital transformation, client experience, and corporate social responsibility. In 2021, I was awarded a scholarship by the Konrad Adenauer Stiftung to continue my postgraduate studies in Germany. Today, I am in my first semester of the master-of-science program in business and psychology at the WFI Ingolstadt School of Management at the Catholic University of Eichstätt-Ingolstadt.

Motivation to Elevate the Idea

Seven years ago, I joined a yoga class for the first time as an activity offered by the company I worked for. It is fair to say in hindsight that the practice of this ancient Indian discipline has brought well-being to my life and has helped me enhance my outcomes in a positive way. Yoga provides physical, mental, emotional, and spiritual balance and health. Research has evidenced that it improves physical and mental health through an immediate down-regulation effect on the hypothalamic-pituitary-adrenal (HPA) axis and the sympathetic nervous system (SYNS) response to stress, which may lead to the dysregulation of the system and diseases such as obesity, diabetes, autoimmune disorders, depression, substance abuse, and cardiovascular disease.[34] In addition, it has immediate psychological effects decreasing anxiety and increasing feelings of emotional, social, and spiritual well-being. As only five percent of the German population practice yoga,[35] I want to contribute to my environment by creating awareness of this discipline.

34 Cf. Ross & Thomas, 2010.
35 Cf. GfK SE, 2018.

Framework Step 1: Physical Meaning

A promotional flyer was created as a physical manifestation of the Yoga Festival (Fig. 2). It provides basic information about the event, including the name, dates and duration of each session, the incentive that would be given to the participants, and a QR code for registration. Attaching physical meaning to this idea takes it one step closer to its realization in 2022.

Framework Step 2: Emotional Meaning

When I think of yoga, I remember the setting in my room (Fig. 3), where I forget about time and space, where I practice yoga and meditate while activating my awareness, listening to peaceful songs, smelling the aroma of candles, with a warm and nourishing drink and a notebook to record my creative ideas. This place connects my emotions to the idea that I wish to elevate, giving it meaning beyond the merely physical.

Framework Step 3: Creative Meaning

I created a model with LEGO bricks (Fig. 4) that captures the essence of the Yoga Festival's setting and the goals it aims to achieve. The model showcases the scenario with participants and various elements of the environment. The figure on a podium represents each participant as the winner of their own battles. Establishing the idea's creative meaning elevates it and takes it one step closer to reality.

Framework Step 4: Social Meaning

I envision the WFI Ingolstadt School of Management as an ecosystem where students, professors and administrative staff nurture each other and form an interacting community. In order for the ecosystem to thrive, it is imperative to create a healthy environment in which the physical, mental, emotional, and spiritual well-being of each individual is nurtured. Attaching this social meaning to an ecosystem with interdependencies represents the flow of energy essential to realizing the Yoga Festival.

Framework Step 5: Purpose-Driven Meaning

The idea of a Yoga Festival reflects my aspiration to support people in reaching their potential by developing their soft skills. It seamlessly integrates into my purpose of creating a healthier community and promoting well-being with a practice that has nurtured me and helped me grow as a person and professional. This purpose-driven meaning will propel my idea to reality.

Idea 2: Human Thought Security through Individualized Algorithm Encryption

Scientists and private companies are conducting research to gain deep insights into the human brain. Brain hacking is an emerging research area that is gaining increasing attention. Using artificial intelligence, machine learning, algorithms and chips, brain hacking aims for medical excellence with external control enabling, for example, the improvement of visual impairment, addictions, and other mental and physical handicaps. By systematically tracking neuronal structures of the brain based on the transmission of stimuli via synapses, scientists say that it will soon be possible to anticipate human actions and thoughts. Fundamental breakthrough innovations within communication technologies are expected any time soon, enabling humans to perform telepathic brain-to-brain communication. Reading human thoughts could then be a part of everyday reality. However, if third parties are able to read people's minds without permission, fundamental human rights could be breached. To prevent unauthorized access to human thoughts by external parties using sophisticated algorithms, thoughts should be encrypted by individualized algorithms. External parties should only be granted insight into thought processes if they are given the permission to do so. The idea at hand is to secure human thoughts from being hacked without permission.

Idea Creator and Elevator

I am Mahir El. I was born in Kempten, Germany. I have a bachelor's degree in international relations and management and am currently pursuing a master's degree with a specialization in entrepreneurship and innovation at the WFI Ingolstadt School of Management, Catholic University of Eichstätt-Ingolstadt. I gained professional experience as management consultant working on numerous projects across industries such as aviation, defense, aerospace, automotive, insurance, real estate, parcel and courier services, as well as banking and financial services. I am interested in entrepreneurship, innovation, deep tech, and social welfare. I am a volunteer with local associations to foster cultural diversity and equal educational opportunities for everyone, with a focus on supporting children and teenagers through social, educational, and cultural integration. My main goal is to contribute to future social and economic welfare through my expertise in economic, political, and cultural sciences by promoting innovation, education, and integration.

Motivation to Elevate the Idea

My main motivation for elevating the idea of individualized security algorithms that protect human thoughts is based on the impact that brain hacking could have on society. Promoting social welfare is one of my major personal goals, which is why encrypting human thoughts to secure fundamental human rights while also supporting technological progress that benefits society is of utmost importance to me. Brain hacking could help us, for example, to anticipate seizures through prophylactic identification of severe neurological deficits, or provide people with mild to severe physiological and psychological handicaps with better control of their body. However, the biggest threat of this technological progress might be the unauthorized access of external parties to the human brain. This could open the doors for unethical exploitation of human thoughts, which poses one of the biggest ethical dilemmas that mankind has recently faced. I am motivated to contribute to this evolving landscape by developing, facilitating, and ultimately promoting the security of human thought economically.

Framework Step 1: Physical Meaning

In order to attach physical meaning to my idea, I visualized it in four steps using a storyboard on the web-based design platform Canva. First, I broke down the idea into four concepts – human brain, algorithms, chips, brain hacking and security – and defined them to specify my vision. Then I drew the words symbolically to get a pictorial representation of my vision. Subsequently, I detailed the multiple industries and actors that would have to be involved in the implementation of my idea. Lastly, I depicted the formation of a collaborative, societal-technological vision that the idea demands. This physical representation transforms this ambitious idea from the abstract to the concrete, one building block at a time.

Framework Step 2: Emotional Meaning

I associate the safeguarding of thoughts with climbing a mountain summit. Summits can only be reached with endurance, motivation, and diligence. Once the summit is reached, an intimate sense of inviolability and pride can be felt as you look out over the wide landscape. In this secure place, thoughts are not shared with anyone, because they provide sanctuary that only oneself can, and should be able to, access. This image of a solitary mountain climber having reached the summit is deeply resonant, emotionally, to the idea of securing human thought

Framework Step 3: Creative Meaning

I attached creative meaning to my idea by visualizing a chip implanted in a human brain: the neurological processes of human thoughts are transparent, an individualized algorithm allows individuals to encrypt their own thoughts, empowering them to either permit access to their thoughts or deny it (Fig. 5). The visual simplifies the complex idea of securing human thought and allows me to discuss the idea with colleagues, friends and potential collaborators while explaining how unethical exploitation of human thoughts can be prevented.

Framework Step 4: Social Meaning

To implement the idea, I will need to collaborate with experts from the fields of medicine, psychology, business, engineering, information technology, and data science. This collaboration highlights the societal-technological vision of the idea and its implementation. To generate social meaning and validate the idea, I conducted preliminary discussions with a nanotechnology researcher, an engineer, and three business experts, all of whom strongly endorsed the idea and its vision. Gradually building a tribe of proponents with deep functional expertise in their respective fields creates social support for the idea.

Framework Step 5: Purpose-Driven Meaning

The idea of creating individualized algorithms to protect human thoughts is deeply related to my core values. I believe that the purpose of my private and professional life is to support, facilitate and promote technological progress to positively impact society and steadily change the status quo. However, transforming society through breakthrough technologies carries the risk of potential negative consequences. Technology should elevate rather than exploit the human condition. Hence, the idea of proactively combating the unethical misuse of the access to human thought is driven by my purpose to enable human progress and welfare through technology.

Idea 3: A Platform for Aspiring Psychology Professionals

My idea focuses on a gap that exists in the educational ecosystem of aspiring psychology professionals in Germany. Studying at a university in Germany is structured in a way that assigns a major role to students' personal responsibility. High school pupils are often left alone in their choice of study programs. Many pupils and students lack the inspirational input to develop a professional vision of their future and thus create a meaningful and motiva-

tional foundation for themselves and their higher studies. I would like to develop one such vision of the future by setting up a platform for high school pupils and college students that not only provides information about the application process and the content of study programs but also gives insights into professional and future career paths and options. I would like to start with the field of psychology, which I am familiar with, and gradually expand into other fields. This digital platform will be an open, inspirational, and informational forum for knowledge exchange and first-hand learning. It will offer multiple modes and interfaces, including video conversations, interactive search features and future path mapping. For instance, video conversations with graduates of psychology programs could feature their career path, day-in-the-professional-life snippets, and advice from the trenches. The platform will not only benefit high school pupils and college students but will also contribute to a better allocation of next-generation talent to current and emerging fields of work.

Idea Creator and Elevator

My name is Alina Hansen, I am 23 years old. Besides being socially active, I like to be creative in my free time painting, working on web design and digital art, or teaching myself how to edit videos. I took my bachelor-of-science degree in psychology at the University of Ulm and am now taking a master's degree in business and psychology at the WFI Ingolstadt School of Management, Catholic University of Eichstätt-Ingolstadt. During my bachelor's degree I volunteered with the Psychology Student Council (*Fachschaft*) and participated as a delegate in the Psychology Student Council Conference (*PsyFaKo*) and student council representative of the University of Ulm. At the conference I coordinated the admission test working group (*AG Zulassungstest*), which advocates for a countrywide bachelor program admission test. In addition, I worked as a student assistant for the student counselling psychology service (*Studienfachberatung*) at Ulm University. These working experiences helped me build a foundation for moderating the discourse between universities and students. Furthermore, during my studies, I gained insights into the challenging work processes of universities and into the demands of students. As a person who strives for effectiveness and positive change, I want to close the service gap(s) I have observed.

Motivation to Elevate the Idea

I am motivated to implement this idea, as I am convinced (and have first-hand experience to the effect) that it will benefit many confused and uninformed high school pupils and college students. An independent, credible, inspirational, and informational point of contact for high school pupils and college students is especially important in view of upcoming bachelor and master program admission tests and the Psychotherapist Reform Act (*PsychThRefG*), which is currently being implemented. However, my motivation is not driven purely by altruistic motives, but is also fueled by my desire to learn and grow as a person. This idea challenges my innate creativity and my ability to execute an idea, which allows me to sound out my abilities, resources, and limits.

Framework Step 1: Physical Meaning

As a means of attaching physical meaning to my idea, I started a YouTube channel last year (tenderresistance), but this year I only used it to respond to comments and questions. In 2022, I would like to revive the YouTube channel and build an information website where I could integrate the videos. I also aim to create a channel on the platform, Discord, where aspiring psychology professionals will be welcome to network, discuss, and build an engaged community with high school pupils and college students.

Framework Step 2: Emotional Meaning

I find the idea of creating this platform very exciting. I feel energized and full of drive. A song which embodies the emotional meaning of this idea for me is "The Eye of the Tiger" by Survivor. When I think of the idea, I think of an exciting and welcoming place where a lot of people come together and talk wildly.

Framework Step 3: Creative Meaning

I attached creative meaning to my idea by developing a board depicting the platform (Fig. 6). The visual captures the energetic exchange between the various stakeholders while providing information on and illuminating future career paths.

Framework Step 4: Social Meaning

The idea primarily caters to high school pupils and college students, while engaging psychology processionals in various fields. I want to create a compelling social and professional network for present-day pupils and students, who are about to become well-informed and empowered graduates and professionals

and pass on their knowledge to the next generation of pupils and students. In addition, the *PsyFaKo* offers a good interface to get information bundled and forwarded into this cycle, thus further enhancing the social meaning inherent in the idea.

Framework Step 5: Purpose-Driven Meaning

This idea reflects who I am and who I want to be, because it combines three aspects that are central to my purpose – social responsibility, the will to change, and communication. It allows me to put all my creative power into a meaningful vision for the future.

Idea 4: Accessible Sustainability Transparency for a Better World

My prime motivations are environment and sustainability. My idea aims for complete transparency in all activities a firm undertakes in developing, creating, and delivering a product or service to consumers. This applies to all stages of the company's value chain – from research and development to the sales of products and services. Many multinational companies fail to maintain social and ecological sustainability throughout their value chain. My idea is to create a simple yet powerful application that indicates the level of sustainability at all stages of a product or service value chain, for any product or service in the market. Such a platform would make it possible for consumers to trace the origin of any product or service and determine if it has been ethically and ecologically sourced, produced, and delivered. The application would be available worldwide and would be free for consumers.

Idea Creator and Elevator

My name is Aurore Keller. I am an international bachelor student in my semester abroad at the WFI School of Management, Catholic University of Eichstätt-Ingolstadt, Germany. I study at the Burgundy School of Business in Dijon, France. I am an optimist and I believe that mistakes in life are proof that you tried. This quote is my lucky star. I also think that every person in the world can contribute in their own way to make it a better place. I am often described as smiling, persevering and committed to what I do. It is important for me to follow through on the tasks I perform daily, and to persevere. I like to immerse myself in my work, but also in my passions. I have been playing the piano since I was six years old.

Motivation to Elevate the Idea

I feel a sense of urgency about the overall state of social and ecological sustainability, or the lack thereof, when it comes to consumption. I believe that transparency about the social and ecological sustainability of products and services can empower consumers to reward firms that invest in social and ecological sustainability and punish those that don't. Though transparency by itself cannot solve all problems related to unsustainable corporate practices and consumption, it will contribute to raising awareness of social and ecological sustainability and help set norms for how products and services ought to be sourced, produced, and delivered.

Framework Step 1: Physical Meaning

To attach physical meaning to my idea, I created a mock version of the application using wireframing. The two screenshots of the mobile application (Fig. 7) show the name of the app, ECW, and the home screen of the app. The process of creating a mock app and thinking through its functionality afforded me a physical manifestation of the idea to return to every time I think of the idea and elaborate it mentally.

Framework Step 2: Emotional Meaning

My idea reminds me of an organization that I am affiliated with and actively engaged in: Ecologic'Owl is a student association at my home university, the Burgundy School of Busines, dedicated to the implementation of sustainable initiatives on campus in collaboration with the university. Many projects have already been implemented to make our campuses greener, such as awareness campaigns for waste sorting, installation of playful ashtrays, installation of a book box with the school's art association, sales of eco-responsible products and DIY workshops on organic cosmetics. These initiatives provide students with tools and knowledge they need to contribute to our planet's future. The organization's flagship event is a voyage of discovery of socially responsible best practices, which is the subject of a comprehensive report distributed to all students, titled #Leadforgreen. My active involvement in this organization adds emotional meaning and heft to my idea of achieving complete transparency in all activities of a firm in developing, creating, and delivering a product or service to consumers.

Framework Step 3: Creative Meaning

An idea board I put together (Fig. 8) helps me attach creative meaning to my idea by visually depicting the various elements and value propositions of the mobile application. Working on many more idea boards like this one will help me refine the idea conceptually and balance it with practical aspects of its implementation.

Framework Step 4: Social Meaning

The idea of providing sustainability transparency on the full range of activities, which comprise the development, production and delivery of a product or service, is rooted in the interdependent nature of society and indeed our entire ecosystem. Sustainability affects every aspect of our social contract. Together we can make a more substantial difference than when acting alone. The impact of this collective action is much greater than the sum of its individual actions. This is the essence of the social meaning I want to attach to my idea.

Framework Step 5: Purpose-Driven Meaning

I consider myself to be a highly motivated, innovative, team-oriented person, and see myself as a ground breaker. New ambitions or discoveries do not scare me. This application is congruent with my idea of being ecological, international, ambitious, and persevering. Driven by my purpose and the core beliefs about myself, I regard myself as instrumental in launching this application worldwide. I plan to work with an innovation incubator to realize this idea. Let the adventure begin!

Discussion

Ideas are only successful when they are realized.[36] This essay posits that turning our ideas into reality is linked to the meaning we associate with and assign to those ideas. The article develops a novel, five-step framework to elevate ideas and create meaning, drawing from research insights in multiple disciplines. A collection of five types of meaning can elevate an idea and aid in transforming it into reality: physical meaning, emotional meaning, creative meaning, social meaning, and purpose-driven meaning. The overall aim of this framework is to empower individuals who want to realize a personal-

36 *Cf.* Belsky, 2012.

ly significant idea. Four cases were presented in which the framework for elevating ideas and creating meaning has been applied.

The proposed, novel framework contributes to multiple streams of research, including a) interdisciplinary theory and research on meaning making and meaning maintenance; b) research on how goals, goal implementation, and meaning are linked; and c) research on the content and types of meaning. The practical implications of this framework lie in its application in numerous contexts, be it individuals trying to achieve personally significant goals, entrepreneurs aiming for the acceptance and success of their ideas, or organizations striving to successfully bring their innovations to market.

Future research can examine whether applying this five-step framework to an idea creates advantages that can be reliably measured – for instance whether it affects variables such as goal perseverance and subjective well-being of the creator, or the implementation time of the idea. A longitudinal study which follows creators who apply this framework as opposed to creators who do not would do just that. Additionally, future research can identify how external or situational variables related to the idea, as well as individual variables such as the need for meaning, affect the five types of meaning. Most importantly, the proposed framework offers multiple avenues for interdisciplinary research and collaboration.

Fig. 1

Elevating Ideas, Creating Meaning

Purpose-Driven Meaning

How does this idea fit your purpose? How does it integrate into the core of who you are or who you want to be? Articulate the purpose-driven meaning of your idea.

Creative Meaning

Create a symbolic representation of your idea. This is how you assign a creative meaning for your idea. Tips: Visual symbols, LEGO bricks, etc.

Social Meaning

How does this idea relate to other people? Does it affect others? How can you include them in your idea? How do they interact with each other in your idea?

Physical Meaning

Make it tangible and concrete. Develop a physical manifestation of your idea. It will no longer be just an idea. Tips: Website, App, Flyer, or a Physical Model

Emotional Meaning

How does this idea make you feel? Label the emotion that you feel when you think of the idea. Does it make you think of a song? A book? A place? Metaphor can enhance emotional meaning.


WFI
INGOLSTADT
SCHOOL OF
MANAGEMENT
PRESENTS:
YOGA
ANNUAL
FESTIVAL
JULY 2022:
ALL SATURDAYS
FROM 9:00 TO 10:00
PARTICIPANTS WILL GET A
YOGA MATTE FOR FREE!
SCAN
ME
REGISTER HERE

Fig. 2

Fig. 3

Fig. 4

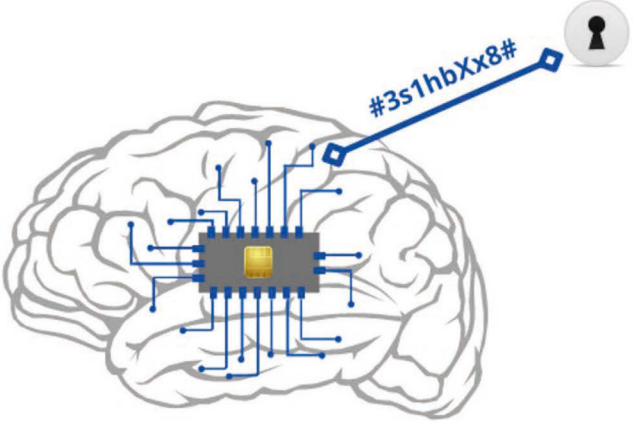


Fig. 5

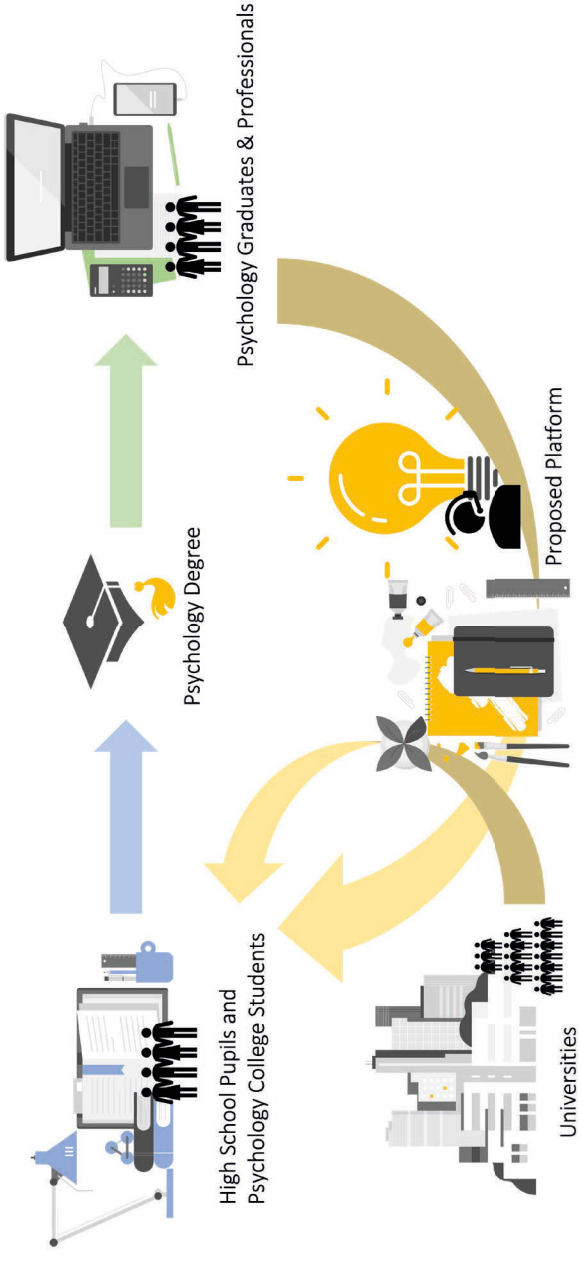
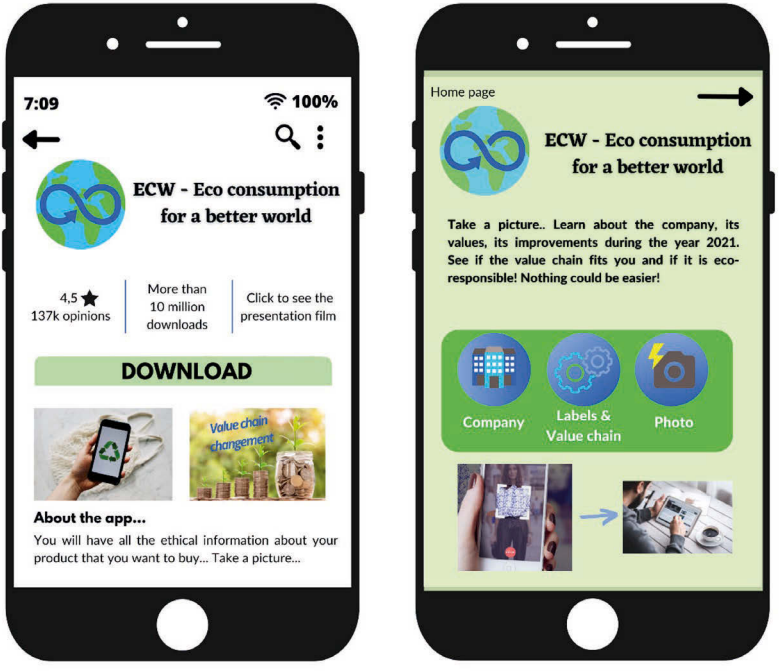

Psychology Graduates & Professionals
Proposed Platform
Psychology Degree
High School Pupils and
Psychology College Students
Universities

Fig. 6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ECW - Eco consumption for a better world
4,5 ★ 137k opinions
More than 10 million downloads
Click to see the presentation film
DOWNLOAD
Value chain changement
About the app...
You will have all the ethical information about your product that you want to buy... Take a picture...
Home page
ECW - Eco consumption for a better world
Take a picture.. Learn about the company, its values, its improvements during the year 2021. See if the value chain fits you and if it is eco-responsible! Nothing could be easier!
Company
Labels & Value chain
Photo

Fig. 7


App available on social networks
Obsolescence
CSR issues
discover the motivation, capacity and opportunity of consumers, know the involvement of buyers according to the offerings
exchange my ideas with companies
CREATIVE MEANING
get opinions and feedback from consumers
International
abolish ethical problems in the value chain
Performance
RELATIONSHIP
MORALITY
TRUST
RESPONSIBILITY
BUSINESS ETHICS
PRINCIPLE
BEHAVIOR
CHOICE
RELIABILITY

Fig. 8

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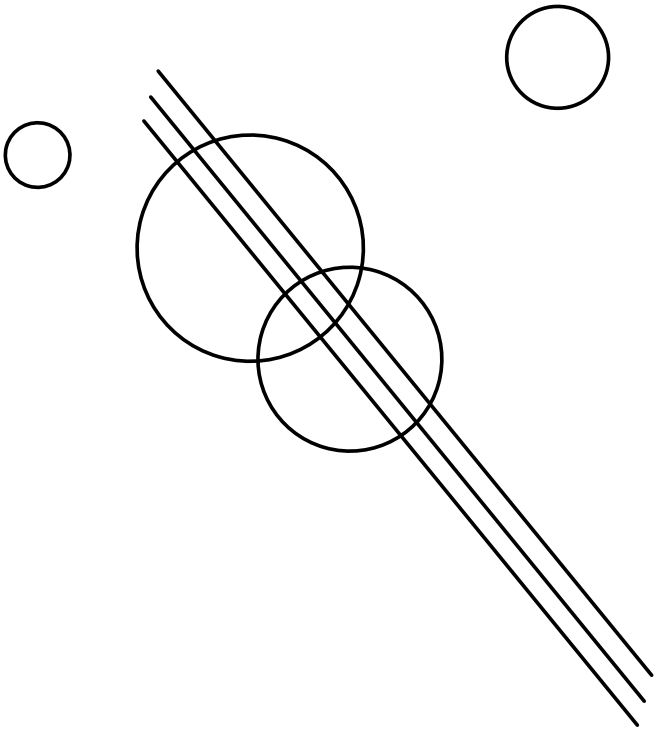
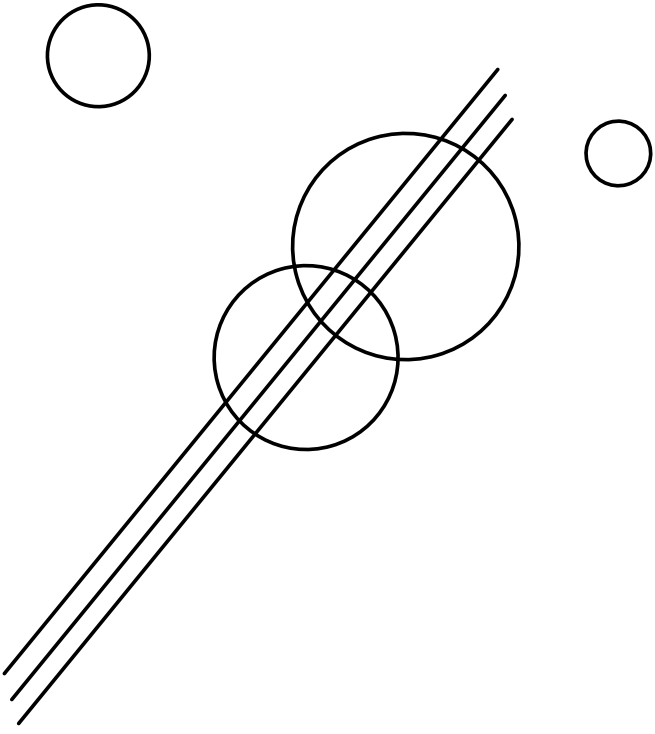
Figures





Aware, Care, and Share: A Fair World through Entanglement

Ruth Mateus-Berr

This text ventures a discursive-analytic understanding of Karen Barad's notion of *entanglement* as expanded interdisciplinary action and applies it to both art and art- and design education. To what extent can Barad's view be translated for use in an artistic art education context? To what degree does artistic art education already integrate her concept? *Entanglement*, to Barad's understanding, means more than interdisciplinary thinking and acting, more than binary acting; it is a being-in-the-world, a connectedness. Interdisciplinarity is replaced by *entanglement*. Ontology, the *sense* of being in this world, determines the approach, which is determined by the notion of being part of this world. Such a view implies a completely different approach to responsibility *in* this world.

The following text takes a closer look at thoughts drawn from my own didactical position with the aim of understanding the extent to which *entanglement*, understood as expansion, or *agential realism* can lead to a paradigm shift in art and design. Entanglement does not allow for 'pigeonholing' into one discipline, one subject, one focus, as this particular understanding calls for viewing, feeling, and analyzing the world from within. The following interweaves agential realism with aesthetic, sensory cognition. It also asks how and whether contemporary tendencies can, or must, make their way into the classroom.

A Critique Before the Analysis

As I noted back in 2014, although "interdisciplinarity is demanded in the preambles of higher education policy research concepts" and has been "a mainstay of [particularly elementary and secondary] school education- and curricular

plans for decades, it is rarely applied in practice."*[1] Inter- and transdisciplinarity are understood differently in elementary- and secondary school settings as opposed to university contexts, as the terms are usually not precisely defined and interdisciplinarity is not a part of the lived experience. Structural conditions in higher education virtually prevent interdisciplinarity and an entangling of subject areas. Bayrhuber et al. take the view that academic subjects in and of themselves significantly contribute to world orientation in the sense that they build knowledge and skills; at the same time, they also question whether subjects in their current form are necessary to that end.[2] They further emphasize that all prior attempts to establish interdisciplinarity and interdisciplinary teaching have proven very difficult. Scholars – including this one – often point to Finland as a model, a country that in 2014 implemented *phenomenon-based learning* in comprehensive schools (cf. additive and integrative).[3] For years, my own teaching practice has shown how subject matter, problematizations, and approaches can be entangled.[4] Interdisciplinarity, by contrast, is binary; it presupposes *the self* and *the self of the other,* rather than seeking to understand how intra-actions that *produce phenomena* connect and interconnect everything in a variety of ways, specifically "the phenomenon as a particular instance of wholeness, the fully contextual be-in where the matter and meaning meet."[5] Barad goes on to note that:

> Entanglements are not intertwinings of separate entities, but rather irreducible relations of responsibility. There is no fixed dividing line between 'self' and 'other', 'past' and 'present' and 'future', 'here' and 'there', 'cause' and 'effect'. Quantum discontinuity is not ordinal disjunction.[6]

Accordingly, *entangled art and design teaching* in schools, with its particular attitude and philosophy, might be more interesting for the world. Would this approach also exclude 'the othering' aspect, or even not allow it to come into the world in the first place, and instead cultivate more of a 'both-and' paradigm? The time has come, in my opinion, to finally allow the Augustinian two-city

1 Cf. Mateus-Berr, 2014, p. 209.
2 Cf. Bayrhuber, Abraham, Frederking, Jank, Rothgangel & Vollmer, 2017, p. 25.
3 Since then, Finnish schoolchildren have been required by curriculum to participate in one interdisciplinary project per term, such as a week-long mathematics fashion project, for example. There still are individual subjects, however.
4 Cf. Mateus-Berr, 2013/2020.
5 Barad, 2015, p. 43.
6 Barad, 2010, p. 265.

model – which would have Christians decide between *civitas Dei* (the heavenly city) on the one hand and *civitas diaboli* (the city of the devil) on the other; that is, between good and evil – to disappear. As Mikhail Bakhtin already observed, "If carnivalistic *ambivalence* should happen to be extinguished in these images of decrowning, they degenerated into a purely *negative* exposé of a *moral* or sociopolitical sort."[7]

Center for Didactics of Art and Interdisciplinary Education

In the following I describe my didactic expertise as an artist, social designer, researcher, art therapist, professor at the University of Applied Arts Vienna, and teacher at a general secondary school in Vienna (Schulschiff Bertha von Suttner [School Ship Bertha von Suttner]) (Fig. 1–4). I founded the Center for Didactics of Art and Interdisciplinary Education in 2019 as a new forum for subject-didactic research at the University of Applied Arts. I had previously worked in a school setting since 1991. Having always taken an interdisciplinary approach to the material conveyed, I have continued that practice at the University of Applied Arts Vienna since 1992, and have headed the Department of Subject Didactics there since 2013. My interdisciplinary study and research projects are widely published in academic journals and regularly receive third-party funding from (inter-)national research funding programs, which is striking for art didactics, a comparatively 'minor' discipline in Austria.[8] After reading Barad's writings, I wondered whether such conceptualizations as 'interdisciplinarity' are even necessary anymore, whether they shouldn't be replaced by Barad's use of the term *entangled*, and what change that might bring about. *Inter-/transdisciplinary* concepts presuppose binary subject constructions. *Entanglements* look at the whole; they feel phenomena.

When I was a university student (1983–1990), the disciplines were strictly separated, to the extent that a trained painter could not possibly be a sculptor. Photography was not (yet) considered an artistic discipline, and painting was declared 'dead' in 1990. Art educators in schools kept (and still keep) large folders into which students (had to) sort their work by discipline: architecture, sculpture, design, graphic art, visual media, etc. While these subjects still in fact exist, even at art universities, the various forms of materiality of

7 Bakhtin, 1984/1999, p. 126; see also Mateus-Berr, 2007, p. 24.
8 Cf. Mateus-Berr, 2002–2022.

expression to emerge from them is different. Bodies have retreated.[9] Materiality no longer plays a role. All objects have a deep cultural significance. As Jean Baudrillard observed, they have lost all their functional identity and have transformed into simulacra (one could also say avatars) of themselves.[10] The real has become our real utopia, and yet utopia is no longer the reality of the possible that – like the dream of a lost object – can only be dreamed. It seems to Barad that "it seems that at every turn lately every 'thing' – even materiality – is turned into a matter of language or some other form of cultural representation [...] the only thing that doesn't seem to matter anymore is matter."[11]

Heibach and Rohde speak of a 'material turn,' which is to say a complex scholarly narrative "in which things are understood as actors in networks of cultural processes."*[12] This turn can be understood as a political and spiritual turn. For Barad, "the primary ontological units are not 'things' but phenomena – dynamic, typological reconfigurings/entanglements/relationalities/(re)articulations of the world."[13]

Indeed, the University of Applied Arts has also consistently engaged with the idea of inter-/ cross- and transdisciplinary study tracks and has also established some. This engagement was preceded by an acknowledgement that the world could no longer be understood solely from within divided disciplines and that – following Hannah Arendt's concept – thinking, or rather inter-thinking more productively occurs between disciplines.

Nevertheless, art education at the University of Applied Arts Vienna was considered a purely scholarly subject. This ran contrary to my own ideas, as I understand art education or, like some say, art didactics to be an entangled and therefore artistic subject in addition to being a scholarly one. If contemporary school and society demand interdisciplinary approaches – because the world has become so complex that one discipline can no longer adequately explain it – then it is for subject-didactics to discuss this. The *Deutsche Gesellschaft für Fachdidaktik* (GFD, [German Subject-Didactics Society]) has been engaged with the concept of *general subject-didactics* for some time now.[14] General subject-didactics, as understood by this work group, is a comprehensive

9 Cf. Kamper, 1999/2008.
10 Cf. Baudrillard, 2006.
11 Cf. Barad, 2007, p. 132.
12 Heibach & Rohde, 2015, pp. 9–30.
13 Barad, 2007, p. 141.
14 Cf. Bayrhuber, Abraham, Frederking, Jank, Rothgangel & Vollmer, 2017.

theory of subject-focused learning, which is consequently elaborated into a metatheory of subject-didactics. Its authors were faced with the central task of analyzing "how subject-specific learning exists within the subject, and how it tends to point beyond itself and toward the development and building of interdisciplinary skills and abilities."*[15] They aimed to develop new competency models, in particular by exploring how cross-disciplinary knowledge and skills are acquired. This project was preceded by a detailed analysis of subject-based learning. Evaluation consisted of a brief outline on the history of the subject, followed by the criteria of the subject's self-understanding, which is to say learning *within* the specific subject (Subject competencies – content. Definition of subject matter; subject-specific competencies: active engagement with the world, reflection; imagining, designing, creating, presenting, describing, analyzing, interpreting, evaluating within the art subject area; problem-solving creative action and thinking) as well as learning *outside of the subject* (linking content across subjects, generalizing subject-specific competencies). These competency templates have been similarly defined in Austria for the subjects Art Education (visual practice, reflection, presentation and documentation) and Design Education (development, production, and reflection with materials and techniques).

In contrast to other disciplines, in the art and design education and the many theories and practices of associated subjects are experienced and understood in an entangled way (i.e. both artistically and in a scholarly sense). As in agential realism, practice is integrated into theory: "theory reflects context epistemologically and ontologically"*[16] and – in the case of art-related subject didactics – also reciprocally. Yet here, too, there is a need to expand competencies and awareness of the world's interdisciplinary development among art education students and trainee teachers as the various disciplines (pillar subjects: art/design and art/design theory, didactics, school practice, pedagogy, cognition-process space[17]) are taught separately there as well.

Art education fulfils a bridging function between specialized areas of study (at art universities, both the artistic and theoretical departments and workshops) and general didactics. Consequently, art education regards itself as an interdisciplinary communication platform between artistic and design disci-

15 Ibid., p. 23.
16 Barad, 2015, p. 50.
17 Cf. Mateus-Berr, 2011a, 2011b, 2011c; Mateus-Berr et al., 2011; Mateus-Berr, Diaconu & Vosicky, 2011.

plines, artistic research, art and design pedagogy, art theory, cultural theory, design theory, architectural theory and philosophy, game-based learning, museum education, art therapy, new media, life-long learning, pedagogy-related subjects, and other disciplines including the natural sciences, health, citizen science, social entrepreneurship, museum education, social space, science centers, urbanism, socially-engaged art, socially-oriented design, etc. It is inclined to reference neighboring disciplines in matters of theory, method, and research. The center of didactic and interdisciplinary education at the University of Applied Arts in Vienna enables competence acquisition in both school settings and in the extracurricular space.[18]

In this case, art education, to my understanding, exists at the intersection between the arts, theory and other related fields, and few of those involved perceive it as a whole. Nevertheless, I view practical and related theoretical fields as already implicit in and integrated into any study of the arts. They are expanded in the associated subject-didactics, wherein they are made explicit and reflected upon. Consequently, in subject-didactics, all subjects are conceived together and condition one another. Practices and theories are *reciprocally entangled*.

Regardless of a trainee teacher's subject-specific area of focus, they stand to benefit from interdisciplinary or entwined experience in cooperation[19] with other disciplines as early as their own university education, as this will enable them to apply such a method either in a school setting or in a non-school-related professional field later on. Since 2005, I have realized, documented and published University of Applied Arts projects incorporating such diverse subject areas as music, religion, mathematics, hearing acoustics, computer science, medicine, physics, Scandinavian studies, economics, climate research, digitization, sustainability, energy, history and many more.[20]

This particular approach to art education in no way precludes, for example, empirical studies on subject effectiveness so as to continually evaluate various knowledge possibilities in iterative modes of review. As Gert Selle has stressed, "art education today would necessarily have to continually correct and reconfigure itself in a fluid context of observation, reflection, and experimentation, all with a view to parts of the cultural present; it is to be under-

18 Cf. Mateus-Berr, 2020.
19 Cf. Bayrhuber et al., 2017, p. 253.
20 Cf. Mateus-Berr, 2013/2020, pp. 73–116/pp. 1–97.

stood as a mobile potential in the making and not as training that can in any way ever be considered complete."*[21] Barad also asserts that it is essential to be able to do empirical research, but she considers agential realism a critical tool for which the objective reference must be considered as *material-discursive phenomena*.[22] Though the one does not preclude the other, it differs from what we are used to.

In essence, according to Schnack (2011), there is a distinction to be drawn between *additive and integrative* approaches to interdisciplinary learning.[23] The *additive* approach presumes subject-specific teaching, which is then supplemented with content and methods from other subjects as the occasion arises. It is also possible to teach the same topic simultaneously in different subjects. Teachers can implement this form with no significant curricular changes. The *integrative* approach, by contrast, focuses not on subject-specific instruction, but on a complex problem that is approached from the perspective of various different subjects. Relevance to lived experience and action framework often play a prominent role. Field reports also clearly show that interdisciplinary learning and its development are not only a didactic matter, they also indicate further evolution in terms of school organization. Interdisciplinary teaching usually occurs in team teaching situations.

For my own teaching I developed the design rhizome, a concept reflecting artistic and design processes from my own perspective. This image, inspired by Gilles Deleuze and Félix Guattari (Fig. 5),[24] can in the literal sense be understood in terms of the cyclical learning method, but is above all a metaphor for *entanglement*. The concept also alters the typical image of the educator: in this setting, rather than impart knowledge, the teacher accompanies and organizes. Students become active participants in the social construction of knowledge.

Barad's *agential realism* concept puts thinking about language, discourse, and objects on radically new footing. Among her inspirations was the work of Danish physicist Niels Bohr, who had designed "a new epistemological framework that calls into question the dualisms of object/subject, knower/known, nature/culture, and word/world."[25] Bohr describes the parable of a person in

21 Selle, 2004, p. 6.
22 Cf. Barad, 2015, p. 180.
23 Cf. Schnack, 2011; see also Popp, 1997, p. 149.
24 Cf. Deleuze & Guattari, 1977; Mateus-Berr, 2013/2020; Mateus-Berr, 2014.
25 Barad, 2007, p. 821.

a dark room trying to feel their way around with a stick. The manner in which the stick is held determines how it is perceived: Hold it loosely and it is an object that facilitates the sense of touch. Hold it tightly and it becomes an orthosis, an extension of the person holding it.[26] Barad notes, moreover, "that seeing is an achievement that results from specific bodily engagements with the world."[27] Although not present per se, it allows objects to emerge only through what she calls "*intra-action* with and as part of the world."[28] This thought not only allows for the envisioning of new tools for this world, it creates space for creativity, imagination, intuition, and implies responsibility,[29] in Barad's terms, the "incarnate relation that precedes the intentionality of consciousness."[30] She argues for a re-measuring of the boundaries between objects, our instruments, language, and human observers. Quantum physics, in her estimation, requires a new logical framework that integrates observational processes. In sympathy with Bohr, she links philosophy with physics.

Barad's focus is on a series of problematic dichotomies, an exploration of existence at the intersection of matter and meaning. Humankind and so-called apparatuses must, from her perspective, be seen as integral parts *of the* universe. This is another way of thinking about responsibility in this world. Moreover, Barad's discussion of instruments is preceded by her concept of the *personal equation*. The physics didactician Simon F. Kraus, for example, describes influences on measured values and their dependence on the person of the observer, a factor discovered by Friedrich Wilhelm Bessel, resulting in significantly improved data sets.[31] Kraus asserts that, thanks to Bessel's experiment, "belief in the authority of the observatory directors of the time in stating 'true measured values' was exposed as a fallacy."[32] It definitely showed that there can be no such thing as a 'true value' – i.e. objective value – where classical observational methods are concerned. Kraus views this experience of the interdependencies of different dimensions as essential to physics didactics in an age of growing faith in technology. He appears to think it important that students reflect on process chains and their own influence

26 Cf. Bohr, 1963a [1929], p. 99, cit. in Barad, 2012/2020, p. 46.
27 Barad, 2007, p. 156.
28 Ibid., p. 146, emphasis added.
29 Cf. Mateus-Berr, 2020, pp. 145–155.
30 Barad, 2007, p. 392.
31 Cf. Kraus, 2017, p. 23.
32 Ibid., p. 26.

on observations and measurements. To this end, he suggests drawing a connection between this subject-specific topic and insights from the psychology of perception. Barad describes process chains by way of the Stern-Gerlach experiment – which led to the chance discovery of quantized spin (i.e. the angular momentum of electrons) – while considering, among other things, the *intra-actions* of the two men, a cheap cigar and its aerosol-chemical effect on the plate, socio-economic backgrounds, material practices and *performativities* as key factors in arriving at that particular scientific finding.[33]

Intra-actions show interrelationships between people, nature, the material and the artificial, or – as Barad terms it – the "nonarbitrary, nondeterministic causal enactments through which matter-in-the-process-of-becoming is iteratively enfolded into its ongoing differential materialization."[34] She concludes that "*agential realism* gives us a technology of embodiment."[35] Understanding this approach, it becomes clear that an interrelation with the Other describes the absence of one's own existence, as "existence is not an individual affair."[36] Indeed, Barad views intra-actions as socially constructed theories with real, material consequences.[37] Her *intra-actions* and *embodiment* describe a *being-in-relation with the world;* she pursues a multi-perspectival, constructivist worldview.

A key principle of this approach is that of constructivism; described in the words of Heinz von Foerster, "the environment as we perceive it is our invention,"[38] our construct. It is we who construct prejudices against others and images of people and things. Everything we learn is socially constructed. Listening carefully, learning to understand the constructs of others, making feelings and sensory impressions comprehensible to others is often easier to translate into artistic media, signs and symbols than language alone; it is its own form of language acquisition, one that can be experienced. A constructivist, cybernetic worldview supports interdisciplinary thinking. Constructivism is thus primarily a form of cognition and attitude, not of teaching.

33 Cf. Barad, 2020, p. 58.
34 Barad, 2007, p. 179.
35 Barad, 1996, cit. in Barad, 2007, p. 45, emphasis in original.
36 Barad, 2007, p. ix.
37 Cf. Barad, 2015, p. 58.
38 Von Foerster, 2003, p. 212.

Transfer to Art and Design Education

"Is reality an amorphous blob that is structured by human discourse and interactions?"[39] And: "What is the outline? [...] It is not something definite. It is not, believe it or not, that every object has a line around it! There is no such line. It is only in our own psychological imagination that there is a line."[40]

This finds Barad's inquiry leading into art. A description of non-existent outlines (as articulated by the physicist and Nobel Prize winner Richard Feynman) serves to challenge perception on the whole: How does one sketch, or what does one actually sketch, if there are no outlines? And do they actually exist?

Perhaps it is more essential – to think with Barad – to return, for example in design, to the original French designation of origin, which is to say 'sketch, outline, illustration, having something in mind.' Michael Erlhoff and Tim Marshall describe the difference in the meaning of the word in German versus English usage, where *design* refers to the conception or mental planning of an object and at the same time anything that is in any way designable.[41] Richard Niesche and Christina Gowlett recommend Barad's philosophy for training in educational leadership roles.[42] Anne Phelan knows the problem of expected recipes[43]: "[...] one teacher candidate's struggle to let go of a conception of knowledge as generalizable formulae that can be readily applied in practice and to become more open to practice itself as a site of learning."[44] She sees opportunity in teaching practice, first and foremost in having to learn to deal with the notion of 'uncertainty/unpredictability.' In 2020, Jasmin Kaufmann completed her MA at the Zurich University of the Arts; her thesis, titled "Touched: An Aesthetic-Theoretical Investigation of Touch as Relationality and Site of Subjectivity in the Context of Art,"* examines processes of touch between people, but also those involving matter that is perceived as *lifeless*.[45] Fabian Ginsberg contributes yet another art-educational position with *scripted reality,* which likewise references Barad.[46] Petra Kathke writes about Barad in the

39 Barad, 2007, p. 42.
40 Cf. Barad, 2007, p. 156.
41 Cf. Erlhoff & Marshall, 2008, pp. 87–92.
42 Cf. Niesche & Gowlett, 2019.
43 Phelan, 2005, p. 339.
44 Ibid.
45 Kaufmann, 2020.
46 Ginsberg, 2020.

context of elementary school education,[47] after which transfer attempts become rather tepid.[48]

Art Entangled

Contemporary philosophy, texts, and discourse should occupy an important place in art- and design education subject-didactics, as a matter of keeping pace with the latest research and to enable the further evolution of the discipline. Subject-related discourse has yet to test or document the application of Barad's theses, or their transformation into a corresponding teaching practice, in any significant way. It seems much more essential to me that the teaching practice should not be concerned solely with illustration; processes based on artistic research are far more engaging. Yet in this case, it might also be better to enhance teaching quality through the literary appropriation of her writings (that is, teachers read Barad's texts, develop a different attitude to the world and consequently enact a different approach to teaching) than to work directly with children and teenagers to 'apply Barad.' Conveyed, thought-provoking ideas have to do with uncertainty, unplanability, breaking down preconceptions, worldview, responsibility, etc. There remains a great deal to try out and subsequently analyze, including where we might succeed in overcoming dichotomies and perhaps even in reconciling an apparent and constructed oxymoron (that which is incompatible) ourselves, which is to say coherence within ourselves and in (the) teaching (of art). Translating Barad's philosophy into art- and design pedagogy could potentially give rise to new values. It carries within it a potential revolution, also in education.

47 Kathke, 2018.

48 Kathke describes "the disappearance of things and their digital producibility"* (ibid., p. 47) and calls for this reason "to take seriously the challenge of dealing with materiality in artistic teaching/learning processes and to cultivate it beyond mere *craftsmanship*" (ibid., emphasis in original).

Fig. 1

Fig. 2

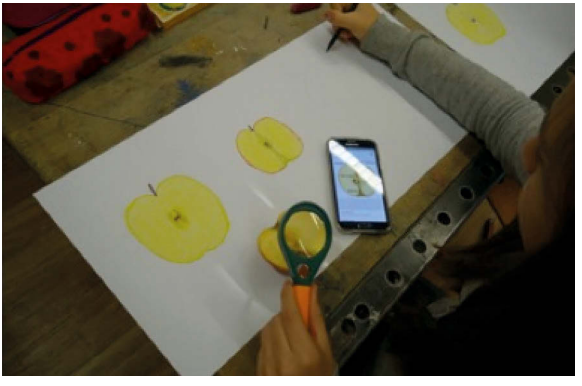


Fig. 3

Fig. 4

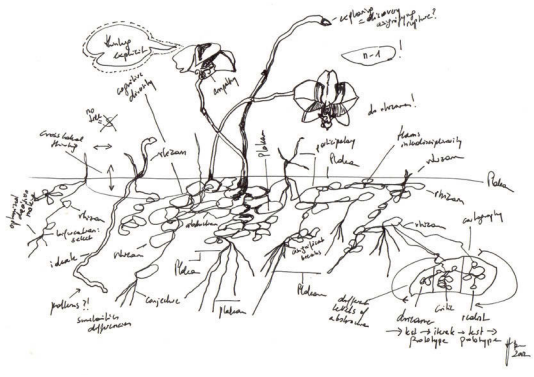


Fig. 5

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Figures

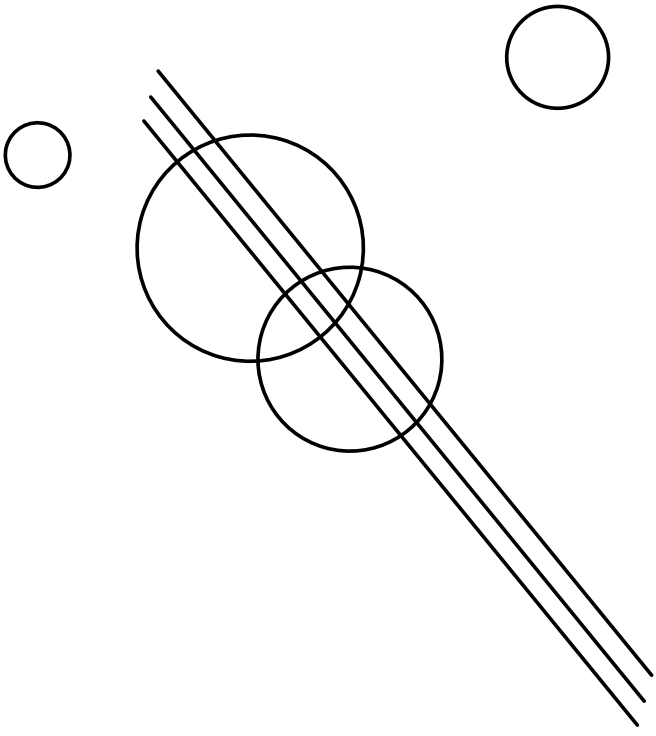
Fig. 1: Book project and -cover "When the World started to Dance," https://interacct.cs.univie.ac.at/index.php?item=participants [26 May 2022], photo © Ruth Mateus-Berr.

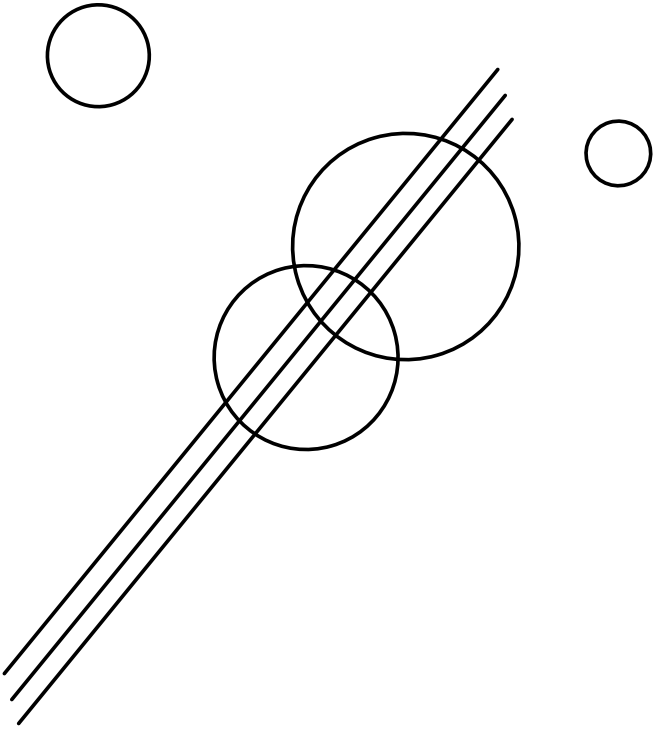
Fig. 2: Scene from art class, photo © Ruth Mateus-Berr.

Fig. 3: Scene from art class, photo © Ruth Mateus-Berr.

Fig. 4: App design project, photo © Ruth Mateus-Berr.

Fig. 5: Concept of Designrhizom, photo © Ruth Mateus-Berr.





Playful Times – Exploring World … PHEW!

Charlotte Axelsson, Mela Kocher

The future of (higher) education needs to be actively 'played with.' After all, only a diverse, well-thought-out and future-oriented education system will be able to meet the challenges of the digital age.[1] *Diverse* in this context is defined as interdisciplinary, multi-perspective and transversal.[2] *Well-thought-out* means applying concentration and critical reflection, but also establishing one's own points of view, admitting (and learning from) mistakes and integrating new sources and content. *Future-oriented* means thinking about parameters that are not yet fixed: a system of this kind shapes personalities and humanity, encourages collaborative thinking, and does so with with a great deal of empathy and sensibility.[3]

Picturing and discussing education in this way points to factors inherent in artistic, creative and cultural modes of practice, as art and culture – the

1 Here, we refer on the one hand to what Felix Stalder has termed the "culture of digitality," referring to mechanisms that significantly shape our culture beyond '0 and 1' (cf. Stalder, 2016). On the other hand, we are inspired by Armin Nassehi's articulation of a theory of digital society in which the digitization process is not primarily or exclusively defined by technology, but by a systemic change in our society (cf. Nassehi, 2019).

2 Cf. Mateus-Berr, in this volume.

3 The Center for E-Learning at the Zurich University of the Arts (ZHdK) understands education to be a collaborative act, sees itself as a driver for future-oriented university didactics, and sets new standards for teaching and learning concepts both nationally and internationally. At the ZHdK, e-learning stands for more than just electronic learning: it is a multifaceted concept in the charged area between experimental, extended, engaged, equal, epic and endless learning – and thus a teaching concept that works both syneasthetically and (in a playful way) digitally, in a hybrid way, and on-site. Moreover, it allows for explorative experimentation (cf. ZHdK, 2021a).

social avant-garde[4] – both promote education and influence it with that same vision. Moreover, the 'digital university'[5] as described by Oliver Ruf is to be pursued and co-designed along these lines.

> The special feature of the digital university lies here once again in a paradoxical undertaking. For, as is to be illustrated, the emphasis is on a form that is specifically aesthetic. [It] is a matter of what is not obvious at first glance: of explicitly ascribing attributes of the sensory to its digitalization and, in doing so, not neglecting them.*[6]

This essay posits a thesis or, rather, a call to action: the education system of the future is one that is both highly philosophical and greatly impacted by artistic developments. In order to want to remain proactive, it should adapt methods and concepts from the creative sector. Indeed, interest in the relevance of the creative sector goes beyond the field of education: particularly in the wake of the COVID-19 pandemic, discourse around arts and culture brought increasing calls to recognize the creative sector as 'system-relevant,' thereby highlighting its importance for society:[7]

> Culture is an essential necessity of society. As Aristotle's Poetics notes in its definition of tragedy, it serves to effect catharsis in people, unleashing affect in its mirroring of the conditions of life. In the process, culture serves to broaden perspectives on one's own life.*[8]

As such, future-oriented higher education didactics must consider the creative sector the key to a future-oriented society, employing design processes similar to those embraced by 'planet-centric design' to connect to a commu-

4 The concept of avant-garde can also be read as an awakening or departure from that which came before. It implies a manifest mood of new beginnings that does not provide a set of rules, but calls and inspires without already knowing the benefits. It gives rise to new, agile ways of being or working together. The word 'avant-garde' is often used interchangeably with 'innovation,' as both imply courageously bringing together constellations that had previously seemed impossible. The avant-garde can also point to social change (see avant-garde movements such as Futurism, Bauhaus or Dadaism), though we will not be elaborating on underlying ethical principles here, nor does this essay address the ways in which they were (in some cases) interpreted retrospectively by individual avant-garde currents or representatives. Members of the avant-garde emerge in or after crises and use them to test and establish radical, fearless approaches.

5 Cf. Ruf, 2021.

6 Ibid., pp. 45–46.

7 Cf. Annual Report ZCCE, 2020.

8 Skipis, 2021.

nity that both takes shape and allows itself to be shaped, integrates the environment in which it lives and foregrounds it as a subject of consideration. The aim must be to help create a future worth living, and to do so in a thoughtful, self-determined way. "Planet-centric design is a dramatic shift in perspective. We need to move from egoism to ecosystems."[9]

The present essay offers a model, which we call PHEW and which can be used to support this call and sort the resulting theoretical connectivity. PHEW is a ludic, design-based, agile and inclusive 'superpower' concept that builds on basic elements of artistic, design and cultural practice of action as a starting point for new teaching-learning concepts and social issues. PHEW is complemented by a location-independent and mobile laboratory implementation method[10] that directly tests the mechanism of *explorative experimentation*.[11] As we have described our model's investigative mode elsewhere: "PHEW stands for playful learning, which takes place in all kinds of hybrid settings (spanning from the analogue to the digital), taking an easily accessible, inclusive approach, and featuring the reflective and nurturing elements of a walkabout."[12]

9 Huber, 2021.

10 Our laboratory approach derives from notions first developed at the Bauhaus. In 1919, Bauhaus founder and director Walter Gropius sought to merge disciplines of art and craft together at his Weimar art academy. The underlying idea flows, among other things, into the *Propädeutikum* [propaedeutic], as the preliminary design course at the ZHdK is called (ZHdK, 2021d). It prepares prospective students for studies in design and art in a trial-like studio situation, guiding them in a 'safe space' that allows for reorientation. The Center for E-Learning abstracts and translates this laboratory idea into a moving, discovery-oriented laboratory situation – similar to the concept of using a 'design bus' to enable a mobile experience of one's study journey (cf. https://www.designbus.ch/ [16 Dec. 2021]). The protected, safe framework of a laboratory-like field of experimentation can also be found in the culture of so-called 'magic circles': this concept refers to a symbolic space within which a game evolves in which the normal rules, role attributions and realities of the world are suspended and replaced by the artificial reality of a game world (cf. Salen & Zimmermann, 2004).

11 Here we refer to the term as defined by Friedrich Steinle, who distinguishes the explorative from the theoretical experiment (Steinle, 2005). Going further, we also speak of an *exploratory experiment*, otherwise known as an *explorative experiment* or *pilot study*. It "aims at broadening the basis for hypotheses or acquiring general experience"* (KU Eichstätt-Ingolstadt, 2021).

12 Kocher & Axelsson, 2021.

Ludic Interventions

We see the superpower concept PHEW as a particularly exciting and goal-oriented measure with the potential to highlight skills and motifs including tolerance (in the sense of ambiguity tolerance), error culture, independent thinking and an explorative attitude in teaching practice; to promote the development of (changing) communities in project work; and to elaborate, present, reflect and revise this development in an iterative process.

PHEW is based on a strategy that can be understood as a *ludic intervention*: periods of uncertainty show the helpfulness of approaches with the ability to realign deterministic, planned-out, and 'inside-the-box' thinking. There is a growing need for methods that are chance-driven, out-of-context, and engaging – methods that question, re-discuss, tentatively swap and redefine social norms and roles. The (after)effects of artistic methods that would not have been alien to such socio-political and art-political movements as Fluxus or Dadaism are especially keenly felt in Zurich as a cultural melting pot; the past 30 years have seen these strategies repeatedly gaining a new foothold in subversive global movements including guerilla marketing, guerilla gardening, hacker culture and the protest scene.

The fact that games are inextricably interwoven with politics, society, and anthropology has been described, analyzed, and deconstructed in various ways since time immemorial. In the 1st century AD, the Roman poet Juvenal coined the term *panem et circenses* (bread and circuses) to describe political rulers' strategy of distracting people from social grievances with a grain dole and spectacular staged events.[13] In the 18th century, Friedrich Schiller praised the play instinct as an immanently aesthetic category of being human: "For, to mince matters no longer, man only plays when he is in the fullest sense of the word a human being, and he is only fully a human being when he plays."[14]

Finally, in the late 1930s, Johan Huizinga defined what he termed *Homo ludens*,[15] or the playful, play-minded human being, as he understood *play* to be a fundamental building block of culture per se. Game studies research initially defined *play*, which follows its own set of rules and is detached from external functional contexts, in terms of *agon* [ancient Greek ἀγών for struggle, competition, contest] – a reflection of the zeitgeist at the time. Con-

13 Cf. for example the novel as well as the movie "The Hunger Games," 2008.
14 Schiller, 1795, p. 88.
15 Cf. Huizinga, 1938.

sequently, in the 1960s, Roger Caillois saw it as influenced in equal measure by *agon*, *alea*, *mimicry* and *ilinx*.[16] Play as defined by the forces of competition, chance, masquerade/role-playing, and stupor/intoxication lends itself to very different forms and contexts of meaning, and offers more room for the subversive – in education and in culture.

From Gamification to Playification

When we talk about exploring a diverse, well thought-out and future-oriented education system with ludic methods, this means that we adapt functionalities and mechanics usually associated with the game system to what was originally a non-game context. This in no way refers to gamification strategies, which – often serving the marketing sector – use relatively short-term measures such as points, badges, tokens, rankings, etc. to convert extrinsic motivation into intrinsic motivation, thereby leading users to participate in largely pleasure-free contexts: "Hot on the heals of that is the number of people still selling 'quick win' solutions and 'magic bullets' off the back of the word 'gamification.' Promising to solve any and all problems a client may have with a simple plugin offering points and badges."[17] PHEW envisions a different way of working and a different learning and teaching atmosphere: Participants are surprised and challenged, and enjoy fun and sustainable involvement in the learning process. Consequently, PHEW refers to *playification* instead of *gamification*. Humans learn by *playing* and therefore strive for a kind mindset similar to what Brian Sutton Smith notes in his descriptions of the 'lusory attitude,'[18] which is often forgotten in adult culture: "When you are an adult you don't stop learning through play, you just stop playing."[19] The goal of PHEW is logically to make this play instinct fruitful for the future of education.

PHEW in Action

Ludic interventions in teaching – taking *video conferencing* as an example – can take the form of personal, thematic, engaging check-ins. Framing is essential here, as it creates a personal, motivating work atmosphere. Introductory questions such as "What did you do for the very first time this week?" or "Show us your socks and tell us a little story!" can be simple but subtle course-set-

16 Cf. Caillois, 1967.
17 Marczewski, 2021.
18 Cf. Sutton-Smith, 2009.
19 Waters, 2014.

ting cues for developing a motivated, mindful learning community. Equally important is the process of exiting the interaction: check-outs such as "Before you go, tell us exactly one word that sums up the essence of the seminar for you" can playfully end a video conference call and also give cause to reflect.

In general, elements of ludic didactics[20] can contribute to cognitive activation or add depth to material presented in class. Whether guiding a theoretical discussion with questions chosen with a roll of dice or drawing lots for active roles within a particular class session (one person gives feedback; another formulates critique; another gives input; another observes quietly but attentively, etc.), *random design* can help refigure stalled structures or predictable processes. Quizzes and voting rounds are ludic elements already in use in the classroom, and many more can be added to them.

A more complex example is "Creative Encounter," an online course co-developed by the ZHdK's Center for E-Learning, its Digital Skills & Spaces program and the ZHdK Center for Continuing Education, which has been implemented several times since 2020.[21] Similar to an advent calendar, the online learning platform PAUL gives participants access to a new video contribution by a ZHdK expert every morning for a period of ten weekdays. The video illustrates a creative method and explains the day's task: for example, inventing stories by looking at stains, crafting wheels of fortune to be used as decision-making machines, generating new meanings from pages of text, or making paint from moss to offset CO_2 emissions. Participants share and discuss their results and approaches in an online forum. The course, which is aimed at creative-curious individuals from all walks of life, is a kind of digital walkabout. It also constitutes a short journey to the inner creative self, a facet that (like the play instinct) many adults tend to neglect. Creative Encounter's recipe for success is creative empowerment with playful tasks and exchange within a small, protected community.

Identities, Agency and Interventions as Future-Oriented Competence Clusters

PHEW is more than a model; it is an experimental system that takes a movement as its point of departure and explores, elaborates and evaluates sub-

20 Cf. ZHdK, 2021c.
21 Cf. ZHdK, 2021b.

ject matter within that movement.[22] Facilitated by exploratory experiment, PHEW enables different ways of thinking about teaching and the finding of new solutions. With this in mind, we propose three competence clusters that we will explore using PHEW in the *mobile laboratories* known as "Experimental Learning Labs," but also want to both challenge and encourage in the future.

The three clusters *Identity*, *Agency* and *Intervention* are fields borrowed from the creative sector; taking a playful approach to these systematics can support teaching across disciplines. With this structure, we invite everyone to develop a future-oriented lesson with us:

> Adopt a creative, formative attitude; be aware of the environment in which you operate – not reacting to it in any reverent way, but with a bit of 'deliberate oblivion,' meaning playful and unbiased. Link your context with others, adapt outside methods and content, and merge it all with your own experience and presence.*[23]

Identities and the related manifestations in physical, hybrid and virtual spaces. It is here that personality is shaped and a future-oriented ecosystem built.
Keywords: world, performance, (re)presentation, dramaturgy, identity, artificial intelligence, social roles, social media, virtual reality/augmented reality, avatars

Agency means the ability of actors to act in or with a particular environment.
Keywords: activation, playful modes of action and digital skills, leadership, immersion, creativity, error culture, resilience

Interventions mean engaged interventions for a playable future; these build sustainable competencies, including the competence to think about, envision and create the future. An intervention is an agile system that is both self-reflective and open to reflection.
Keywords: ethics, digital sustainability, inclusion in digital space, learning culture, value discourse, action-based learning/peer learning/guerrilla learning

22 Cf. Klenk, 2020.
23 Axelsson, 2020, p. 22.

In conclusion, our approach supports the following 'mission statement' to make the arts 'playful' so that others might enjoy them:

> Currently, many institutions and companies are looking for new answers, a change of perspective, and increasingly want to include the view of future generations in their work. As part of a large, multidisciplinary art university and after many years of research, we know the specifics, potentials and impact of the arts for other fields.[24]

Our search for a change of perspective is guided by the fundamental question of successful scholarly communication: how can we manage the transfer and translation work in such a way that both our ludic approach and artistic mindset reach a broader public? – PHEW! A challenge we love to tackle.

24 Bossow, 2021.

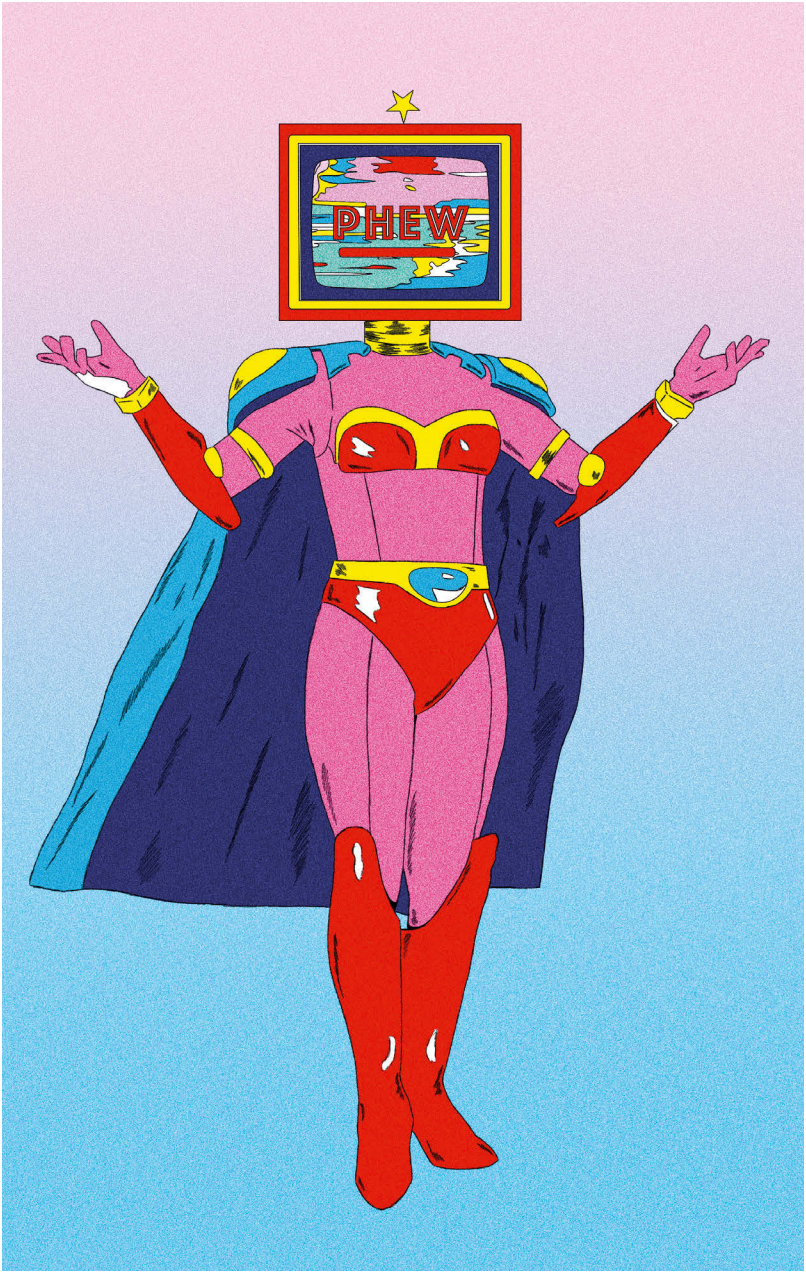


Fig. 1

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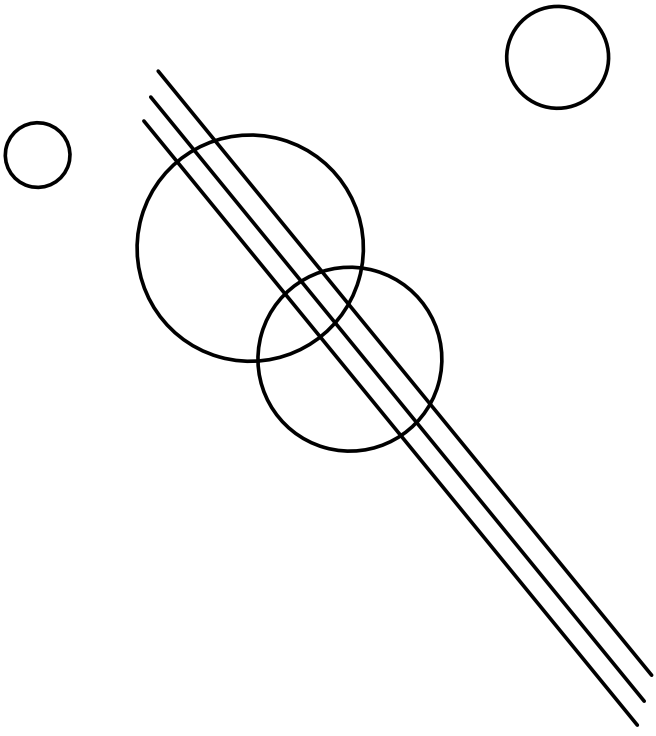
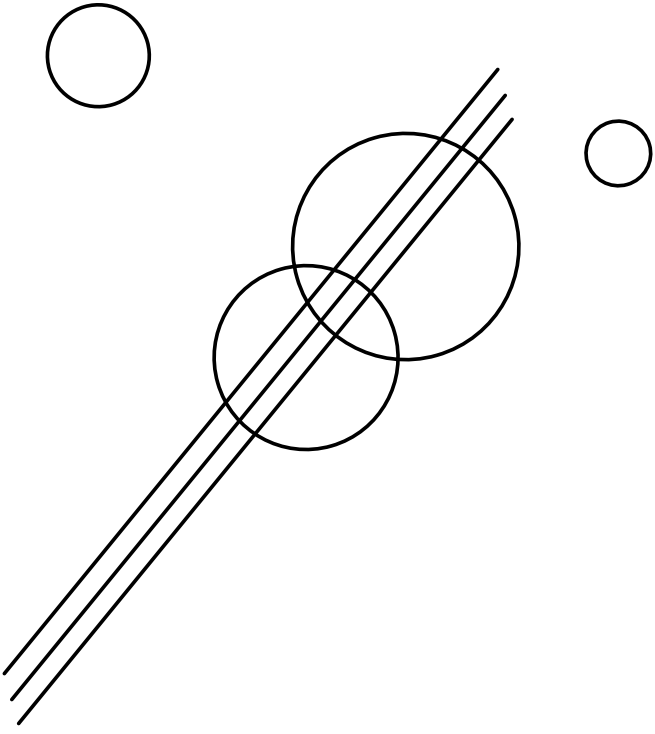
Figures

Fig. 1: PHEW model by Marie Mohanna.





Changing Values – Shaping Minds: Flow, Creativity, and Ikigai

Anna Maria Loffredo

"We are subject to a radical loss of space and time,
even of world, of being-with."[1]
(Byung-Chul Han)

"The capacity for creativity is essentially human
and it holds the constant promise of alternative ways
of seeing, of thinking and of doing."[2]
(Sir Ken Robinson)

"Wake up all the teachers time to teach a new way
Maybe then they'll listen to whatcha have to say
Cause they're the ones who's coming up and the world is in their hands
When you teach the children teach 'em the very best you can."[3]
(Harold Melvin & The Blue Notes ft. Teddy Pendergrass)

Teaching (art) is a gestalt of learners, teachers, and subject matters that deserves no less than the attribute 'complex.' The question of which *mindset* should be used to navigate this dynamic process is becoming increasingly ur-

1 Han, 2009/2021a, p. vii.
2 Robinson, 2001/2011, p. 165.
3 This song, written by John Whitehead, Gene McFadden, and Victor Carstarphen is from the 1975 U.S. soul charts. It advocates reform and 'change' and equally calls for mindful accountability when it comes to interventions in (arts) education.

gent. It is in this context that the OECD's educational aspirations for and targeting of 'Future Education & Skills' circle concepts of 'creativity' and 'well-being': *"The Learning Compass 2030* defines the knowledge, skills, attitudes and values that learners need to fulfill their potential and contribute to the well-being of their communities and the planet"[4] (Fig. 1). From this finding, we can derive an understanding of 'literacy'[5] that is both related to the common good and, to a certain extent, *connected to the earth* – that is, one in which knowledge and skills, values and attitudes inevitably determine and provide orientation for one another. This observation could be called the micro-perspective level of the following considerations for a critical cross-cultural discourse analysis. It is, as will be shown below, embedded in a 'glocal' higher education sector that needs to identify a strategic positioning in the face of assured uncertainty about which main drivers (will) characterize societal change and its pace. Geopolitical changes, a fragile understanding of democracy, or a further development of digitization, artificial intelligence (AI), and 'mixed realities' as 'the new normal' require appropriate measures with a steering function that commonly falls to 'educational governance.'[6] These rather abstract developments in turn raise the question of what role the individual can play in a community; or, more specifically, what values will come to define the individual in a future society that has hitherto been dominated by gainful employment. It might also ask, vice versa, how people create new meaning or strive for different conditions along those same lines of *well-being*.[7] This is an entirely creative

4 OECD, 2015/2021.

5 Historically, it was the Austro-American art educator Viktor Lowenfeld who coined the concept of *literacy* in the arts in the 1940s, seeing it as a stimulant for both creative and cognitive development (see Wenrich, 2020, p. 164). Besides the established subject-specific literacies including *mathematical, reading* or *scientific literacy*, other literacies including *data* or *future literacy* might be considered major core concepts in the future. The emerging generations will be taught to decode new, complex and fluid sign systems.

6 Cf. Maag Merki & Altrichter, 2015, p. 396; EUA, 2021, p. 7. For a culturally pessimistic present-day analysis of the infosphere in which data, artificial intelligence, etc., would become a 'smart prison,' see Han, 2021b, p. 11.

7 This line of thinking does not stem exclusively from the education sector's COVID-19-related *remote mode* of learning and interaction (Loffredo et al., 2020); the prior *New Work* movement likewise impacted occupational biographies, thereby enabling the emergence of patchwork identities as well. This inevitably results in different work structures as employers, employees and the self-employed respond to trends. The new work mode requires that competencies and a different mindset be learned differently, unlearned to some extent, and learned again. These educational processes are nonlin-

act, which in turn calls for complex *transformation design* in the abstract as well as in the concrete. The following discusses patterns for 'a life well led' as they are interpreted within the Japanese cultural context, with the aim of reconstituting derivatives of changing knowledge systems and imaginary worlds into a new context of knowledge. This will then be used to deduce a design competence[8] at the levels of various stakeholders within the educational system.

Ikigai as 'barometer'

In this context, it is worth taking a look at Japan, where *ikigai* acts as a kind of barometer, a cultural orientation aid for the individual considering the common good.[9] This ethos can prove an important source of inspiration for a future-, subject- and sustainability-oriented *mindset*[10] of practitioners at the micro- and macro-levels of the educational system briefly indicated above, that is individuals who strive for answers to how to render responsible, meaningful educational work for future generations. A fundamental part of this is that it is practiced as a normative attitude that extends beyond one's own lifetime; a prerequisite is that, in the midst of the current disruptions, discontinuities and transformations, one is prepared to consider other world concepts outside of one's own 'comfort zone' and literally delight in engaging with a didactic vision in thought and action:

> *Imagining* the future is grounded in Deep-Thinking Humility and developing a Transcendent Goal for humanity. *Caring* about the future requires

ear and are more or less far-reaching. The effort required to balance ambiguities lies in a clear shift toward such progressive values as openness, flexibility and curiosity as typical indicators of creativity, but it also expresses a new type of society. Nevertheless, Philipp Hübl (2019, p. 29; see also his contribution to this publication) emphasizes that the prospect of finding answers to successful *work-life blending* in the future is less a matter of an 'or' than of a 'both/and' of traditional/conservative thinking on the one hand and liberal/progressive thinking on the other. As Ralph Waldo Emerson put it as early as 1841: "And so, whilst we do not go beyond general statements, it may be safely affirmed of these two metaphysical antagonists, that each is a good half, but an impossible whole. Each exposes the abuses of the other, but in a true society, in a true man, both must combine."

8 Gerhard de Haan, referring to the OECD reference framework for literacy, subdivides the term into twelve subcompetencies. They describe a sense of empathy and compassion in addition to knowledge and skill areas (cf. de Haan, 2010, p. 320).

9 Cf. Mogi, 2017, p. 18.

10 Here I understand *mindset* as an attitude, a specific personality type, a mentality or even a certain temperament that I use to situationally apply convictions, ways of thinking, and a diverse repertoire of actions. This enables me to navigate my worldview or even philosophy of life as autonomously and, above all, as happily as possible.

> a Legacy Mindset and a sense of Intergenerational Justice. *Planning* for the future beyond our own lifetimes is a skill emerging from Cathedral Thinking and Holistic Forecasting.[11]

Education – a thoroughly controversial category in the German linguistic and scientific fields and one too often instrumentalized by politicians – demands a vastly forward-thinking, critical and questioning look at the multi-level system behind the overall whole, with a view to finding answers in the present.[12]

In this context, *ikigai* is a state of mind that literally means *iki* ('to live') and *gai* ('meaning'); it is an essentially democratic concept that finds joy in the diversity of life.[13] The basic idea of *ikigai* does not come from a single value system.[14] Instead, we find a plurality of small things that constitute the following five pillars:

1. *Starting small:* focus on the details
2. *Releasing yourself:* accept who you are
3. *Harmony and sustainability:* rely on others
4. *The joy of little things:* appreciate sensory pleasure
5. *Being in the here and now:* find your flow

Ken Mogi elaborates on the central tenets of this five-pillar model with a view to what is worth living – and learning – for. This is because the education system focuses primarily on knowledge and skills, but less on emotional values, which are an essential driver for personal success. As Alain de Botton critically notes of the revision of educational concerns: "Sustained shortfalls in emotional intelligence are, sadly, no minor matter. There are few catastrophes, in our own lives or in those of nations, that do not ultimately have their origins in emotional ignorance."[15] Success is measured not by economic yardsticks, but rather by life satisfaction and community care. From this follows an expanded, multiple understanding of intelligence and talent[16] from which a broad spectrum of 'awareness' also unfolds in the sense of a socially compatible 'ecosophy.' It is only in the respectful treatment of other living beings –

11 Krznaric, 2020, p. 11, emphasis in original.
12 Cf. e.g. also Stojanov, 2006; Berner & Loffredo, 2021.
13 Cf. Mogi, 2017, p. 12.
14 Ibid., p. 175.
15 de Botton, 2020, p. 3.
16 Cf. Gardner, 1983.

that is, a nature-human relationship that does not consider the human species the sole starting point of the world's design – that we find the 'equilibrium,' as Guattari put it,[17] needed to redefine the enlightened human being in their ability to reflect and assess.

Japanese society describes so-called *kodawari* as the central catalyst of a mindset and inner attitude. It denotes a normative, basic value in everyday life that urges one to continually strive for a certain level of quality and professionalism with the highest possible degree of commitment or perseverance, and is habitualized as a personal standard. In the school context, this basic attitude manifests itself, for instance, in learners delving into a topic or a problem that goes beyond their formally achievable learning curve, for which they have already achieved the best possible grade – that is, they cultivate an urge to explore that has nothing to do with grade-seeking. This approach, which is to say finding value per se, independent of school requirements and detached from an evaluative dichotomy, represents an important 'creative insanity'[18] that involves thinking in terms of alternatives, infinite possibilities, and complex scenarios – within the bounds of healthy ambition – to embark on a search. It also demands sufficient willingness to make an effort and to experience unexpected discoveries and one's own reaction to them as pleasurable. This process can be described as the opening or switching-on of the 'tinkerer's duct.' In other words, an innovative force emerges to come close to a breakthrough, or to successfully produce something completely new. Parts of this path to discovery cannot be planned, calculated, or fixed step-by-step, and there is no guarantee that any discovery will be made at all.

One open, iterative, and circularly-oriented approach to the world – i.e., entering unknown terrain and revealing new maps in an explorative way, to stay with the metaphor – can also be found in the so-called Columbus effect ("India sought, America discovered"[19]) that Stefan Wilsmann and others have brought to the fore. Here, it is a matter of trusting in the magic moment of serendipity, and the same applies to educational processes.[20] An ethos built around achieving a diverse array of sensory qualities consequently produc-

17 Cf. Guattari, 1989; see also Gardner, Csíkszentmihályi & Damon, 2001.

18 Mogi, 2017, p. 46.

19 Wilsmann, 2019, p. 28.

20 Curiosity, inquisitiveness and passion are, on the one hand, part of the hallmark of children and adolescents. They also represent an essential prerequisite for the creative process (e.g., Sievert-Staudte, 2001; Kirchner & Peez, 2009).

es an inclusive way of thinking and working; this in turn gives rise to a growing, mindful appreciation of cultural artifacts, as exemplified in Japanese consumers' interest in the refined craftsmanship and production techniques needed to create ceramics, for example.[21] *Kintsugi* refers to such gold repair of broken bowls and a very different understanding of what is a flaw or, conversely, what is beautiful.

The question that arises is how we reactivate this *desire for more* in schools[22] so as to authentically connect learning and educational processes with meaningful life questions, and do so in a way that resonates with learners and teachers alike. It also has to do with a bundle of mindsets among teachers – a mindset with which they feel at home in a creative field. They bring their (co-) design competence on the micro-, meso- and macro-levels, but also critical resilience and a sense of *playfulness* to the job. It is about contributing competitively and constructively as a stimulating part of the whole: "Each person's *ikigai*, when implemented in harmony with other people, promotes creativity in the free exchange of ideas."[23] Recognition and acknowledgement then occur in challenges that can be shared.

The Enigma of Qualia

The second pillar of *ikigai* involves the (again, as it were) mysterious way of letting go. It is closely tied to the appreciation of the presence of the fifth pillar, the here and now. After all, the ability to discover sensory pleasures touches on one of the biggest riddles in contemporary consciousness research, namely how to observe, measure, and systematize phenomenological properties of sensory experiences – the experience of consuming a culinary delicacy, for example.[24] Sensory impressions like the scent of a rose, the rustling of trees, or the colorfulness of a sunrise are perceived and form imaginative content, which in turn gives rise to 'phenomenal' consciousness. 'Qualia' is the name given to the sensory qualities that accompany this kind of experience via visual, olfactory, auditory, or proprioceptive stimuli, specifically those that cannot be grasped by conventional attempts at operationalization. To this day, we find an explanatory gap in psychological diagnostics. This division of ideas and their volitional activities into six types has persisted in scientific discourse

21 Cf. Mogi, 2017, p. 64.
22 Cf. Robinson & Aronica, 2015.
23 Mogi, 2017, p. 88, emphasis in original; cf. Loffredo, 2018, p. 49.
24 Cf. Mogi, 2017, p. 11.

since Wilhelm Wundt's development of the theory in the 1860s. In contrast to the other five types of imagination – i.e. imaginative fantasy, subjective evaluation, self-reflection, self-control with respect to volitional acts, and self-control with regard to emotion and motivation – 'qualia' refers to a so-called "first-person perspective."*[25] This means that access to the individual sensory impressions is subject to a limited linguistic describability. One Swiss artist – or rather, *the* Swiss artist – who tried to visualize his sensations and Wundt's insights on humankind in his painting is Ferdinand Hodler. Accordingly, his 1909/1910 painting "Die Empfindung II" [Sensation II] embraces a rhythmic representational principle that incorporates different depictions of a female figure; in doing so, he manages to render a multi-perspectival transformation from one state to the other within a static, flat 'painting,' to evoke an emotional response, the moving essence of an intense touch (Fig. 2). Hodler's brushwork and color choice allow the silky blue robe to symbolically caress the female body, clinging to and wrapping around her form in a metaphor for sensibility. An idealized, typical beauty delicately reveals her body while simultaneously facing away from the viewer; the sweeping allegory of sensation is effectively a private, almost secret, soulful act, which Hodler's painting shows as a public act on a light background with contrasting dabs of red scattered across it.[26] Hodler's ability to bring abstract feelings to life in paintings made him a key forerunner of Expressionism, a modernist movement focused entirely on expressing emotion in the fine arts.

On the Value of the Present

The five-pillar concept of *ikigai* finds the struggle for coherence in life transposed into the ability to get involved in something, into pursuit of the feeling of delving into an activity and taking pleasure in 'losing oneself' in it: "Negation of the self, therefore, becomes a release from the burden of the self and becomes a fundamental aspect of flow."[27] A key task of educational processes

25 Sokolowski, 2013, p. 46.

26 Hodler's influence as an innovator of monumental painting has been taken up in various retrospectives in recent years. The Bern-born artist influenced painters including Klimt, Schiele and Kokoschka in Austria, as well as turn-of-the-century German modernism (Leopold Museum: Ferdinand Hodler. Elective Affinities from Klimt to Schiele, 2017–2018; Berlinische Galerie – Museum of Modern Art, Photography and Architecture: Ferdinand Hodler and the Berlin Modernism, 2021–2022).

27 Mogi, 2017, p. 75. Mihály Csíkszentmihályi's groundbreaking studies on flow in connection with creativity, happiness, the philosophy of life and the understanding of leader-

in schools and universities is to develop correspondingly creative learning settings and to support the next generation of learners in envisioning life goals. This is, in other words, about being role models with a sense of responsibility. It is the immersive moments for a creative stance as Mogi describes it after a conversation with Hayao Miyazaki, the director and 'inventor' of the animated film "Spirited Away," in which he notes a trait particular to children: "A child knows the value of being in present. Actually, a child has no definite idea of past and future. His or her happiness resides in the present."[28] As soon as our ideas become detached from the here and now, fantasies emerge that can anticipate temporally fluid possibilities in the past or in future scenarios: "Our minds dance across multiple time horizons on a day-to-day basis, rapidly swivelling our attention from one perspective to another. We are experts at the temporal pirouette."[29] This capacity for *mental time travel* – something Vilém Flusser already stressed as a key ability to imagine things as being different from the way they currently are – might also enable the change we are looking for: "The power to envision is the power of drawing the concrete out of the abstract."[30] 'Transformation' therefore also means the ability not only to abstract on the way to cognition, but, conversely, the ability to retrieve that insight, to make it accessible, to translate it into an actual comprehension, also for others, to cast it into projects undertaken together. Herein lies the source of human creativity. The impossible can be thought and potentially channeled into the possible. Detached from reality and factual constraints, imagination is *ecstasized* and appropriated as sensory play. A 'time rebel' subverts typical patterns to find new bridges and forks in the road. Oliver Ruf has proposed the following understanding of the present:

> 'Present-in-time' [*Gegen-wärtig*] is something that is recognizably opposite to oneself. This physical presence is joined by the mental 'present' [*Gegenwart*], the realization of something absent [*Vergegenwärtigung*]. Thus the 'present' gives an idea of time, which also includes past and future: there is *only* 'present'; the past is the remembered, the future the hoped-for 'present.'*[31]

ship in companies (among others 1975, 1996, 1998, 2003) are meanwhile taken for granted as global knowledge.

28 Mogi, 2017, p. 78.

29 Krznaric, 2020, p. 32.

30 Flusser, 1985/2011, p. 38.

31 Ruf, 2011, p. 16, emphasis in original.

The seemingly abstract, distant goal of *well-being* leads to happiness, and it does so via concrete routes. Still, the way people perceive happiness and what they consider causally necessary to attain it is "an interesting scientific question, as well as a matter of practical concern," says Mogi.[32] People very often succumb to an illusion of focus, which is to say they tend to believe that very specific things are important for happiness when in fact they are not.[33] A sufficiency lifestyle promotes an enlightened approach to life and one lived with humility, particularly when the Education for Sustainable Development (ESD) approach is about self-limitation, frugality, or modesty. That said, ongoing 'turbo-capitalism' stands in diametric opposition to this view and shifts fundamental values.[34]

Self-acceptance, which is to say self-love, is another important prerequisite for happiness.[35] This also includes letting go of one's self in the midst of what performance-, experience-, and consumer-oriented society considers worth striving for: "Self-love is the quality that determines how much we can be friends with ourselves and, day to day, remain on our own side."[36] Mogi describes 'being in the here and now' as perhaps the most profound pillar of the *ikigai* way of thinking, as belief in the ephemeral, transitory and fleeting only bundles the necessary mindfulness towards oneself and others without expecting immediate reward or recognition.[37] Work on one's self implies intersubjective care, something peaceful, within the overall idea of a reflexive mindfulness.[38] Considerations such as Hartmut Rosa's articulation of 'resonance' – an idea that has contributed to the notion of relationship work in

32 Mogi, 2017, p. 159.

33 In this context, Byung-Chul Han points to 'mental catastrophes' that can be attributed to the so-called overtired society with its hyperactive workloads. Having succumbed to fatigue syndrome as capitalistic self-logic weakens both social and ecological self-efficacy, the philosopher sees the need to restore the *vita activa* to a *vita contemplativa*. According to Han, revitalization of that which makes it possible to experience fulfilled and fulfilling time is, the philosopher notes, an art in itself that would help develop a crisis-proof mindset (cf. Han, 2022). In the discourse-analytical ordering of the different positions here, I aim to pursue with this contribution less an 'either-or' than a complexity-preferring (mind-)set of possible considerations. For me, it is about finding a fundamental coherence that stands on its own, while also taking context into account so as to find joy in creative doing (nothing).

34 Cf. de Haan, 2010; Dallmer, 2020, p. 30.

35 Cf. Mogi, 2017, p. 159.

36 de Botton, 2020, p. 50.

37 Cf. Mogi, 2017, p. 85.

38 Cf. Dallmer, 2020, p. 199.

the pedagogical field – describe experiences of responsivity as existential for human beings, even though "an irreducible aspect of *inaccessibility* is inherent in all resonant experiences."[39]

The Golden Triangle

Mogi concludes that it is possible to realize a "'golden triangle' of *ikigai*, flow and creativity."[40] Doing so would conceivably allow one to align one's own *mindset* with the individual characteristics of the people in one's environment in an appreciative way. Learning to base assessments on honest interest requires both practice and the ability to classify and evaluate the ability to adopt perspectives. An important metastructural ability that contributes substantially to the success of such coherence processes is the power of observation that extends to interpretation from a systemic point of view. Parallel to this comes *monitoring*, i.e. a process of self-regulation vis-à-vis oneself, others, and the process as a whole. At any given time, thinking considers thinking from a higher level.[41] This is referred to as meta-cognition; it has a significant impact on success in creative group processes, and teaching-learning research now undisputedly considers it evidence-based knowledge.[42] At the instructional level, it can be promoted when students engage in such self-regulatory techniques as *prompting* by using leading questions, thinking aloud, or 'freeze frames' to reflect on existing inconsistencies, thus encouraging learners to engage with a particular problematization. Teachers reinforce intended learner behavior with multi-modal type cues designed to draw their attention to the desired learning or behavioral outcome. The same can be applied to staff management processes at universities, if one shifts the viewpoint to another kind of relationship work. Academic leadership methods that focus solely on few strong individual potentials will inevitably fall short. Universities, with their various professorships and personalities, follow a logic of their own and tend to idle on account of "structural typicality"*[43]; too seldom does 'the university' turn out to be a learning organization, even as it is considered *the* site of a higher-learning-with-each-other. In "The Digital University," Oliver Ruf evokes the

39 Rosa, 2019, p. 295, emphasis in orginal.
40 Mogi, 2017, p. 88, emphasis in original.
41 Cf. Sokolowski, 2013, p. 47.
42 Cf. Hattie, 2009, p. 188.
43 Luhmann, 2016, p. 10.

image of finding a "desired 'temperature' of university"*[44] – and I should like to add: a temperature that lies between the actual and the target values so as to ignite the flame for education in and through the arts.

Ikigai could therefore ultimately be translated into another philosophy of life and work. *Kaizen* (*kai* 'change, transformation', *zen* 'for the better') has been adopted as a *terminus technicus* by corporate quality managers pursuing continuous, never-ending improvement. However, before leaping to a hasty critique of the supposed economization of education (i.e. a symptomatic shift away from the Humboldtian neo-humanist ideal embraced by the German-speaking world), it is all the more important to point out its potential focus on the well-being of all stakeholders in the education sector. After all, the interplay between problem-, customer-, process- and employee-orientations could potentially serve as an opportunity look critically at existing flaws in the 'school' and 'university' systems. That responsibility cannot fall to those who represent the interests of either subject-specific or general discourses in the educational sciences, nor to those in the field of educational management. With a view to the so-called *21st-century skills*, what is needed is *change management* supported by competent and creative *changemakers* in both the sciences and the arts and in the education sector, one that is resolutely carried out at all levels: "People entirely lacking in notions of utopia should not practise science, technology, or art."[45] First honest, creative steps might involve fundamentally reorganizing the self-concepts, sites and processes of educational institutions, and making them as flexible as possible.

John Colemann has highlighted the meaning of his activity as a very personal, continuous act of creation.[46] After all, it isn't just the meaning of things and activities that can change; the way we live our lives changes as well. This increasing change ultimately shakes up familiar routines in the education system.[47] Returning to the image of the OECD observation mentioned at the be-

44 Ruf, 2021, p. 176.
45 Zielinski, 2010, p. 298.
46 Cf. Colemann, 2017.
47 One example of the imminent epochal change in working society is the increasingly clear call for an unconditional basic income in Germany. To this end, the German Institute for Economic Research (2021) has launched a three-year pilot study in which 122 people – a cross-section of participants from different income levels – will receive an additional € 1,200 regardless of income. The study group will be surveyed seven times via questionnaires during the period. Results will be compared to those of a reference group of 1,380 participants who do not receive a basic income.

ginning of this article, the central question at the end of the day is: How do we remain captains on our journey through life, and which anchors lend support to that journey? Four basic questions show how the five pillars of *ikigai* might translate into a concrete answer (Fig. 3):

1. What do I love?
2. What am I good at?
3. What does the world need?
4. What can I be paid for?

Actors at the micro and macro levels of the education system must also – or especially – have answers to these questions if the desired end result is successful citizen *entrepreneurship* (in the form of startups, social entrepreneurship, ecology projects), which is to say a situation in which citizens can experience themselves proactively as part of a community.[48] We are free to understand it in the plural sense – with many other levels of interpretation than that of profit maximization. But it is not possible to do without it altogether. It requires formats for dialogues, especially cultural polylogues,[49] e.g. with artists of any discipline or people who engage with the arts by reading, writing, academically, as collectors, or in an appreciative way. This is not insignificant for opening up participation and for seeing oneself as (self-)effective in a democratic practice of action.

48 The Institute for Entrepreneurship and Innovation Science at the University of Stuttgart and the University of Applied Science Stuttgart, for example, teach *ikigai* as part of the curriculum (https://www.eni.uni-stuttgart.de/institut/aktuelles/meldungen/Ueber-solche-Fragen-habe-ich-noch-nie-nachgedacht/ [24 Oct. 2021]; https://www.hdm-stuttgart.de/startup-center/assets6/downloads/Innovation_und_Entrepreneurship.pdf [24 Oct. 2021]).

49 Cf. Torkler, 2021, p. 30.


The OECD Learning Compass 2030
Action
Transformative competencies
Core foundations
Knowledge
Attitudes
Competencies
Values
Skills
Creating new value
Reconciling tensions & dilemmas
Taking responsibility
Anticipation
Reflection
Well-being 2030
Co-agency with peers, teachers, parents, communities
Student agency
OECD

Fig. 1

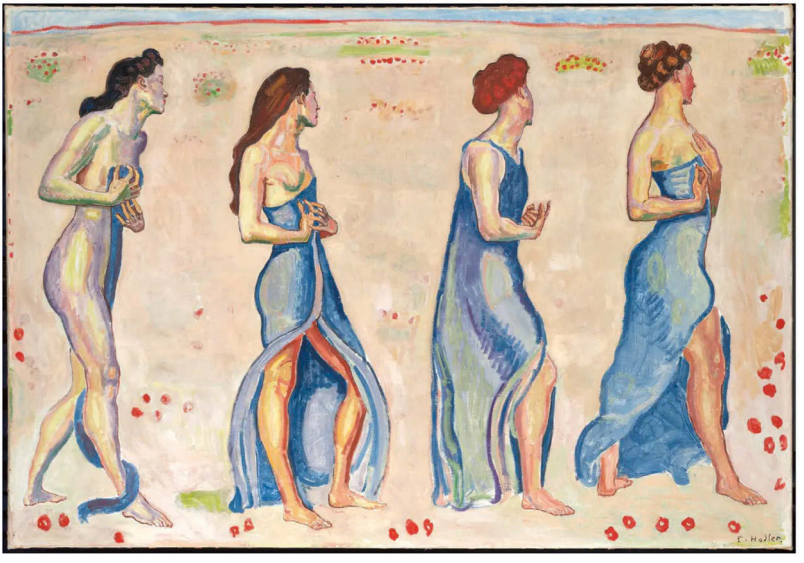


Fig. 2


what you LOVE
Passion
Mission
what you are GOOD AT
ikigai
what the World NEEDS
Profession
Vocation
what you can be PAID FOR

Fig. 3

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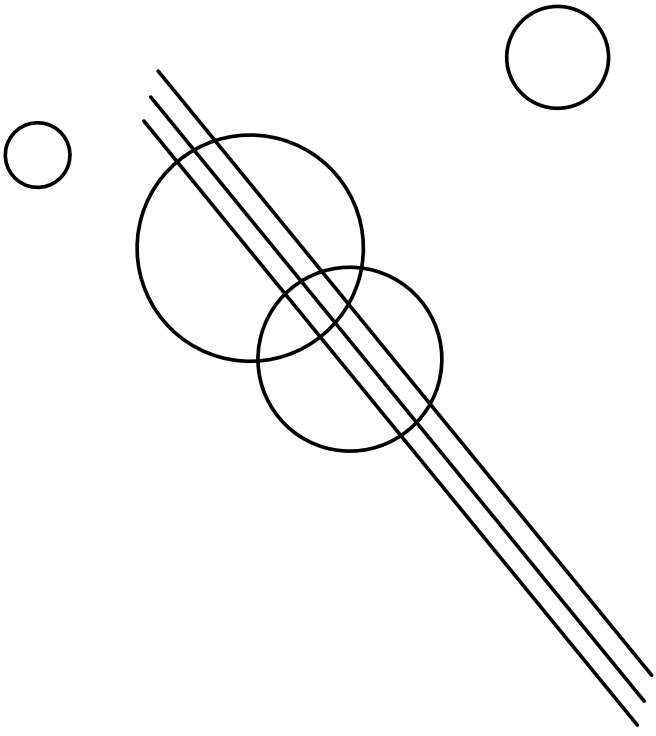
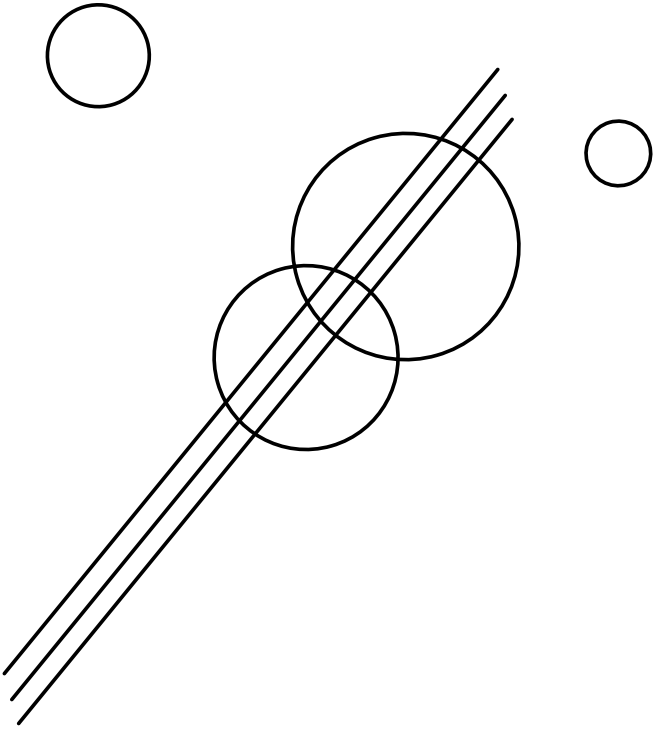
Figures

Fig. 1: OECD "Learning Compass," https://www.oecd.org/education/2030-project/teaching-and-learning/learning/ [24 Oct. 2021].
Fig. 2: Ferdinand Hodler, Die Empfingung II [Sensation II], 1909/1910, oil on canvas (image courtesy of the Stiftung für Kunst, Kultur und Geschichte [Foundation for Art, Culture and History], Winterthur, photo SIK-ISEA, Zürich ©Philipp Hitz).
Fig. 3: Ikigai Asset Management, https://upload.wikimedia.org/wikipedia/commons/e/eb/Ikigai-EN-optimized-PNG.png [24 Oct. 2021].





Changing Aesthetics – Shaping Taste: A World of (Dance & Fashion) Communication

Rainer Wenrich

"The dance is an art in space and time.
The object of the dancer is to obliterate that."[1]
(Merce Cunningham)

"Without change, nothing new can emerge.
Even a slight change of perspective can
bring about a dramatic change of the whole."[2]
(Rei Kawakubo)

Encounters and Changes in the Arts

The following observations deal with encounters and exchanges in the arts that have occurred numerous times since the beginning of the 20th century and continue to have a significant effect on the arts today.[3] The focus is on the extraordinary cooperation between the American dancer and choreographer

1 Cunningham, in Meade, 2017, p. 341.
2 Kawakubo, in Loschek, 2007, p 125.
3 In the field of visual arts, the most notable groups include Der Blaue Reiter [The Blue Rider] and Die Brücke [The Bridge] as well as pioneering design schools such as Bauhaus and De Stijl. No less memorable are the groundbreaking musical innovations of Alban

Merce Cunningham (1919–2009) and the Japanese dressmaker, fashion and couture designer Rei Kawakubo (*1942) in conceiving and realizing the 1997 dance piece "Scenario." Cunningham and Kawakubo entered a groundbreaking collaboration for this purpose by joining their powerful individual means of expression – each of which had by then been an iconic creative language of its own – into a unanimous, multi-sensual message. This message was delivered through a characteristic choreography, signature garments, and an avant-garde tapestry of sound, staged in the heart of a white cube.[4]

Rei Kawakubo, originally a stylist with no professional training in the fields of dressmaking or fashion, was already pushing the boundaries of established design in her early days in the late 1960s, creating garments never seen before and redefining fashion in the process.[5] She founded her own label in 1969 and named it "Comme des Garçons" (Like the Boys), harnessing her sense of aesthetics for future fashion by questioning the architecture of body proportions and leveling her subtle criticism against predominant fashion styles and beauty ideals.

Kawakubo made her first appearance on a fashion stage in 1981 Paris[6] with oversized, asymmetrical pieces. Anyone interested in fashion is familiar with the creative impact of her 1982/83 fall/winter collection. The pieces shown in the early 1980s featured holes and seemed unfinished due to deliberately exposed manufacturing techniques.[7] Her "Lace Collection" of black sweaters dotted with random holes made it clear that some kind of 'destructive power' was at work here that was symptomatic of the intellectual flux of the 1980s and that subjected the garment per se to critical scrutiny. In her early Paris days, Kawakubo displayed the exposed hems of her designs, presented unfinished pieces and turned her peculiar fabrics inside out. This rad-

Berg and Arnold Schönberg, and in modern dance those of Isadora Duncan, Martha Graham and Mary Wigman.

4 The dance piece "Scenario" premièred on 14 October 1997 at the Brooklyn Dance Academy. The 40-minute performance was accompanied by the musical piece "Wave Code A–Z" by musician and composer Takehisa Kosugi. The original cast of the piece included the following dancers: Lisa Boudreau, Thomas Caley, Michael Cole, Holley Farmer, Maydelle Fason, Jean Freebury, Frédéric Gafner, (Foofwa d'Imobilité), Matthew Mohr, Banu Ogan, Jared Phillips, Glen Rumsey, Jeannie Steele, Derry Swan, Robert Swinston and Cheryl Therrien.

5 Whitfield, n. d.

6 Rei Kawakubo presented her first collection in 1981 with fellow designer Yohji Yamamoto at a Paris hotel (ibid.).

7 Cf. Wenrich, 2003, p. 110.

icalism of action, of a creative process that can also be found in her current collections, sheds light on the dressmaker's skills. The exposure of structures and processes seems pioneering in both fashion and art. Multi-layered wool fabrics obstinately resist the impression of a perfect cut, merely hinting at the contours of the body (Fig. 1). Rei Kawakubo remarks in a conversation with Japanese architect Tadao Ando: "When it comes to finding possibilities, I derive my skills from architecture and tailoring in equal measure."*[8]

But Kawakubo also frequently draws inspiration from puristic designs of modernist architecture. To approach a piece of clothing is, to her, to start from scratch, and to examine not only the appearance of the body shell, but also its construction. The female body is not blatantly exposed but enters an organic, reciprocal relationship with the respective cover, which can move in space and alter its appearance through the wearer. Kawakubo's designs reveal themselves to the viewer through architectural concepts rather than the logic of fashion theory. Designed between 1971 and 1979 by Renzo Piano and Richard Rogers, the Centre Georges Pompidou in Paris was formative for Kawakubo's first *défilé*. As an exhibition forum for contemporary art, it embodies Le Corbusier's dictum that a "house is a machine for living in." The architects exposed the internal structure of the building's organism to reveal its mechanical and constructive elements to the viewer.[9]

It almost seems as if the apocalyptic rider Kawakubo wanted to reset the history of clothing and fashion to zero with a single blow while at the same time becoming a pioneer by exposing the sophisticated inner structure of her clothing to the audience. Kawakubo's designs still disrupt the idea of fashion and (Western) perceptions of the ideal body today.

Rei Kawakubo's concept of clothing sculptures bears analogy to Merce Cunningham's dances and choreographies in terms of development and impact. Cunningham's work has been formative for contemporary dance across the globe. His beginnings go back to the Martha Graham Dance Company, which he was a member of in the 1940s and where modern dance had been negotiating the forms of expression of classical ballet since the early 20th century, with dancers conquering the floor and space and freeing the body from the highly aestheticized rules of ballet positions such as *port de bras* and *arabesque*. Dance narratives often remained linear nonetheless, and the aesthet-

8 Sudjic, 1990, p. 10.
9 Cf. Wenrich, 2003, p. 110.

ics of movement was based on the sequence of overall choreographic statements. Cunningham's dance technique and choreographies soon broke fresh ground as he started in the 1950s to develop seemingly arbitrary movement sequences and eventually founded the Merce Cunningham Dance Company.[10] Pieces conceived under his direction referenced the history of dance with irony and respect, while at the same time opening the doors to a new world of dance right from the start.

Positions of Concept and Design

Cunningham and Kawakubo's creative force and aesthetic iconoclasm has arguably paved the way for contemporary artists and subsequent generations of dancers, choreographers, and designers to trespass norms.[11] Perhaps the most striking feature of their work is their radical refusal to impose boundaries on the body regarding both fashion design and the lines of movement. Their continual design experiments epitomize a mixture of masterly technique and the unshaking will to cross boundaries. In their respective fields of design, Cunningham and Kawakubo display a high potential for innovation and for initiating processes of change. Their ultimate ambition is to reflect on traditional forms of design and the milestones of their respective cultures and combining them with their own wealth of ideas. In the process, both Cunningham and Kawakubo anticipate conceptual and creative developments in the fields of dance, choreography, clothing, fashion, and aesthetics.

The early phase of dancer and choreographer Merce Cunningham's career in the 1940s is closely linked to his encounters with artists active in diverse fields of design and expression at the famous Black Mountain College near Asheville, North Carolina. Black Mountain College opened in September 1933, the year the Nazis seized control, which would ultimately drive the entire world to the brink of total ruin in the following twelve years. In the history of American progressive education, this college exemplified the

10 In 1953, Merce Cunningham founded the Dance Company during one of his sojourns at Black Mountain College. He had been there in 1948 and danced in John Cage's Theater Piece #1 (Black Mountain Piece).

11 Cunningham was always interested in everyday life movements and implemented them in his choreographies, which were then appropriated and interpreted by the dancers of his company. Pina Bausch and Sascha Waltz were clearly influenced in their choreographies. Kawakubo's conceptual radiance is very much reflected in the design of her former protégé Jun'ya Watanabe. Watanabe and Tao Kurihara's brands subvert the prevailing boundaries of fashion in their designs.

courage to not only develop but, more importantly, rethink the curricula that had been handed down until then, emphasizing diversity in both the arts and sciences. Taking its cue from pragmatic philosopher John Dewey and his critical view of specialized knowledge taught everywhere amid specialized isolation, Black Mountain College sought to make Dewey's emphasis on experiential education and interdisciplinarity the core of various approaches to teaching. No one could have guessed at the time of its opening that, between 1933 and 1957, Black Mountain College would become a place where eminent artists and scholars would meet and spark numerous processes of change and development.[12] A look at its lists of teachers (which included Josef and Hanni Albers, who had immigrated from Europe, as well as Richard Buckminster Fuller, Merce Cunningham, and John Cage) and students (among them Robert Rauschenberg, Cy Twombly and many others) illustrates the pioneering importance of this university from today's perspective. Teaching, research, and ultimately the cooperation of all those involved, characterized by democratic awareness and the will to engage in dialog, resulted in a powerful stream of innovation which still reverberates today in many lines of development.

The founder of Black Mountain College, John Andrew Rice, had initially taught classical languages at Rollins College, Winter Park, Florida. At a conference devoted to the advancement of college curricula, Rice met the chair of the conference, John Dewey.[13] Rice's dissatisfaction with conditions at his college and the stagnation in contemporary education in general led to a break with his institution. Together with like-minded colleagues, he decided to change the educational system by founding his own college, which would aim for a holistic humanistic education. The pioneers of this new movement considered the knowledge of classical canons of literature and philosophy, history and mathematics to be insufficient. They regarded life as a continuous stream of change whose invaluable potential for innovation and creativity could be exploited with common knowledge and, above all, with artistic reasoning and action.[14] These encounters at Black Mountain College proved pivotal for Merce

12 In 1933, the year Black Mountain College was founded in Asheville, North Carolina, while the Bauhaus art school in Berlin was closed by order of the Nazis. Some members of the Bauhaus including Josef and Hanni Albers and Walter Gropius were forced to emigrate. As a result, they had a formative effect on education at Black Mountain College in the college's early days.

13 Cf. Reynolds, 1997, p. 1.

14 Cf. Ellert, 1972, p. 145.

Cunningham, who was now able to develop his own dance and choreographic language at the college. In the synergy of arts, he experienced their individual power; in direct exchange, he recognized the possibilities of his own art. This interaction between arts and sciences produced groundbreaking developments in art, such as happenings and performances, which had a strong impact on society.

Changing Aesthetics – Body Meets Dress

In fashion theory, the late 1970s are considered the end point of a tradition of fashion.[15] The emergence of a new clothing aesthetic associated with Japanese design ideas marks a break with traditional beauty ideals and clothing conventions. Issey Miyake, Yohji Yamamoto and, above all, Rei Kawakubo broke with the aesthetic body concepts of previous decades and challenged Western notions of the ideal of beauty, proportion and perfection of craftsmanship.

The same is obvious in Rei Kawakubo's 1997 collection "Body Meets Dress – Dress Meets Body."[16] In its conceptualization and realization, Kawakubo referenced a moment in the 1990s history of clothing and fashion that allowed her to engage intellectually with the triangle of dress, body and space, and translate this discourse into three-dimensional form. The collection "Body Meets Dress – Dress Meets Body" draws on earlier design experiments and at the same time serves as basic idea and concept for later collections of space-consuming clothing sculptures created by extending the human body by means of exalted vestimentary architecture and the implementation of textile elements as paddings.[17] The transition from garment to wearable sculpture became fluid. The result of this reflection was a series of garments that openly addressed clothing functionality, body aesthetics and the relation to space. All three aspects together were put in relation to their respective histories. Kawakubo placed bulges, humps and protrusions in unexpected places of the garment, distorting the body and its silhouette, while tight-fitting yet asymmetrical garments "refused to adhere to prevailing beauty norms, [re-

15 The first presentation of Rei Kawakubo's label Comme des Garçons in 1981 Paris was both a closing point and a new beginning. That was the moment the "Mode de cent ans,"* as Barbara Vinken has called it – i.e. fashion from 100 years, with highlights by Charles Frederic Worth, Madeleine Vionnet, Coco Chanel, Elsa Schiaparelli, and Yves Saint Laurent – appears to have come to an end (cf. Vinken, 2005).

16 Cf. Vogue Runway, 2015.

17 Cf. the collections "Inside Decoration" (fall/winter 2010), Mower (2010) and "Not Making Clothing" (spring/summer 2014); Furniss, 2013.

turning] an avant-garde sensibility to fashion."*[18] Individual pieces from this collection represent a turning point, or tabula rasa, in view of the preceding decade of aestheticization through lush shoulder pads and the oversize trend in the fashion world.[19]

Shaping Taste – Dress, Body, Dance and Sound Hit the Stage

"Scenario" (1997) was the first time Merce Cunningham asked for a fashion designer to create the costumes for a piece of his. He chose Rei Kawakubo, who initially declined the offer to collaborate on account of her lack of knowledge of dance, but eventually allowed herself to be persuaded.[20] Inspired by her collection "Body Meets Dress – Dress Meets Body" from the same year, she designed a completely new series of 116 unisex garments based on 14 basic cuts, divided into three groups tailored to the dance piece, each with its own fabric colors and patterns: first came blue stripes on white, followed by pale green and white-checkered patterns, then all-black and finally all-red costumes.[21]

Kawakubo also designed the stage and lighting, bathing the venue in cool neon light infused with the electronic sound fabrics of Takehisa Kosugi, a longtime collaborator of Cunningham.

Cunningham and Kawakubo's collaboration goes beyond the conventional framework of fashion design. Their focus is on the moving body in space, whose second shell, the clothing, defines it and its movement, freeing and restricting it in equal measure, evoking associations with the moving body in everyday situations while also referencing the enclosed stage area. Cunningham and Kawakubo deconstruct the dancing body in space and blur the boundary between body and clothes and their expansion in the stage space.[22]

18 Meade, 2017, p. 347.

19 In 2018, an exhibition curated by Andrew Bolton offered an unprecedented glimpse into the work of Rei Kawakubo (cf. Bolton, 2018).

20 By the time Cunningham approached Kawakubo, he had already worked with renowned artists such as Robert Rauschenberg and Andy Warhol.

21 It has been argued that Kawakubo redesigned her "Body Meets Dress" collection into ballet costumes for Cunningham's "Scenario" choreography, but this is only partially true. In fact, she designed an entirely new set of models. However, the basic concept of humps and a specific narrative of the body that explores the body moving in space were indeed taken from the "Body Meets Dress" collection.

22 Cf. Loschek, 2007, p. 54.

The triangle of body, dress and space has a historical tradition. Research has found ample evidence of this in the history of each of these three aspects.[23] Our body moves in space, and it is only through space that its dimension, expansion and limits can be perceived; it is only through the garment, its perception and extension that the body becomes perceivable. When body and garment move in space, we perceive and experience them as a constellation in space; the body, dress and space create a total picture that can be perceived. The history of the body and its creative interpretation has seen numerous moments in which the body strove for change and transformation. This can only be achieved through the body shell of clothing. Clothes change the appearance of the body; they protect, adorn, and decorate it. The body can extend its reach through clothes. Clothes create closeness and distance, attraction and repulsion. Through clothes, the body can express desire, potency and power; it can 'embody' wealth and power, but it can also signify difference, absence, and special circumstances.

For her design concept, Kawakubo was able to take Cunningham's dance and choreographic œuvre and its inner logic as a reference point. In his dance technique and choreographies, Cunningham had always examined the concepts of body and space since his early days. His choreographies reflected on specific aspects of dance and focused on rhythm, the relationship between torso and extremities, and the perception of the body in space. One peculiarity of his approach is that the dancing bodies constantly and simultaneously survey the space in different directions. This often led to unexpected twists in the movements of dancing bodies and ultimately established Cunningham's preeminence as an ensemble choreographer and luminary in dance history. While Kawakubo's costumes for "Scenario" clearly took their cue from her "Body Meets Dress" collection, they were also dress sculptures in their own right which were worn on stage by women and men alike. This is what made the design of the dresses so special, although it was plain to see that the dancers struggled with their restricted range of motion.

23 Cf. Lehnert, 2012.

Dance and Fashion in Dialog

It is important to note that both Merce Cunningham and Rei Kawakubo have a special connection to art and artists as well as their history, a connection to artistic innovation from the early 20th century in particular. The Bauhaus art school and Oskar Schlemmer's Triadic Ballet were definitively formative in this regard. Created in 1922, Schlemmer's costumes were an important reference for Kawakubo's pieces designed for Cunningham. They "enclose the body in such a way that movements are restricted in accordance with the minimalist choreography. The bulky, sculptural clothing thus serves only to support the artwork, which is focused on the body in space."*[24] The architect and designer of fashion Charles James might be another link, or joint, between Rei Kawakubo and Merce Cunningham in terms of design, as can be seen from numerous pieces from his œuvre. Take, for example, his eiderdown jacket from 1937 and its extraordinary construction and effect on the dress, body, and space. James added another, third dimension to the surface of the jacket. Note, too, that the eiderdown jacket was basically a unisex item.[25]

These coordinates from the systems of dance and fashion are key points for a number of considerations: Cunningham and Kawakubo were contemporaries who approached each other in their creative work. The designs of the dancer and choreographer on the one hand and the dress maker and fashion designer on the other both aimed to assess the presence of the body and its physical expansion and movement in space. The point is not to aestheticize or eroticize the body, or in fact to determine its sex; Cunningham and Kawakubo tread on a different level of discourse. Their work is about crossing boundaries, exploring the possibilities of touch and distance, proximity and remoteness, open and closed forms, positive and negative forms.

In the early 1990s, 70-year-old Merce Cunningham began to use the computer for his choreographies. He used Life Forms, a program now known as DanceForms.[26] The choreography separated the torso from the extremities. Cunningham randomized the movement sequences and dissected the body with the computer program. The dancers then pieced together the individual choreographed sections. Rei Kawakubo's costumes intervened in the movement sequences, sometimes forcing the dancers to keep their distance and

24 Drühl, 1998, p. 178.

25 Cf. http://collections.vam.ac.uk/item/O75134/evening-jacket-james-charles/ [6 Dec. 2021].

26 Cf. http://www.lifeforms.com/danceforms/main.html [12 Dec. 2021].

letting the bodies assume unexpected shapes. Cunningham associated the padded bodies with everyday phenomena, such as a man in a raincoat with a rucksack. Cunningham and Kawakubo worked separately, and it was only on stage that the dancers had the opportunity to engage with the choreography and with Kawakubo's costumes. Cunningham then manipulated the choreographed movement sequences on the computer. Because Cunningham worked on the body phrases alone, the dancers did not get to see the edited result. The goal was to synchronize the movement of a formation. Movements were rehearsed together for the "Tango" sequence at the end of the piece. Merce Cunningham then selected individual pairs of dancers and combined their movements.

You can tell from some of the costumes that Kawakubo's intention was to restrict the freedom of movement. It was virtually impossible with some items to make quick turns, or an arabesque. The dancing couples had bulges like the bellies of pregnant women. The bodies had a very hard time dancing a pas de deux. The sober, sterile stage area, for which Kawakubo initially envisaged no entrance or exit, acted like a 'white cube' in which costume innovation and avant-garde, as well as proximity and distance in dance came together and were passed on to the audience. The stage thus became a 'lab' of vestimentary, choreographic and auditory dystopias, a place where the tradition, the present and future of fashion, aesthetics, dance and performance were negotiated.[27]

Conclusion

Rei Kawakubo's costumes for Merce Cunningham's dance piece "Scenario" (1997) referenced her signature collection "Body Meets Dress – Dress Meets Body" from the same year, where the costumes were padded in unexpected places and broke with body and beauty ideals. The convex and concave body shapes of the costumes were a means of expression for Cunningham's

27 Rose Lee Goldberg's reviewed the world premiere of "Scenario" in "Artforum International" in Jan. 1998: "With his breathtaking 'Scenario,' 1997, the choreographer has found a designer to give actual form to the space around the dancers. Rei Kawakubo's constructed costumes make perceptible, almost tangible, the negative spaces between people. Set against the whitest of white backdrops and lit by an overhead row of fluorescent lights, the boldly outlined costumes make it look as though each performer carries the afterimage of each movement on his or her back (or front or side, as the case may be)" (https://www.artforum.com/print/reviews/199801/merce-cunningham-52065 [06 Dec. 2021]).

dance and choreographic concept for "Scenario." The distorted proportions of Kawakubo's dresses commanded extreme dance moves and use of space from the dancers.

Cunningham and Kawakubo's collaboration was unique in every way. Many fashion designers have created costumes for dance performances, but "Scenario" was one of a kind. It is most remarkable that both Cunningham and Kawakubo flouted dance and fashion conventions, with dance movements that neither flow nor follow the sound but ultimately manage to overcome the resistance of the costume, which is both tight and space-consuming at the same time. Virtually all 20th-century fashion designers created costumes for classical or contemporary ballet. Couturiers ranging from Giorgio Armani to Yohji Yamamoto have produced countless innovations and creations.[28] The fascination of Cunningham and Kawakubo's collaboration for "Scenario" is the fact that they both consistently and relentlessly explored the wholeness of the body in space independent of each other. In more than 50 years of fashion design, many of Kawakubo's collections have repeatedly transcended the norms of gender and aesthetics to yield something completely new. Cunningham's 180 ensemble choreographies gradually pushed the boundaries of the body in space and the possibilities of dance. This is what makes his dance technique so groundbreaking.

Kawakubo and Cunningham's encounter was a unique event even from a present-day perspective. Their collaboration almost a quarter of a century ago heralded a number of essential aesthetically and socially relevant discourses by transgressing the boundaries of creative and artistic spaces, creating clothes and body shells that made gender barriers appear fluid, and liberating dance movement sequences from the corset of linearity and narration. Their clothes and dances demonstrated a fluid transition of form and structure, genre and diversity. With "Scenario," a hybrid work of art itself, the autonomy of the arts gained center stage.

28 Cf. Jeitschko, 2015.

Fig. 1

Fig. 2

Fig. 3

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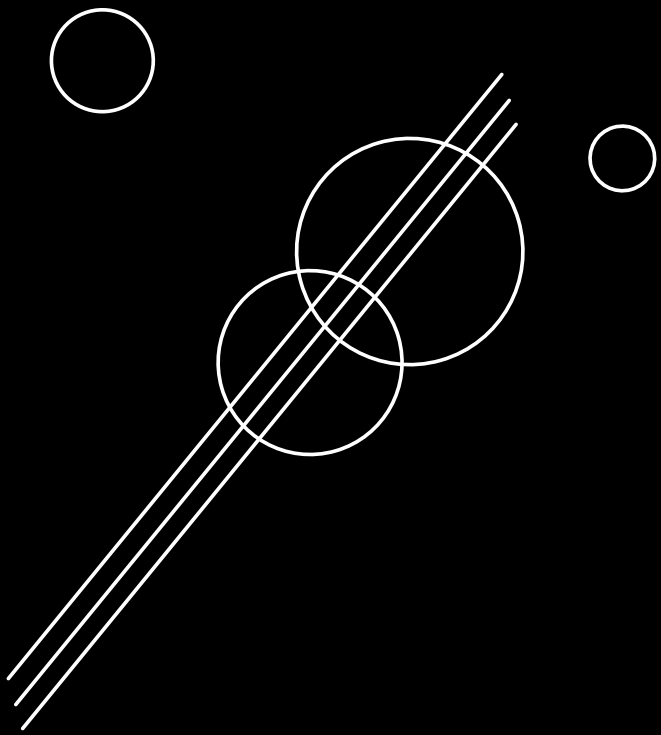
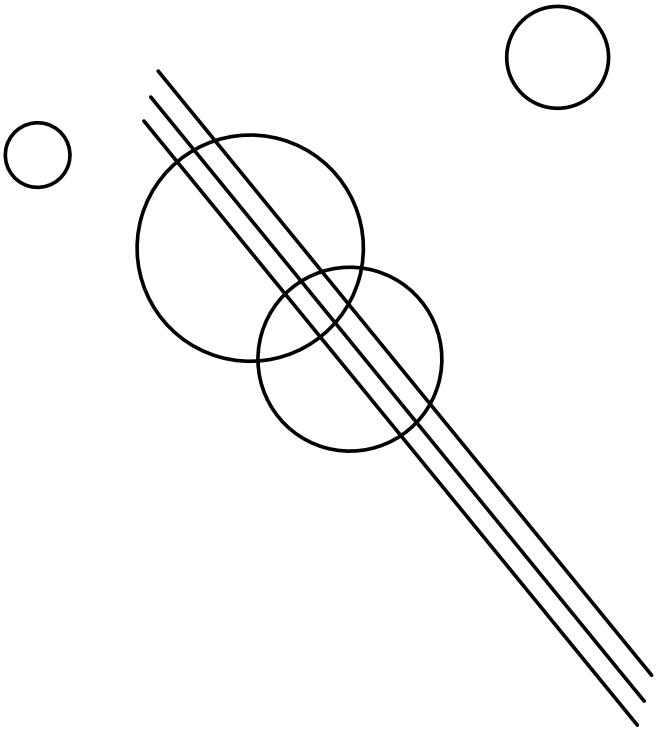
Fig. 1: Rei Kawakubo, Comme des Garçons, Jumper, 1982, Victoria & Albert Museum, Textiles and Fashion Collection, London, https://collections.vam.ac.uk/item/O73390/jumper-kawakubo-rei/ [09 Dec. 2021].

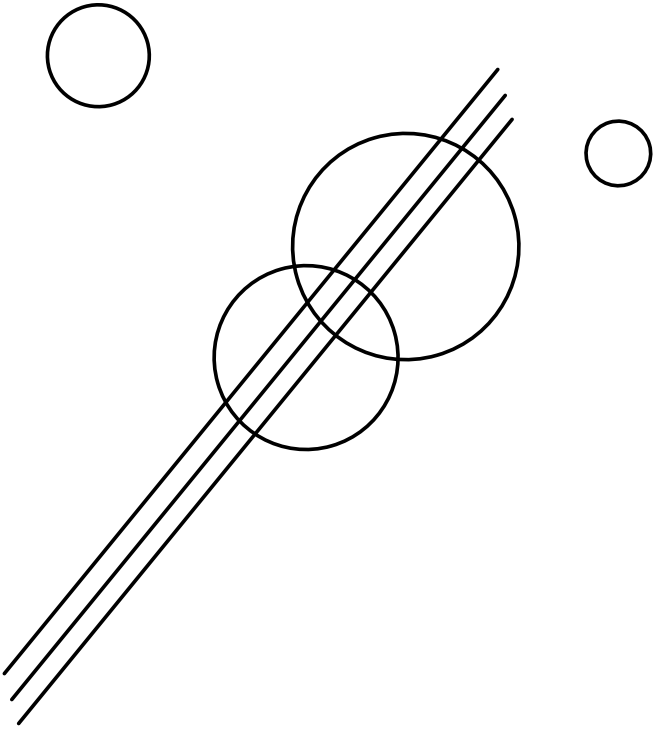
Fig. 2: Comme des Garçons, Spring 1997, "Body Meets Dress – Dress Meets Body," https://www.vogue.com/fashion-shows/spring-1997-ready-to-wear/comme-des-garcons/slideshow/collection#1 [09 Dec. 2021].

Fig. 3: Rei Kawakubo, Costumes for "Scenario," 1997, https://walkerart.org/collections/artworks/costumes-for-scenario [09 Dec. 2021].



Change and Design Education





Changing Space – Shaping Communities: The Challenges of Architecture

Barbara Holzer
(in cooperation with Andrea Reiter)

"Architecture is not just a product but a living organism."[1]
(Balkrishna Doshi)

"In both urban and rural contexts, architecture can be a strong motivator for ecological change, allowing it to be experienced not as a loss, but as a gain for both individuals and society."[2]
"Planet Home," Bund Deutscher Architektinnen und Architekten (BDA, Association of German Architects, 2019)

The motto that introduces this article and informs both my work as a Zurich- and Berlin-based architect and my professorship at the Düsseldorf Peter Behrens School of Arts reflects on the role of architecture as a builder of community and culture. One of the underlying questions, which was also addressed at the 2021 Biennale, is: "How will we live together?" This question was directed

1 Lecture given at the 34th Coomaraswamy Memorial Lecture: "Architecture is a Living Organism" by Balkrishna V. Doshi, December 17, 2018: "When I was asked to do this lecture here, I thought I would show some slides, but more than that I would talk about architecture. Not just as a building product, not as a social work, not as a service element, but as a living organism" (http://archtalks.com/archtalks-home/2020/5/11/bv-doshi-architecture-is-a-living-organism-lecture.html (min 15:45) [10 Dec. 2021]).
2 BDA, 2019.

at architecture, which provides important answers and not only gives shape, but also assumes responsibility (Fig. 1).

Architecture consists of built spaces with individual identities. We spend time and reside in these spaces, and we react to them. By providing the framework and offering, initiating, sometimes also preventing or constricting options (Fig. 2), architecture co-shapes reality and can therefore also be regarded as a 'changemaker.' I would like to focus on various topics that are important to architecture and its future development. They concern relevant topics of our time, such as communal life, climate change, life with the pandemic, land tenure and economic efficiency, diversity, the role of education, the function of the building sector, and the changing professional image of architecture (Fig. 3–5).

As architects and planners, we need to integrate the latest developments, trends, schools of thought, and future research into every new project. This is because every new architectural and urban problem requires an individual, intelligent and site-sensitive approach which – in addition to integrating the existing building stock, taking into consideration aspects of aesthetics, and aiming for good architectural form – has to reflect on substantial societal, socio-political and cultural issues. As Alison Brooks points out: "A major shortcoming is the lack of a political dimension in architecture. Our profession shows a kind of complacent indifference toward the political and economic paradigms in society."*[3] The spirit of a place – the *genius loci* – must be fathomed in its complexity and must be palpable in the new or transformed architecture. The city of the 21st century draws its strength from the complexity of its functions as a living, working and mobility space and from the supposed incompatibilities of these functions (Fig. 6). Progress in architecture is always also induced by social and political change. Every project that deals with urbanity in the broadest sense must be seen as a lab test for future strategies and for possible solutions as to how society can design living and working space in a resource-efficient way and in harmony with the environment and nature (Fig. 7). The most pressing issue today is climate protection, which raises a number of fundamental questions: Is sustainable building even possible? Who will be able to afford sustainable apartments or houses in the future? Won't political particularism continually frustrate the dream of net zero? How to deal with these contradictions? Should compromises be negotiated?

3 Kullack, 2011, p. 112.

The pandemic shows that the unthinkable can suddenly become real. First and foremost, there is a desire for more work from home, more freedom in organizing working hours, and a reduction of workloads. At the same time, the radical separation of functions paralleled by maximum mobility – which defined the modern city in the 20th century, but was questioned in the increasingly complex early 21st-century life, and countered with new, inspiring proposals for solutions – was temporarily shelved during the lockdown due to the pandemic. Forward-looking architecture needs to urgently and fundamentally address contemporary contradictions. This includes a thorough analysis of changing ownership structures for future architecture and transformation projects. Many people still cherish the dream of owning their own home, but this dream will only come true for particular groups of society. The pandemic has increased the desire for housing with a private outdoor space or in natural surroundings. Municipalities need to cooperate with architects, urban planners and sociologists in addressing the question of how to deal with public space. Green spaces, parks, open areas, but also smaller, free-access structures are important spots for people to meet and linger.

A major change has taken place in the way we deal with the diversity of social groups. In order to achieve more diversity, we need to share knowledge and question established or unreflected behavior, but also to change structures and processes. Often a positive attitude is already in place, so a change in behavior must be driven by incentives, measures, or processes in tandem with role models if we are to achieve satisfactory results and a normality based on diversity. This also applies to gender equity, which still hasn't been tackled, particularly in the low-diversity building sector.

Higher education plays an important role in the development of diversity awareness, since it makes it easier for people to experiment and implement, which can lead to a new normality. In addition, in the context of constantly changing conditions, not least in architecture as a profession, the university reflects on its contents, processes and curricula, brings applied research up to date while taking into account the interests and needs of students, applies holistic methods and tests them in the process. Since 2017, in cooperation with the IBA Thuringia,[4] the City of Cologne and others, Tanja Kullack and I have been experimenting in 'curated studies'[5] at the Peter Behrens School of Arts,

4 Cf. https://iba-thueringen.de/ [09 Dec. 2021].
5 Cf. Curatorial Turn, e.g. O'Neill, 2007, pp. 13–28.

Department of Architecture, with the appropriation of multi-perspective design, which I will briefly discuss in the following.

One area that will have to undergo major transformation in the coming years from the perspective of architecture is the construction industry. Investors, architects and planners have a duty to ensure that construction is sustainable and resource-efficient. This raises the question of how the construction industry can cope with the complexity of change – e.g. when profit-oriented investment and high returns conflict with climate protection and the demands of future users.

As an office that deals with urban planning, architecture, exhibition design and design, we find ourselves in the midst of all these areas in transition and grapple with them in our daily work. The last 20 years have seen a radical shift in the approaches and work of architects. Where this journey is taking us, or should take us, and how architecture can foster a paradigm shift, remains unclear, but let us nevertheless take a look at some concrete approaches.

Ethical Standards of Modern Construction – Aspects of 'Change' in Attitude

Social demands on living and working environments have changed fundamentally. The focus is now on community, on communal life. Where do we come from, which cultural traits do we share, and what are our priorities? I am thinking of the diversification of social milieus, the cultural and social benefits in the immediate environment of each and every one of us, the variable use of space, and the affordability of housing, working and living spaces in the urban structure, to name just a few burning issues (Fig. 8). Various bottom-up projects have highlighted these issues and related movements in participatory processes.

One example is the Berlin "House of Statistics,"[6] an action space for a wide variety of actors. It houses various projects revolving around social integration and cooperation, aiming, for example, for refugee housing or the creation of craft rooms for an interested public, etc. The building is a transit space as well as a living, meeting and urban space. Appropriating a space as a diverse, divergent community, even if only temporarily, offers new opportunities to experiment and practice cohabitation. The public perception of such projects is

6 https://hausderstatistik.org/ [09 Dec. 2021].

crucial, because it enables us to 'challenge' social standards and, ideally, promote change toward a more diverse society.[7]

Today, interconnectivity, changeability and diversity are part of the DNA of any new stretch of a city. New urban building blocks must generate added value, both for their users and for their immediate neighborhoods. They should promote an integrative neighborhood life, generate far-reaching synergies between the most diverse uses, and create attractive open spaces that enable communication to balance out the high building density. Such complex urban building blocks or new urban morphologies should be considered independently of classic housing typologies.

At the higher level, in urban planning, experiments are being carried out with innovative formats: far fewer cars in city centers, more space for pedestrians, playgrounds and parks instead of parking spaces, additional paths for bicycles and electric scooters, new zone plans and regulations, more affordable rents and new investment models, combined uses of housing, work, business, production, services, sales, restaurants, etc. Central to all these aspects is the idea of sharing: nothing has a specific purpose or user; everything has multiple purposes and users. Cities and municipalities can (and must) be strong motivators in this rethinking process. An example of the 15-minute city, in which all daily needs can be met within a radius of 15 minutes, was developed by the mayor of Paris, Anne Hidalgo, in 2020 for the city center of Paris.[8] And this is exactly what characterizes the city of the future: compact urban centers with 24/7 structures, i.e. identity-building, future-oriented hubs with multiple benefits in terms of architecture and open space planning for all kinds of residents and requirements. The identity of the place is not only a result of its history, but one of multiple factors including diversity of use, social diversity, infrastructural connectivity, etc. The focus is on holistic sustainability and on the quality of public, semi-public and private spaces, as well as the combination and overlapping of multiple patterns of use.

One central factor in achieving these desired new housing and living concepts is participation (Fig. 9).[9] Large-scale construction projects nowadays in-

7 A different yet similar place is the "Palais de Tokyo" in Paris. The place is both public and private, offering overlapping uses: https://www.palaisdetokyo.com/en/who-we-are [09 Dec. 2021].

8 Cf. Chúláin & Davlashyan, 2021.

9 See also the debate on the Participatory Democracy Turn in Bherer, Dufour & Montambeault, 2018.

creasingly involve the population in urban development processes. For example, during the planning phase of general urban aspects for the RAW site in Berlin – which is one of the last industrial wastelands in the city that has not yet been modernized, and which, as a cultural hot spot, attracts Berlin's cultural and party scenes as well as tourists from all over the world – a dialog and citizen participation process was initiated to get on board all groups involved in the development of the site as quickly as possible.[10] Such civic involvement should ideally enable a continuous dialog using different formats and updates throughout the planning and implementation phases and should have a public character to ensure social acceptance. An exhibition and publication project launched by the architecture magazine ARCH+ and the *Institut für Auslandsbeziehungen* (ifa, an organization for international cultural relations), has taken another path: it aims to reclaim and redefine "the open and emancipatory space of 'us'" – after concepts of 'us' have been appropriated by online, sharing, and community platforms.[11] Here , the concept of "urban commons" involves the "creation and management of tangible and intangible collective resources and spaces as a basis for democratic participation."[12]

Change through the Pandemic

COVID-19 has radically changed our everyday way of life in terms of work, habitation and leisure. Lockdowns have forced us to work from home if this is compatible with our work patterns. As a first step, new work and workplace models had to be tried out as quickly as possible. Bedrooms, living rooms and dining rooms were converted into temporary workplaces, and home-schooling areas set up for children. Living, working and schooling were linked. Rooms were used for multiple purposes, and the dining table became the most contested zone in the apartment. Home office and home schooling fundamentally changed the requirements of living space.

The pandemic has acted like a burning glass and has unscrupulously laid bare the strengths and weaknesses of space design. One insight from the lockdown experience that has had a direct effect on plans for future housing is the need for flexible spatial concepts, such as adaptable, transformable, modulable buildings and spaces.

10 Holzer Kobler Architekturen co-designed the site of the former Reichsbahnausbesserungswerk Berlin (RAW) on direct commission from the owner.

11 Cf. Gatti & Gruber, 2018, p. 1.

12 Ibid.

Metabolist ideas[13] in architecture are resurging. In addition, we now see the significance of the polycentric city concept, where everything required for life is accessible at a short distance, including green recreational spaces and an ungraded neighborhood.[14]

The pandemic has changed our use of urban structures. For example, because of new demands on space, many office complexes were vacated. The pandemic has revealed a lack of collaborative/public and openly designed places. Many office spaces remain vacant even after the lockdowns. It requires some deep thought and the courage to experiment in order to make up our mind what can be done with these vacant spaces and buildings, which contain a great deal of 'grey energy,' and how they can be put to further use. Even before the pandemic, there had been some inventive thinking, as illustrated, for example, by greenhouse offices in a large hall – a concept developed by IBA Thuringia (Fig. 10). The urban exodus phenomenon has also intensified during the pandemic. And yet, the city as a cultural stratum has retained its indispensable advantages. Cities will lead the way in many processes, including issues such as mobility and sustainability. New functions will be found for vacant retail spaces. It is normal for a living organism like the city that individual places or areas should be temporarily abandoned. These are dynamic processes that need to be discussed and understood. Breaks and upheavals need to be seen as bases for and initiators of future structural developments.

Change of Property

Profit-oriented, high-density building still dominates the market, as can be seen from the Pandion project in Düsseldorf's Pempelfort district. Buildings are designed to house as much living space as possible in order to sell or rent out as many properties as possible. At the same time, people have called upon politicians to expropriate real estate. This is because rents are soaring, especially when apartment complexes are renovated, and affordable housing in cities is high in demand (Fig. 11). Examples include a renovation project in Berlin's Karl-Marx-Allee in 2019 and a Berlin petition for a referendum in the same year, where people collected signatures to expropriate large real estate corporations. Both events led to intense debates about the preservation of

13 Cf. Obrist, n. d.

14 The political dimension of the neighborhood in Dewey's sense, which shapes social coexistence in concrete terms, is definitely a motif here.

affordable housing in major German cities.[15] Cities and municipalities can influence and promote affordable and sustainable housing on land that they own. Housing needs protected spaces, but also cultural and communal space. Yet there is little public land available for new construction projects. Political restrictions have been put in place and investors and the building sector aim to maximize their profits. As long as these two positions are non-negotiable, change is improbable. However, every now and then interest groups such as building cooperatives break new ground, look for innovations, and come up with new solutions. Architects can raise awareness, embrace demands and translate them into sustainable concepts.[16]

Zurich is home to numerous urban projects that test new forms of housing. The Zurich housing cooperative *mehr als wohnen* (architecture by Arge Futurafrosch Duplex, Miroslav Šik, pool, Müller Sigrist, Müller Illien Landschaftsarchitektur) realized a neighborhood project with 395 apartments ranging from small studios to 12.5 room apartments, commercial spaces, common rooms, a restaurant, cultural life, and a guest house. The 41,000-square-meter Hunziker Areal, on which the complex was built, had been purchased by the city of Zurich and passed on to the cooperative. More and more cooperatives and investment groups are taking into account the need for variety and diversity in the housing sector and are responding to this demand with new housing concepts such as flexible floor plans, cluster apartments, or integrated 'joker rooms' to provide housing options for singles, couples, apartment sharing communities and patchwork families so as to 'house' as many generations, lifestyles and financial strata as possible. To achieve this, the basic structure of apartments must be planned in such a way that they can be transformed to meet changing needs and requirements. New forms of living require flexible spaces whose exact use need not be predefined. What is more, buildings

15 Cf. https://www.deutschlandfunk.de/wohnungsnotstand-enteignungsdebatte-polarisiert-die-100.html [10 Dec. 2021]; https://www.nytimes.com/2019/07/08/opinion/berlin-socialism-housing.html [10 Dec. 2021].

16 One approach is to look at so-called Sinus Milieus, which are used to regularly summarize a wide variety of – sometimes contradictory – sociocultural motives for individual lifestyles in society as a whole (cf. https://www.sinus-institut.de/ [10 Dec. 2021]). Groups of people are arranged in milieus with the same mindsets and interests, which shows how varied our society is (sensitivities, values, life goals, lifestyles and social backgrounds). Architecture must provide space for togetherness in diversity. The challenge is to find design solutions that take into account Sinus Milieus and offer ways to bring them together in collaborative action.

should offer the possibility of multiple uses, meaning that living areas can also be redesignated in the long term – to be used, for example, as variable living and working spaces (i.e. home-offices/office-homes). Flexibility and the diversity of use yield space for restructuring and change – especially in the context of the 2000-watt society.[17] New superstructures become urban hinges, as it were, linking and interconnecting urban building blocks with each other and with surrounding areas. They co-shape society through strong urbanistic concepts and identity-forming architecture.

In addition, Switzerland has regular plebiscites as an expression of civic participation and democratic identity. Many of these popular votes aim for socially acceptable and sustainable construction projects.

Change through Diversity

The terms diversity and inclusion are on everyone's lips (Fig. 12). Architecture, too, has the task and concern to pave the way for more diversity, integration, and equality. It is increasingly important – and should be a matter of course – in democratic societies to appreciate and give equal consideration to all members. Yet this requires special commitment, as the entrepreneur and author Tijen Onaran states in a pointed remark: "I would have a clause included in every CEO contract that the CEO will be judged by diversity goals."*[18] The CEO is male or, ideally and increasingly, female. Diversity and inclusion are aspects of society and the corporate culture, and they significantly affect the balanced relationship between men/women/diverse people. They reflect an appreciative attitude toward the fundamental social demand for justice and equality.

Furthermore, diversity guarantees a broad spectrum of perspectives, experiences and insights. Companies that practice diversity in the composition of their teams are more successful in the long term.[19] This is where politics and the industry come into the picture. Standardization – whether in terms of employees, industry specifications, materials, or know-how – leads to uniformity and thus narrows the view, which recoils on society. Architecture, in particular, is a field where many norms are not supposed to be questioned.

17 The concept of the 2000-watt society was developed by ETH Zurich with the goal of a significant reduction of climate-damaging greenhouse gas emissions (cf. Huebner, 2009).

18 Innovation Day 2021, cf. https://www.absatzwirtschaft.de/tijen-onaran-die-diversity-fluesterin-der-ceos-182551/ [10 Dec. 2021].

19 For potential success through diversity management, see Klaffke, 2009, p. 139–158.

Thorough political education, which should also be taught in schools and universities, needs to pursue the goal of social equality. Men/women/diverse people are affected by political and administrative decisions in many ways. The guiding principle of 'gender mainstreaming' is based on the notion that there is no such thing as a gender-neutral reality. This principle obliges policymakers to take decisions in such a way that they contribute to promoting real gender equality.[20] Role models must be strongly supported by the 'majority population,' whose positions are based on widely accepted values, traditions, lifestyles and social backgrounds. Conversely, role models need to be more self-confident and present in their role. We need far more role models in architecture!

Change through Higher Education

Academia must be a pioneer. It must develop tools and provide the space for shared reflection on current issues and social developments. Professors have a responsibility to sensitize students, to contemplate architecture in its given context, and to integrate societal values into their thinking and work. This contributes to change in the long term. In the creative, dynamic and open design process, new perspectives and unexpected connections reveal themselves from which innovation can emerge between the poles of the known and the unknown. This requires transdisciplinary, multidimensional thinking and impartiality towards others.

Architects share a responsibility for the shape of the built environment. The task of teachers is to accompany and coach students and to define a guiding system that enables the development and finding of appropriate contemporary urbanistic and architectural solutions in an open and unbiased discourse. Teachers are mediators within and beyond the discipline; they can open views, sharpen them and provide input that enables students to gain new, insights of their own.

The reality of the profession is increasingly determined by highly complex, interdisciplinary planning processes that cannot be managed entirely by indi-

20 Cf. https://www.coe.int/en/web/genderequality/what-is-gender-mainstreaming [10 Dec. 2021]. A study which examines the relationship between gender inequality and economic growth based on the World Bank's database of development indicators, shows that countries that promote women's education and participation in political posts are more successful from an economic perspective (cf. Altuzarra, Gálvez-Gálvez & González-Flores, 2021).

viduals, which requires a new way of teaching. Architecture is teamwork, also in education. Planning teamwork is a discursive process, involving all conditions, needs, and breaches that contribute to its creation. Teams must form, take shape, develop and pursue common goals, adopt and communicate an attitude, produce and evaluate results, while remaining flexible and open in the process. This requires a high level of commitment from students and teachers alike, as well as everyone's willingness to engage with context, content and form – and with each other. Innovative didactic methods that involve students in terms of content and design, horizontalize hierarchies and dissolve traditional teacher-student relationships enable team-based problem solving based on the definition of common goals and involving a wide range of expertise.

At PBSA Düsseldorf,[21] we (Tanja Kullack and Barbara Holzer) have offered for several years a so-called curated study program in the first semester of the master program "Architecture and Interior Design" (Fig. 13). Students and teachers meet external experts to deal with relevant problems in a concrete urban context. In a multi-perspective and multi-dimensional way, they generate solution strategies for practice-oriented projects and plan their implementation. The curated, interdisciplinary program offers students and teachers the opportunity to contribute significantly to heterogeneous projects, participate in them, or initiate their own projects, for example in the context of IBA Thuringia. In addition, established, widespread networks like that of the IBA can be used and expanded. During the program, various aspects come into focus that are essential for the future architect's mode of thinking and acting, but also for any other discipline: a multi-perspective mindset; recognition of the fundamental problem of climate change; awareness of environmentally and climate-friendly, socially acceptable and economic building based on ecological and economic architectures as well as on gender equality and diversity on all social levels. In a way, architects need to have a seismographic sense of trends and social issues and need to adapt them for their future projects. Taking an interest in contemporary waves and being open to them is something that can be learned. Universities have an important part in this. As teachers, we are both coaches and catalysts aiming to spark change processes in students.[22]

21 Cf. Hochschule Düsseldorf Peter Behrens School of Art, https://pbsa.hs-duesseldorf.de/personen/holzer/Seiten/default.aspx [10 Dec. 2021].
22 Cf. KAP Forum, https://www.kap-forum.de/wir-sind-ein-team [17 Nov. 2021].

Change in the Building Sector

Architecture is still often seen as something that is built 'for eternity,' and so buildings and their functions are mainly designed to last. For quite some time now this way of looking at things has contrasted with concepts that also regard architecture as adaptable, transformable, reconstructable, or recyclable. At the same time, the building sector is influenced by many external forces, above all the question of climate protection: re- and upcycling, transformation, climate neutrality, responsible use of raw materials, recycling management, and the 2000-watt society, to name just a few topics. The building industry needs to take a stand in this regard. According to the UN Environment Programme Annual Report 2021, the global greenhouse gas emissions in the construction and buildings sector are at a record level. In 2020, the sector accounted for 36 per cent of global energy consumption and 37 per cent of global, energy-related CO_2 emissions (38 per cent = 9.95 Gt CO_2 in 2019). The press release states:

> "While the level of emissions within the sector are 10 per cent lower than in 2015, reaching lows not seen since 2007, this was largely due to lockdowns, slowing of economies, difficulties [...] households and businesses faced in maintaining and affording energy access and a fall in construction activity. Efforts to decarbonize the sector played only a small role. With large growth projected in the buildings sector, emissions are set to rise if there is no effort to decarbonize buildings and improve their energy efficiency. In Asia and Africa, building stock is expected to double by 2050. Global material use is expected to more than double by 2060, with one-third of this rise attributable to construction materials."[23]

Despite positive developments, the report concludes that efforts are insufficient in terms of pace and scale. For example, building CO_2 emissions would have to be halved by 2030 in order for the building stock to be net zero carbon by 2050. In Switzerland, economy is often used as an excuse, like recently when a debate revolved around the political decision to ban combustion engines. Some maintain that the market will solve the problem, with the help of consumer behavior and subsidies – in the case of electric-powered vehicles, for example, this could be subsidies for photovoltaic-powered charging stations.[24] While many corporations and smaller companies do indeed show a more conscious approach to sustainability issues such as climate protection and resource consumption, this very fact is sometimes used as a decoy to enthuse

23 Cf. UN, 2021.
24 Cf. Hospe & Oroschakoff, 2021.

consumers with a mindset that then fails to be implemented. In the building industry, this is due in no small part to the dichotomy of climate protection and projected returns. For example, if construction costs should rise due to the current rapid increase in wood prices, then clay, brick, or recycled materials could be used from a sustainability perspective, but this requires the will and support of builders as well as a lot of commitment and perseverance on the part of architects and planners.

To build in a climate-friendly way, various measures must be taken. This applies to the production of building materials and to the construction and operation of buildings. Efficiency, consistency, and sufficiency are the three central concepts for a 2000-watt society (Fig. 14).[25] The first point is to increase material and energy efficiency while keeping the use of primary energy under 2000 watts. In construction projects, this can be achieved through suitable building materials and by raising the residents' awareness and offering them an architecture that helps them reduce CO_2 emissions. The second point is consistency. Climate neutrality is to be achieved by reducing climate-damaging greenhouse emissions (to net 0) and increasing renewable energy to 100 per cent. The third point is sufficiency. It raises questions of what we really need, how to limit ourselves, and what we can do without. Sustainably planned or transformed buildings can change a lot on many levels in this regard – think of shared spaces, for example, or plastic reduction (e.g. by buying in integrated or nearby stores for unpackaged goods), or the no-parking-space policy combined with the appeal to dispense with vehicles with combustion engines altogether. Path concepts for non-motorized traffic – on foot, on bicycles, e-scooters, etc. – are welcome.

It is vital for new building projects to use sustainable, renewable raw materials. Wood is an obvious choice, but recycled or upcycled building materials will also play an increasingly important role in the future. Solar panels on building facades and roofs cover basic energy needs; their use is regulated by law. Innovative approaches can only emerge where regulations come with a thorough engagement with the place in question during the planning phase. A factor that should not be underestimated is cost. Sustainable houses must be affordable. One prerequisite for this is the repeated use of building structures, which allows for standardized production processes. The greater the pressure from politicians and municipalities to get involved in the building

25 Cf. Behrendt, Göll & Korte, 2018; Spreng & Semadeni, 2001.

sector, the more likely it is that sustainable change will take place. Multi-layered measures can strengthen urban structures. To brace architecture for the future, we need to determine the right moment for change and how we want it to take place with regard to material and energy efficiency.

Change of Profession

A paradigm shift is taking place in architecture. Future architecture will no longer be just about flagship projects, starchitecture and authorship, but about answers to complex questions. This requires many perspectives, approaches, areas of experience and personality traits in multidisciplinary teams whose members complement but also challenge each other in competition. Collaborative project planning follows the principle of swarm intelligence[26] in order for new architectures to emerge from new urban concepts, new construction methods, new materials, new combinations, etc. Our professional field is widening in terms of processes, discourses, participation, and economics. Today, architects of large-scale projects are also moderators who structure, direct and reactivate the dialog; they are seismographs, as it were, who determine and analyze rupture lines. The integration of sharing economy structures into professional attitudes manifests itself in interpersonal exchange aiming to generate new structures that favor community-based thinking. Manfred Max-Neef has conditioned the emergence of creative potential on nine fundamental principles that have a significant influence on the design of architecture and should therefore always be taken into account in order for planning to be balanced: people need subsistence, security, attention, understanding, participation, idleness, creativity, identity, and freedom to develop in the best possible way in relation to their environment.[27] Future architecture needs to keep a balanced eye on all these issues in a parametric approach and to keep up its commitment and courage in contributing discursively and pragmatically to change.

26 Cf. Loffredo, 2018, p. 49.
27 Cf. Max-Neef, 1991.


BIENNALE
ARCHITETTURA
2021
22.05–21.11
VENEZIA
GIARDINI/ARSENALE
How
will we live
together?

Fig. 1

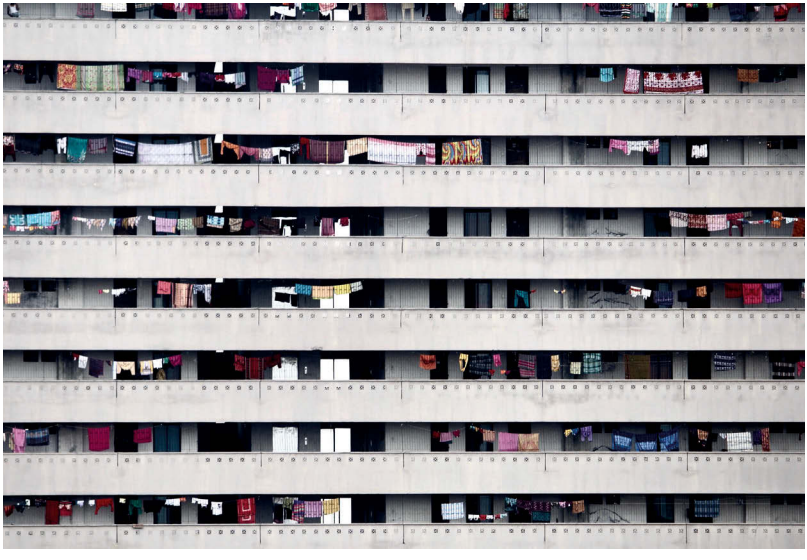


Fig. 2

Fig. 3

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Fig. 7

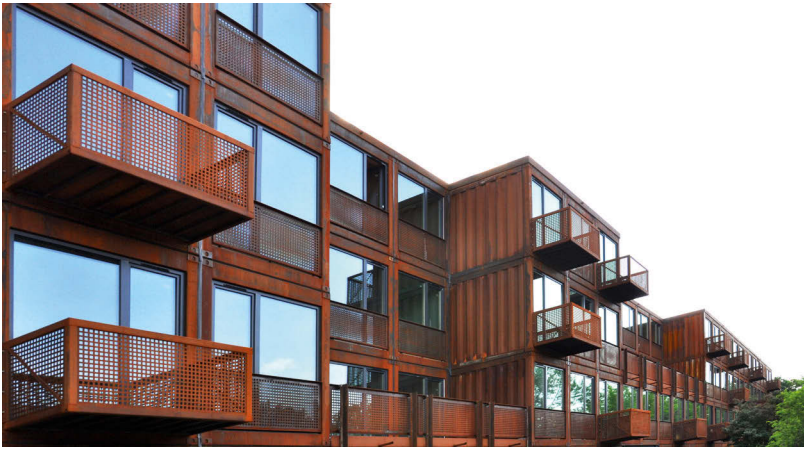

Fig. 8

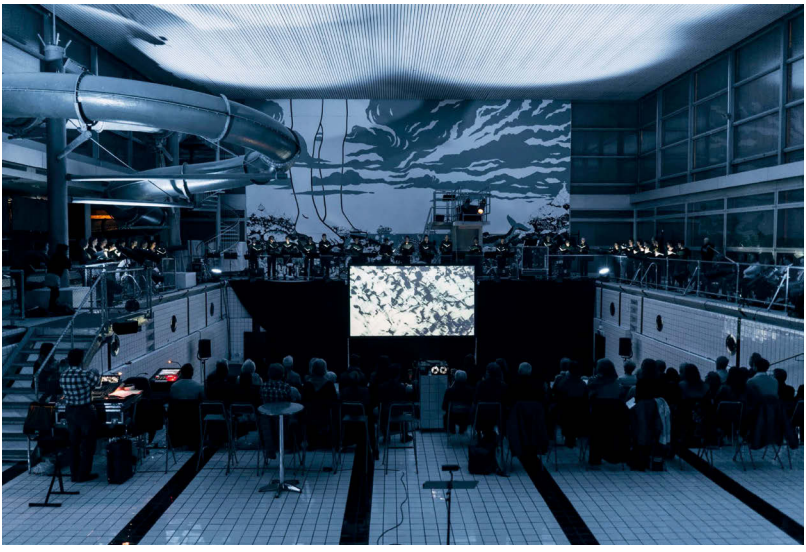

Fig. 9

Fig. 10

Fig. 11

Fig. 12

Fig. 13

Fig. 14

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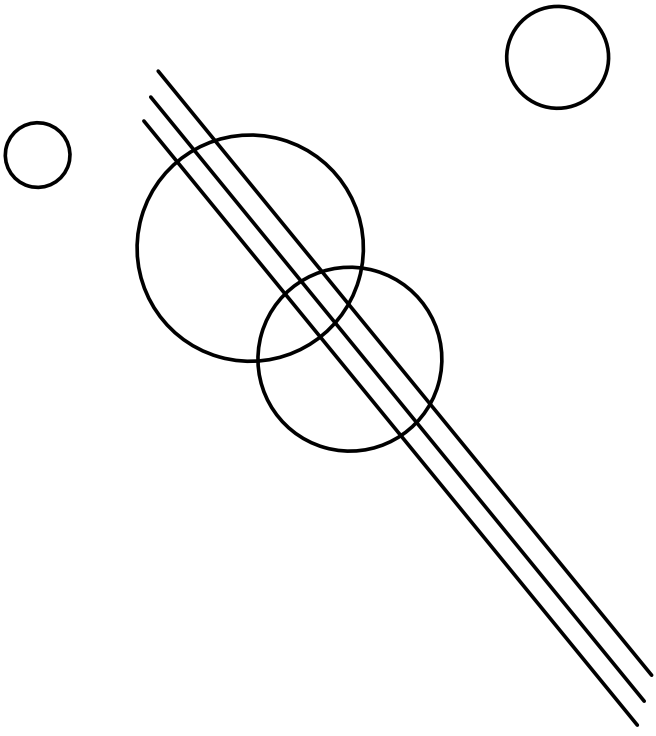
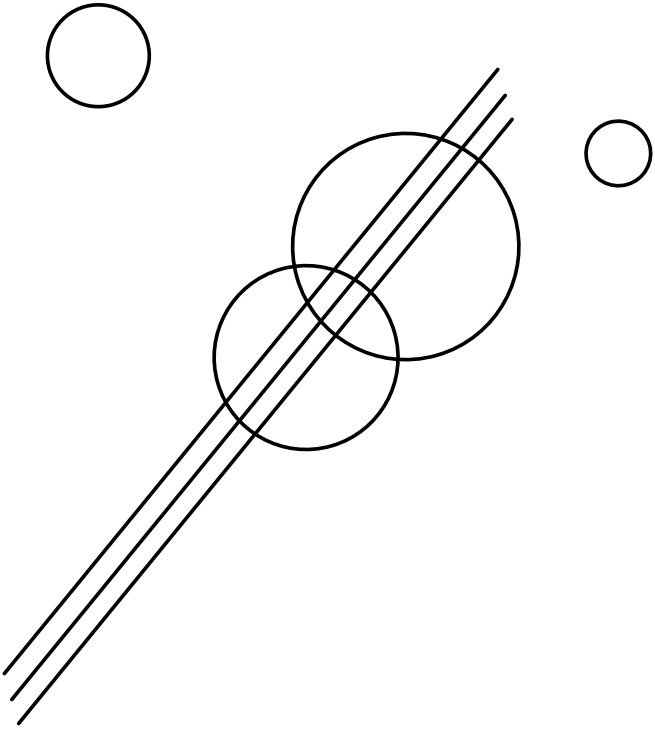
Figures





Galaxies of Non-/ Human Thinking: Opening Mind – Noticing Kind

Johannes Braumann

The digital transformation is no longer the domain of computer scientists and programmers alone; it is affecting all of our daily lives and therefore calls for education at all levels of society. However, digitization is frequently only explored and explained in a virtual context; processes of physicalizing data, of digital fabrication, are often omitted. Closely managing the transition from the digital back to the physical is especially important for people who want to realize custom processes and products that go beyond the established, standardized methods of industry, such as those working in creative fields: artists, architects, designers, craftspeople, and hybrid professionals. Rather than try to teach these diverse groups to build their own machines, industrial robots can be repurposed as a way of introducing individualized digital fabrication to new users, thus fostering positive change through experimentation and innovation. People are not replaced, but equipped with new digital and physical tools that allow them to go beyond the state of the art.

Building Data – Between Expectations and Reality

Popular media often depict robots as intelligent, even humanoid machines that can interact naturally with people. A current example of that is Boston Dynamics' Spot (Fig. 1), an impressively engineered robot dog that has been shown to dance, navigate autonomously through difficult terrain, or simply replace its animal counterpart by walking on a leash. Yet a closer look at the technologies behind those projects reveals dance routines that are merely pre-programmed and tested rather than organically improvised. The navigation relies on complex, external processing power to map and interpret environments and, ironically, it's not usually the person who walks the dog, but the dog who walks the person. Needless to say, attaining the level of interac-

tion and performance seen in the media requires not just expensive hardware, but in-depth, multidisciplinary knowledge as well.

Building robots in an educational setting has long demanded a high-level understanding of mechanical engineering, electronics, control theory, computer science, mathematics and more. The rise of physical computing platforms like Arduino (Fig. 2a) has meant not only widespread availability of affordable, open-source hardware and microcontrollers, but most importantly accessible software environments that are supported by large communities of both beginners and experts. And yet, even with those platforms – which greatly abstract the complexities of addressing sensors and controlling motors – a non-expert's results are bound to fall far short of anything the media portrays robots as capable of doing. Moreover, these systems are constrained in size, as large-scale, heavy-duty systems involve high voltage and are too heavy to be supported by cheap, 3D-printed elements. The wide gap between expectations and reality presents significant challenges when teaching robotics to users who are not content to learn something for the sake of gaining knowledge, but instead want to actively apply robotic technologies as a way of facilitating their professional practice. Examples might include a carpenter in need of a system to support the lifting of heavy loads, for instance; an architect interested in using hot-wire cutting to extract complex shapes from foam materials; or a dancer whose envisioned stage piece involves interaction with a human-scale machine, with both human and non-human elements noticing the other's kind.

Introducing Industrial Robots

Creating a custom machine that can perform these tasks would be highly challenging. There are, however, solutions to be found in the realm of industry, where industrial robots and robotic arms manipulate heavy loads over large distances with a high degree of accuracy (Fig. 2b). Their origins are the same as those of computer numerical control (CNC) machines: in 1952, researchers at the MIT Servomechanisms Laboratory converted a commercially available milling machine into a device with three-axis simultaneous movement.[1] Two years later, George C. Devol filed his patent for a "general purpose machine that has universal application to a vast diversity of applications where cyclic

1 Cf. Parsons & Stulen, 1958.

control is to be desired"[2]; the result was the Unimate, the first industrial robot, a prototype of which was sold to General Motors in 1961. Less than a decade later, in 1969, Victor Scheinman presented the Stanford Arm, a robotic manipulator with six degrees of freedom. Driven by electric motors, the robotic arm displayed a range of motions approaching the fine motor skills of a human arm.[3]

A fundamental difference between a CNC machine and an industrial robot is that the latter is not application-specific, but (as per Devol's patent) a general-purpose machine that can be used to perform a variety of very different tasks. It is comparable to a human arm with extended functionality, infinitely increased by the use of external tools. The concept of the industrial robot has since been further iterated based on user requirements enabling new ways of fabricating and assembling, in particular for the automotive industry, which – with 125,700 robots installed per year – is still the primary user of robotic arms.[4] Current-generation robotic arms, such as KUKA's Quantec-2 series, weigh 1.1t and consist of six axes that can move a payload of up to 300kg (661 lbs) at a maximum 260 degrees/second over a reach of 2.7m (8.85 ft), with a repeatability speed of ± 0.05 mm.[5]

The appeal of industrial robots for large-scale mass manufacturing is that a single platform can be used for a wide array of applications. Rather than having to build multiple custom machines, a single type of machine can deploy a number of tools to perform any number of tasks. While in most cases a generic machine will not attain the kind of performance expected of a specialized machine, mass-produced robotic arms are designed to be highly reliable and offer a known level of performance. Furthermore, at a price range of around 30,000–70,000 euros, industrial robots are more affordable than many other CNC machines and are available in large quantities on the used market. These advantages make robotic arms interesting to fields beyond the automotive sector, such as the creative industries.

However, a remaining challenge is the programming. In industry, robotic arms are mostly programmed once, and then perform that same, single action or sequence of actions over their entire lifespan. This makes it possible to dedicate a large amount of time to programming, as small improvements

2 Devol, 1961.
3 Cf. Feldman et al., 1969.
4 Cf. IFR, 2018.
5 Cf. ISO, 1998; KUKA, 2019.

will lead to significant time savings over the years. 'Online programming,' also known as 'teaching,' is the most common way to program robots in industry. In this case, the programming happens entirely over the robot's teach pendant (Fig. 3) – often a tablet-like controller – where the user can save the robot's current position in a file and then repeat that process to generate a toolpath.[6]

The process is time-consuming, and requires the user to think within the robot's coordinate systems as they push the relevant button on the teach pendent to move the machine. It can be streamlined by grabbing the tool of a compliant robot and moving it by hand, or external tools that allow the user to rapidly capture positions without having to move the robot to those positions.[7] Whereas the automotive sector builds on assembly techniques with robots performing single, specific fabrication steps on a production line, newer fields of application for robotic arms take advantage of the robot's flexibility; a single robot can be programmed to perform a wide variety of tasks depending on the production process at hand. As such, efficiency of the robotic program is not a high priority, as tasks are performed irregularly and with longer pauses in between while other production steps are performed by humans.

That said, task definition itself must be done in a rapid and (semi)automated way. Manually moving the robot to each position may take more time than a human would need to simply perform the desired task by hand.

Beyond Industry

Given these considerations, there is a great need for environments that make the programming of industrial robots more accessible to a broad array of users. A common approach is to use flow-based programming, a paradigm that works with visual 'blocks' rather than text.[8] The outcome is often a flowchart-like program wherein modules representing certain functionality or processes are connected via lines or arrows that define their parametric relationships.

In industry, environments such as drag&bot[9], Fox | Core, and Franka Emika's software Desk allow the visual programming of industrial robots via web browser. Within the greater area of robotic research, there are also educational

6 Cf. Pan et al., 2012.
7 Cf. Müller, Deuerlein & Koch, 2021.
8 Cf. Morrison, 2010.
9 Cf. Naumann et al., 2006.

environments such as Scratch[10] and Blockly, a block-based visual programming language that has been expanded for use on industrial robots.[11]

However, these environments have mostly been developed for industrial use cases such as pick-and-place processes, where robotic manipulation occurs at the end of a development process and is usually unable to feed back information. By contrast, an ideal robotic fabrication workflow for digital artists and designers would be tightly integrated into the design process itself – something that generally happens within computer-aided design (CAD) software. An intelligent system keeps track of changes to geometry, synchronizing these in simulations of robotic fabrication in a way that directly informs the design process – a concept known as production-immanent design (Fig. 4).

Using robotic arms abstracts the complexities of designing an entire machine. In other words, rather than having to deal with mechanical, electrical, and programming challenges, robotic arms allow users to focus entirely on movement. A single line of code can tell the robot to move to a certain position within its workspace while it internally calculates the speed, acceleration, deceleration, and other factors of each of its six motors – all with the aim of reaching that position with a high degree of accuracy in the shortest possible time. As digital artists and designers work within CAD, an approach is needed to link the movement of the robot to its geometry as directly as possible (Fig. 5).

When introducing innovations such as new technologies, it is of crucial importance to consider the individual needs of a user group. Rather than create separate tools for linking design and robotic fabrication, the author of this essay and Sigrid Brell-Cokcan began to develop plugins for Grasshopper,[12] a flow-based visual programming environment that is tightly integrated with Rhinoceros, the CAD software developed by McNeel. The resulting software, known as KUKA|prc[13] (Fig. 6), is currently being used by more than 100 universities around the world; over 50 companies use it for such non-standard, innovative production processes as large-scale 3D printing (Branch Technology and Aeditive), carbon fiber lay-up (Carbon Axis), and timber constructions (Züblin Timber). Even large companies like Boeing and Adidas have employed

10 Cf. Resnick et al., 2009.
11 Cf. Mateo et al., 2014; Trower & Gray, 2015; Weintrop et al., 2018.
12 Cf. Rutten, 2020.
13 Cf. Braumann & Brell-Cokcan, 2011.

KUKA|prc and are actively looking for researchers with both a creative and a technical background.

Such tools show that the rather strict traditional separation between designers and fabrication engineers has given way to a more even, collaborative environment that fosters innovation. It also encourages designers to consider fabrication-related parameters when implementing their designs, thus greatly facilitating the process.[14] This development can be viewed as part of the so-called "low-code" trend,[15] a tendency that brings new digital technologies to a wider range of users while also allowing existing industries to prototype and develop at a fast pace.

Teaching Robotics

Having this set of tools to abstract the complexities of interfacing and connecting data between design and fabrication enables a key step when teaching robotics to artists, architects, and designers: the focus shifts to the fabrication process, and away from the robot per se. In other words, the robot is considered not as an end in itself, but as an especially multifunctional tool. This is in a stark contrast to how robotics is taught in engineering classes, which center on understanding the technical framework of inverse and forward kinematics, control algorithm, and interfacing with programmable logic controllers, while the actual robotic process is often little more than an afterthought or proof-of-concept.

Of course, the physical realities of using a robot must not be ignored. In order to achieve a reliable simulation, it is important to synchronize the virtual environment with the actual, physical one. That means, on the one hand, that both simulated and physical robots need to use the same tool coordinate system (defining the offset from the flange to the tool center point, e.g. the tip of a mounted pen) and base coordinate system (defining the location of the CAD-zero point) within the robot's workspace. In addition, any obstacles such as tables and walls need to be drawn in the simulation in order to check for collisions. Once that synchronization has been performed by the user, programs should behave identically in the virtual and real environments. Data exchange between the robot and the flow-based programming environment can then happen in one of two ways: either a text file with movement com-

14 Cf. Braumann & Brell-Cokcan, 2015.
15 Cf. Fryling, 2019.

mands formatted in KUKA Robot Language (KRL) is copied to the robot controller via a flash drive or shared folder, or the robot can be controlled in real time via an industrial communication protocol.[16]

However, the program needs to be geometrically defined first. At a basic level, a robotic arm is not aware of any kind of 'actions' (picking up an object, for example). Instead, such a process needs to be broken down into its basic components. For instance, the robot is instructed to move above the object in a straight line, close the gripper, wait for a few hundred milliseconds until the gripper is closed, then move up again and to a point above the drop-off position (Fig. 7). Fortunately, visual programming allows the user to create such a sequence of events very quickly and easily re-use it: by providing multiple target positions, the system will create multiple pick-and-place operations based on the initial logic. The basic complexity of a robotic program is therefore low enough that a completely new user with basic CAD experience can create their own within 1–2 hours. At the same time, the complexity can be increased to any level, for example towards defining complex, non-planar, spatial 3D-printing processes that go beyond what is currently possible with commercial slicer software.

Simulation and Expertise

The provided simulation primarily checks whether or not the robot is physically capable of reaching a given position and if it collides with its environment. Importantly, KUKA|prc simulations do not show modeling of materials behavior, as reliable finite element modeling (FEM) and multi-physics simulation of a milling process requires both complex, expensive software and vast amounts of computational power. A current example is an application developed for a local SME specializing in polishing high-end metal molds for the automotive industry (Fig. 8a–b). The polishing toolpath depends heavily on the shape and material of the mounted polishing tool and the surface to be polished: choosing the right parameters requires a great deal of expertise, the result of years of experience with polishing.

Rather than try to duplicate that knowledge with a multi-year research project (resulting in a fully-automated process), researchers opted to create a much simpler program within a few weeks. The result exposes a number of inputs to the material experts, who can then choose the relevant parameters

16 Cf. Braumann & Brell-Cokcan, 2015.

based on their experience with the material. An immediate preview allows them to verify and validate the process and send it to the robotic arm. As such, predicting the material behavior is still the domain of the process expert, who – in the case of 'creative' applications – is usually the robot programmer himor herself. This serves to reinforce the importance of having a dual skillset: programming skill is not per se sufficient when it comes to robotics; one also needs to be aware of the specific physical process that robot is performing.

Collaboration and Knowledge Transfer

When teaching robotics to new users, the approach at Creative Robotics is to encourage both students and professionals to pick a project that relates to their artistic or professional practice and to evaluate how it could either improve upon an existing process or enable a completely new process that would otherwise not be possible. Using a robot should never be an end in itself, but should rather create added value that goes beyond incremental changes. Abstracting the complexities of working with a machine enables a transfer of 'universal' skills that are not limited to a certain type or brand of robot. This is especially true in higher education, where only a fraction of the students taking robotics courses will actually use robots in their professional career. It also makes it particularly important to focus on actual processes rather than the underlying algorithms, as the acquired skills can then much more easily be applied in a new context.

Robotics therefore serves as a motivational tool, exposing students to flow-based programming and with that, to algorithmic thinking. The definition of toolpaths requires students to brush up on their knowledge of geometry, since terms such as 'coordinate system,' 'normal vector,' 'tangent,' and 'transformation' are crucial to achieving a level of control over the robot's trajectory. Similarly important is the ability to break down processes to their basic components, to analyze them and then build upon that knowledge. Finally, use of robotics can be a valuable interface for interdisciplinary collaboration between students of different fields of study, as it enables them to cooperate within a shared environment that is new to all involved, but still individually relevant to their work.

Two experimental, interdisciplinary formats are currently under development. Creative Robotics and the LIT Robopsychology Lab[17] aim to create a

17 Cf. LIT Robopsychology Lab, 2021.

course structure that integrates art and design students as well as psychology students, with the goal of exploring the relationship between humans and robotic arms through actual prototypes that students develop themselves using those machines. Another format by the Ars Electronica Center and Creative Robotics includes a full-day workshop to introduce law students to the wider topic of digitization and robotics, encouraging them to engage with the machines in a hands-on way that allows for closer understanding of highly relevant legal questions within the field of robotics and digitization, particularly with regard to safety and liability.

Creative Hubs

A key part of facilitating the introduction of new technologies to new groups of users is having an inspiring environment that allows people to experience technology up close. Anecdotally, universities are often seen as distant from the realities of daily life, making it challenging to reach out to new groups of users. For that reason, Creative Robotics has partnered closely with the Grand Garage, now Europe's largest maker space,[18] as it provides a highly inclusive environment that targets not only makers, but also companies and startups, primary- and secondary school students. It is also home to a number of continuing education and reorientation programs, such as those for unemployed youth.

Grand Garage itself is tied to Tabakfabrik Linz,[19] a former tobacco factory that has become a creative hub for both academic and commercial institutions. Research groups such as the University of Art and Design Linz's Fashion & Technology, Tangible Music Lab, and Creative Robotics work alongside incubators, co-working spaces, startups, established companies and a secondary school with a focus on digital humanism (Fig. 10). All together, they form a very unique environment that is particularly well-suited to a city like Linz, with its industrial heritage and current focus on digitization.

This interdisciplinary environment has already given rise to such academia-born startups as YOKAI Studios,[20] a company and collective founded by Michael Wieser and Viktor Weichselbaumer, two students in the university's Fashion & Technology program who wanted to explore additive fabri-

18 Cf. Fab Foundation, 2021.
19 Cf. Tabakfabrik, 2021.
20 Cf. YOKAI Studios, 2021.

cation technologies not to build up objects layer-by-layer, but as a means of connecting and decorating fabrics. The project was recently awarded a grant by the EU-funded Re-FREAM program and was accepted into tech2b, an accelerator program at Tabakfabrik Linz. YOKAI Studios uses the infrastructure provided by Grand Garage and Creative Robotics to advance the technological side of their product.

Conclusion

For all the association with industry, there is a great potential in the use of robotic arms by artists, architects, and designers. Startups such as YOKAI Studios and Branch Technology[21] – but also equestrian saddlemakers at Sattlerei Niedersüß,[22] stone masons at Bamberger Natursteinwerke,[23] and visual artists Charles Aweida[24] and Davide Quayola[25] – use similar tools to work toward extremely dissimilar goals, from experimentation to fabrication and performance.

While industrial automation in Europe has nearly plateaued, the use of robots will enable creative sectors to realize entirely new processes that provide a deep level of customization, allowing them to go beyond what is mass-produced in low-wage countries at a competitive price level. Given the lack of skilled labor in these fields, deployment of robots will not replace human workers, but foster upskilling, just as the use of high tech will make traditional crafts more interesting to the next generation of artisans and craftspeople. Beyond digital fabrication, robotic arms can also become an expressive tool for artists and performers (Fig. 9–11) and a powerful interface for teaching algorithmic thinking and geometry.[26] While it may not be possible to match the entertainment industry's depiction of robots in the foreseeable future – and this despite great advances in the field of artificial intelligence and machine learning – having creative users work with robotic arms lends credence to the claim that the digital transformation is a universal concern, encompassing everything from the digital to the physical.

21 Cf. Branch Technology, 2021.
22 Cf. Sattlerei Niedersüß, 2021.
23 Cf. Bamberger Natursteinwerke, 2021.
24 Cf. Aweida, 2021.
25 Cf. Quayola, 2021.
26 Cf. Braumann & Singline, 2021.

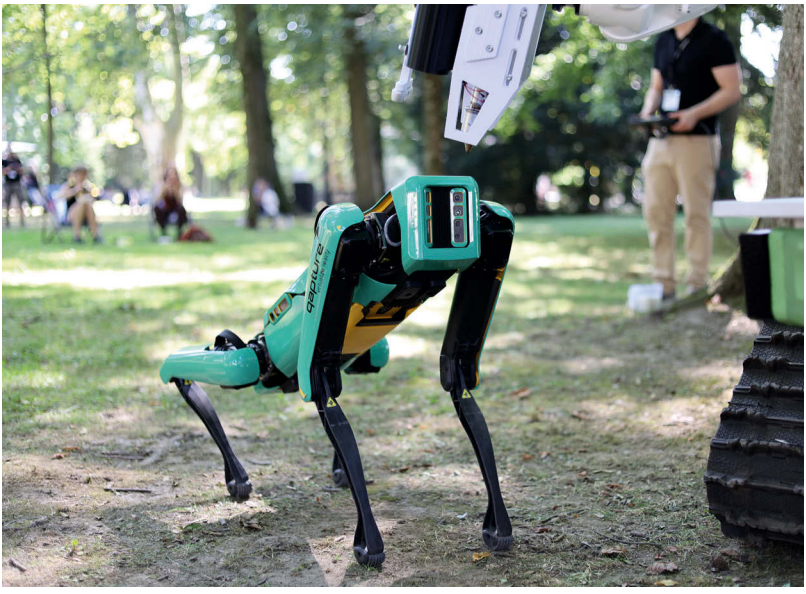


Fig. 1

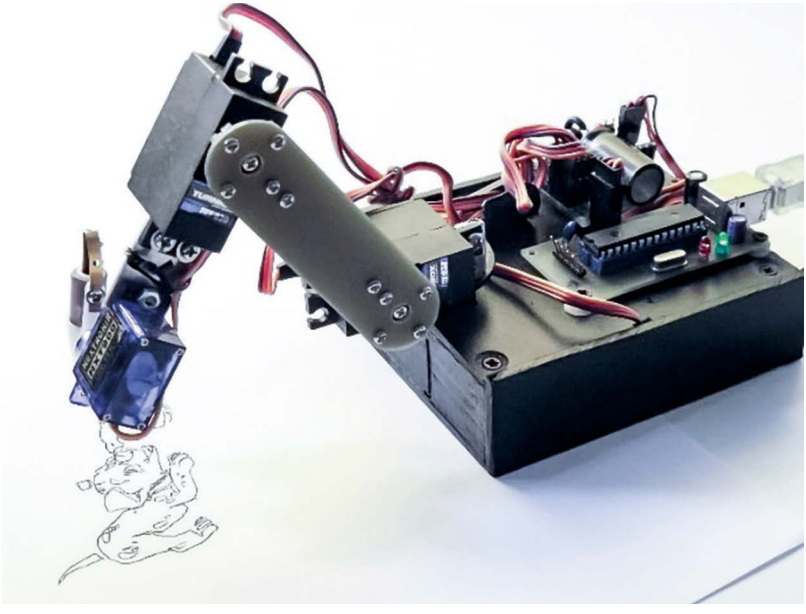


Fig. 2a

Fig. 2b

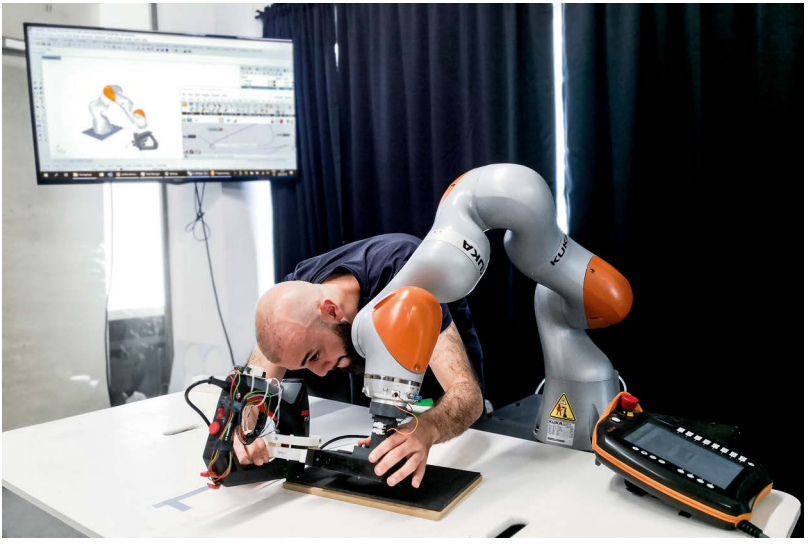


Fig. 3

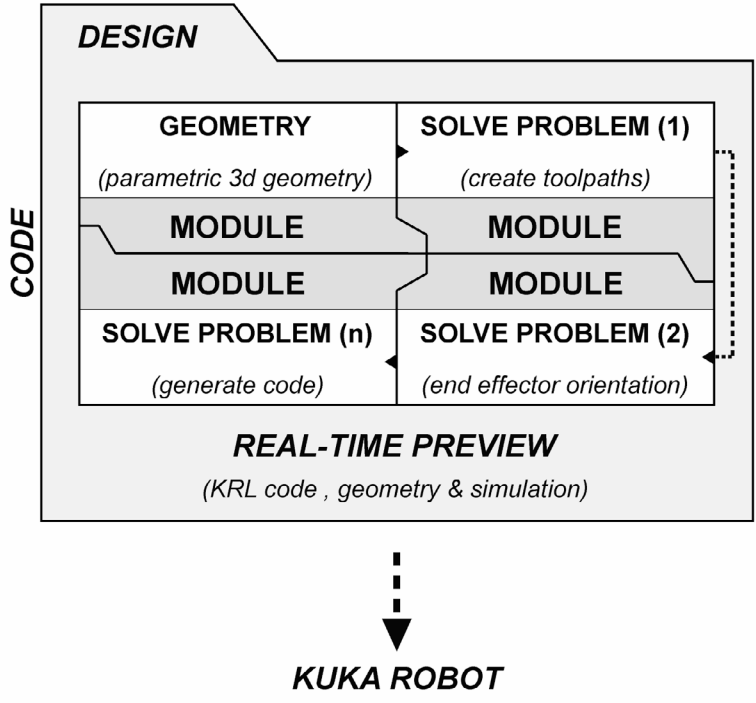
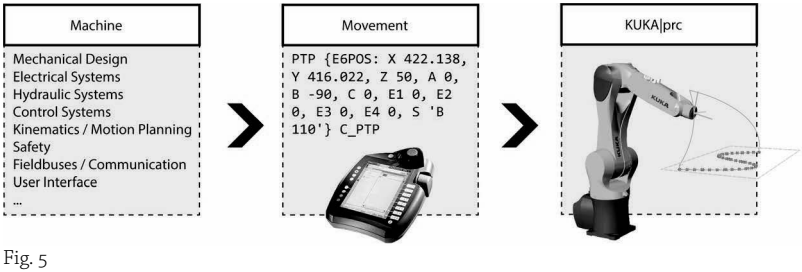

DESIGN
CODE
GEOMETRY
(parametric 3d geometry)
SOLVE PROBLEM (1)
(create toolpaths)
MODULE
MODULE
MODULE
MODULE
SOLVE PROBLEM (n)
(generate code)
SOLVE PROBLEM (2)
(end effector orientation)
REAL-TIME PREVIEW
(KRL code , geometry & simulation)
KUKA ROBOT

Fig. 4


Machine
Mechanical Design
Electrical Systems
Hydraulic Systems
Control Systems
Kinematics / Motion Planning
Safety
Fieldbuses / Communication
User Interface
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Movement
PTP {E6POS: X 422.138,
Y 416.022, Z 50, A 0,
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Fig. 5

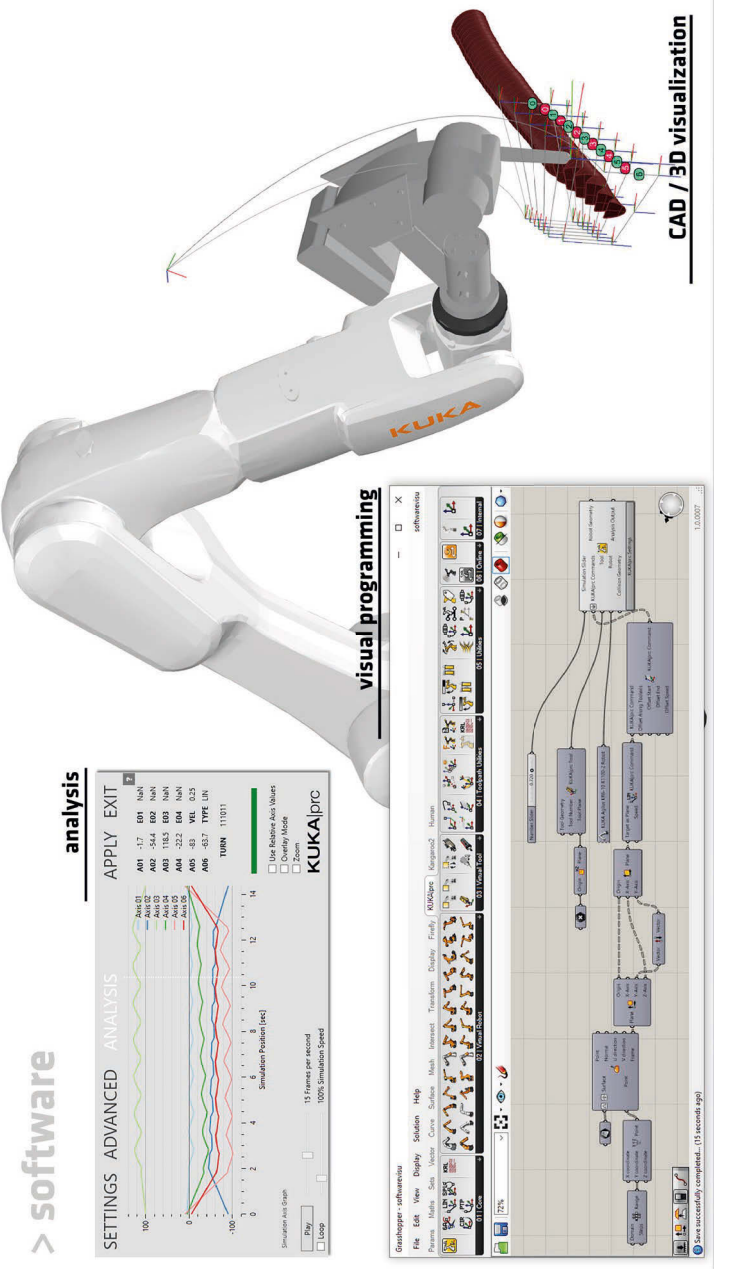
> software
analysis
SETTINGS ADVANCED ANALYSIS
APPLY EXIT
KUKA|prc
visual programming
CAD / 3D visualization
KUKA

Fig. 6

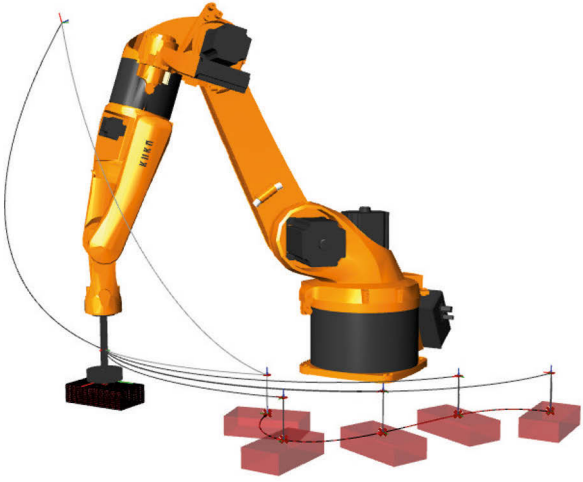

Fig. 7

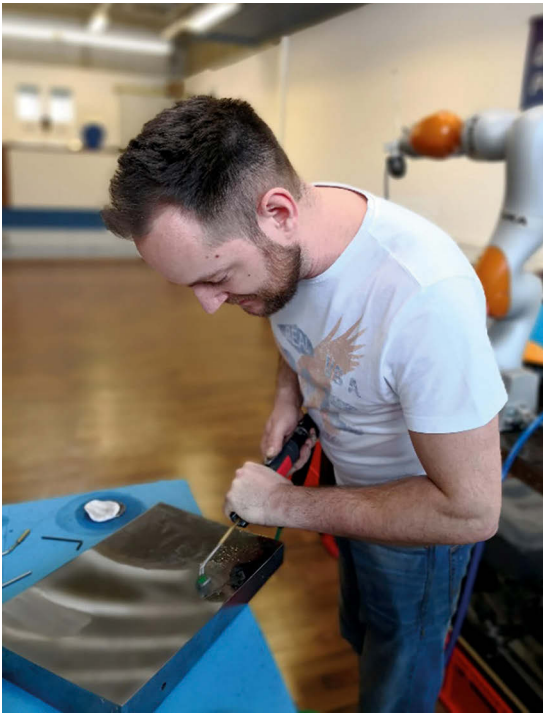

Fig. 8a

Fig. 8b

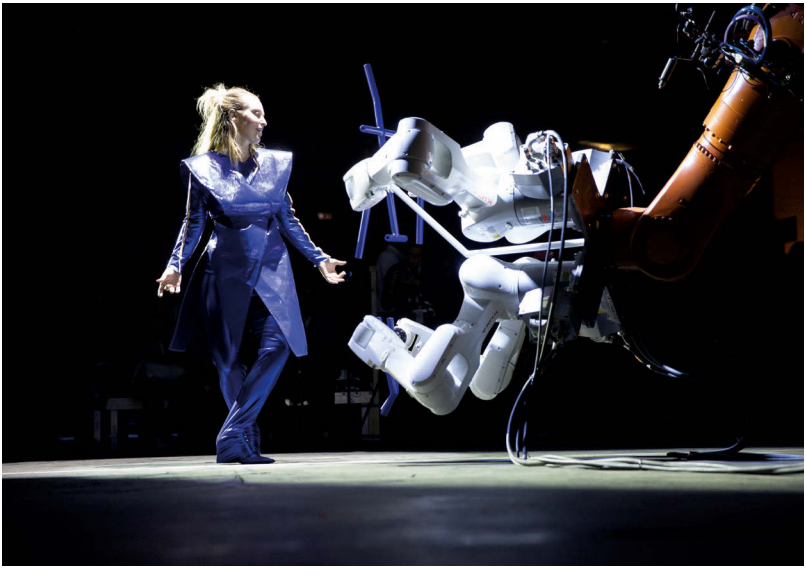

Fig. 9

Fig. 10

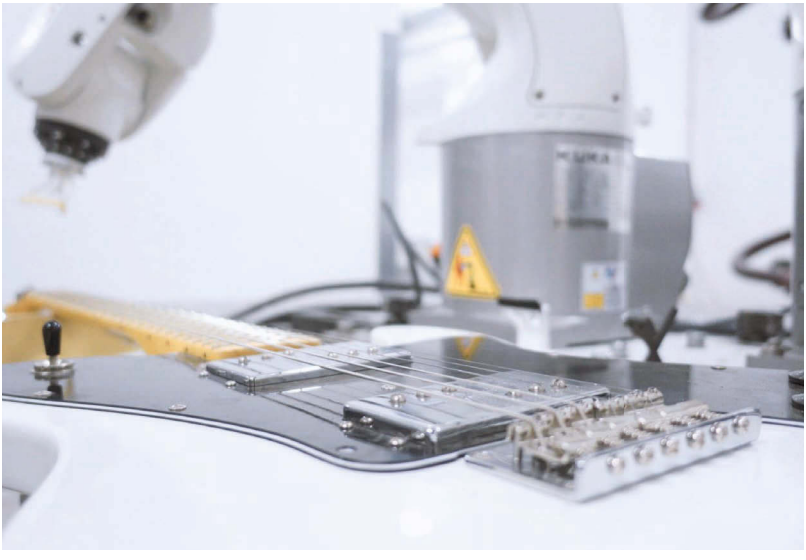

Fig. 11

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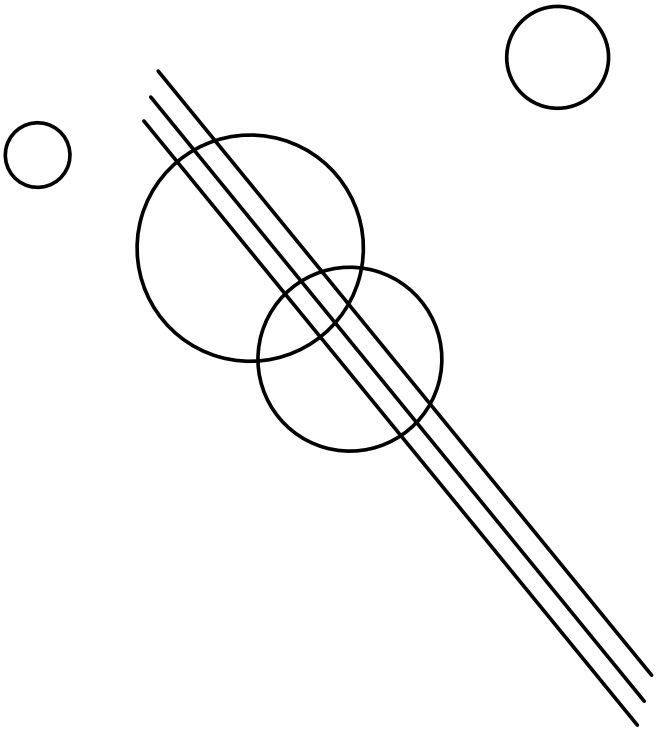
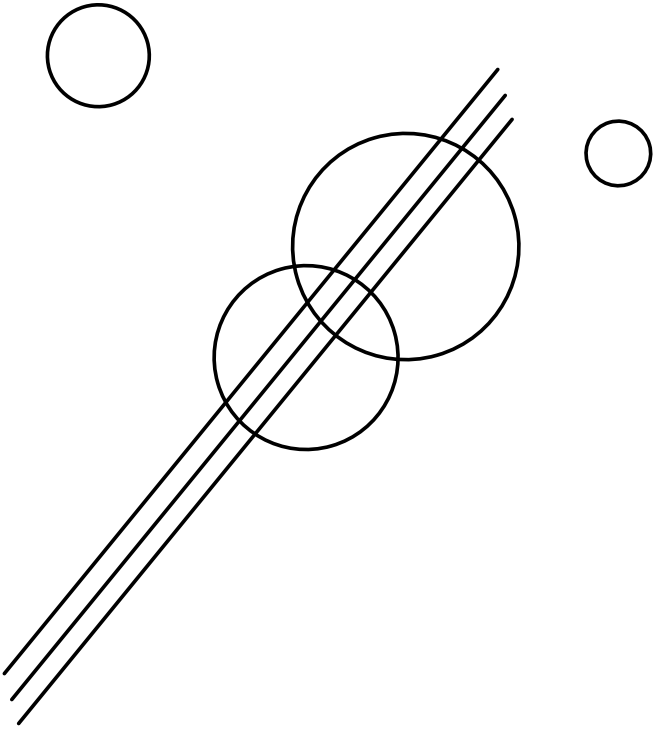
Figures

Fig. 1: Boston Dynamics' Spot at the Ars Electronica Festival 2021, photo © Johannes Braumann.
Fig. 2a&b: Robotic arm controlled by an Arduino microcontroller (a, by Theremino CC), KUKA industrial robot (b), photo © Johannes Braumann.
Fig. 3: Direct manipulation of a compliant collaborative robot. Teach pendant on the right, photo © Johannes Braumann.
Fig. 4: Production immanent design for robotic fabrication, photo © Johannes Braumann.
Fig. 5: Abstracting a machine by using a robotic arm, constraining movement to geometry via flow-based programming, photo © Johannes Braumann.
Fig. 6: Flow-based robot programming with KUKA|prc, photo © Johannes Braumann.
Fig. 7: Programming an industrial pick-and-place process, photo © Johannes Braumann.
Fig. 8a&b: From manual to robotic metal polishing, photo © Johannes Braumann.
Fig. 9: Artistic interaction with a system based on industrial robots at the AEC Festival 2019 with dancer Silke Grabinger, photo © Johannes Braumann.
Fig. 10: Robots as drummers at AEC Festival, photo © Johannes Braumann.
Fig. 11: Robots playing guitar, photo © Johannes Braumann.





Sustainability in the Fashion Industry: A Business Perspective

Nicole Kirpalani

Fashion is one of the largest industries in the world. For all the glamor that its luxury segment is often associated with, textile and apparel production is also plagued by pollution, water waste, greenhouse gas emissions, labor violations, and short product life spans. The fast fashion industry, in particular, has been criticized in recent years for the environmental damage it causes and the poor working conditions in textile manufacturing firms across the globe. Increasingly, initiatives and business models for more sustainable fashion sourcing and manufacturing have been developed. 'Slow fashion' represents an alternative that may be able to counter many of the disadvantages of fast fashion. However, business models that are innovative and based on responsible and sustainable practices are also more capital-intensive. While the environmental impact of initiatives can often be tracked and measured, the question of whether sustainable fashion is 'good business' from a financial point of view is still under debate. Fashion brands are starting to realize that investment in long-term, innovative initiatives that champion social responsibility and sustainability makes financial sense and is perhaps the only strategy that will support the future of the industry.

This article discusses current challenges in the fashion industry, particularly in the fast fashion segment. It examines the state of sustainability efforts and current trends, analyzes consumer perception and buying behavior, and explains differences between fast fashion and luxury brands. Citing several apparel brands to illustrate innovative initiatives, it highlights the concepts of circularity and B Corp certification. Furthermore, based on existing literature, it examines the Return on Sustainability Investment (ROSI) framework and the relationship between sustainable practices and financial performance in the context of fashion companies.

Industry Overview

Fashion generated about 1.46 trillion U.S. Dollars in revenue in 2020 and is expected to grow to about 2.25 trillion U.S. Dollars by 2025.[1] Around 430 million people are working in the fashion and textile industry (roughly one in eight workers among the global workforce). Most of them are based in Asia. Jobs range from sewing machine operation in textile factories to farming, raw material processing, treating, finishing, logistics, design, wholesale, retail, etc.[2]

Fast fashion has become a dominant category in the industry. It describes clothing designs that move quickly from the runways to the stores. Taking advantage of new collections presented at events such as Fashion Week, fast fashion brands will tap into trends and quickly mass-produce cheap, disposable clothing.[3] Major global fast fashion brands include Zara, H&M, UNIQLO, GAP, Forever 21, Topshop, Esprit, and Primark. Many of these companies are both retailers and manufacturers. Traditional mass-market department stores such as Macy's and Kohl's in the Unites States operate in a similar way with their private label brands, shortened design and production times. It is noteworthy that, historically, the fashion industry was focused on producing new collections four times a year: in spring, summer, fall, and winter. With the fast fashion model, traditional seasons are no longer sufficient. Since the early 2000s, many fast fashion brands have switched to 'micro-seasons', creating and producing about one new collection a week.

The fashion industry is one of the largest polluters in the world. Approximately 20 to 25% of globally produced chemical compounds are used in the textile-finishing industry, ending up in rivers and streams.[4] Moreover, because of its excessive water usage, the fashion and textiles industry is a major contributor to what the World Bank has called the 'invisible water crisis.'[5] More than 8% of global greenhouse gas emissions are produced by the apparel and footwear industries. In addition, almost 60% of all clothing ends up in incinerators or landfills within a year of being produced.[6] This issue is a direct result of the limited lifespan of fast fashion. Some clothing items are worn only

1 Cf. Statista, 2020b.
2 Cf. Common Objective, n. d.
3 Cf. Hayes, 2021.
4 Cf. Quantis, 2018.
5 Cf. Scott, 2020.
6 Cf. Remy et al., 2016.

ten times or less.[7] The environmental and social impact of apparel manufacturing is becoming increasingly alarming.

Some companies are pushing back against these trends and are starting to focus more on 'slow fashion.' The objective of this approach is to produce clothes with timeless designs and premium, long-lasting quality.[8] Slow fashion brands are quick to subscribe to the sustainable fashion business model, but it would be incorrect to assume that all slow fashion brands are sustainable and, conversely, that all fast fashion brands are unsustainable. In the following, the concept of sustainability and its relevance for fashion will be discussed in more detail.

Sustainability in Fashion

There are many definitions of sustainability, depending on context. A broad definition of sustainability that has been widely used stems from the 1987 Brundtland Report of the U.N. World Commission on Environment and Development (WCED). It describes sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs."[9] The 17 United Nations Sustainable Development goals also help shape our understanding of a sustainable future. They serve as a "blueprint to build a better and more sustainable future for all."[10] They include varied issues such as zero hunger, clean water and sanitation, decent work and economic growth, gender equality, climate action, and responsible consumption and production (just to name a few).

Sustainability in the fashion industry is about more than just textile production. It considers fashion from the perspectives of a variety of stakeholders, ranging from contemporary producers and consumers to future producers and consumers.[11] It involves the entire life cycle, including how an item is produced, who produces it, and how long its life span is before it ultimately gets discarded. Sustainability initiatives in the fashion industry attempt to reduce the large carbon footprint by reducing the greenhouse gas emissions stemming from manufacturing and transportation. Reducing the environ-

7 Cf. Morgan & Birtwistle, 2009.
8 Cf. Marquis, 2021.
9 Brundtland, 1987.
10 UNEP, n. d.
11 Cf. Charpail, 2017.

mental impact of fashion, including air and water pollution, could prevent millions of premature deaths over the next century.[12]

Sustainability: the Consumer Perspective

Consumer awareness regarding sustainability seems to be growing. Consumers are increasingly cognizant of the climate impact of their consumption choices. Many are willing to change their behavior in purchasing clothing when they become aware of how and where an item was made. They might end up buying fewer items, but such of a higher quality. Reusing items is also a trend. For example, Cao et al. found that consumers bought fewer new garments and kept their used items longer if they could adapt and use them in several different ways.[13] Instead of buying new clothes, consumers are finding alternative ways to get items 'new to them' by either swapping them, buying them second-hand, or renting them. Online clothing rentals have become particularly popular in recent years, with global revenue amounting to about 3.45 billion U.S. Dollars in 2020. This figure is projected to grow to about 7 billion U.S. Dollars by 2025 (Fig. 1),[14] and yet it is dwarfed by the value of the worldwide second-hand apparel market, which was worth about 27 billion U.S. Dollars in 2020 and is projected to grow to 77 billion U.S. Dollars by 2025 (Fig. 2).[15]

The trend away from fast fashion seems to have strengthened during the COVID-19 crisis. A 2021 McKinsey survey found that, as a result of the crisis, 65% of respondents were planning to purchase more durable fashion items, while 71% were intending to keep items they already had. Additionally, 57% of respondents were willing to repair their clothes to prolong usage. Some consumers are opting to buy luxury fashion items whenever possible. Marketers are devising new strategies to convince consumers that this may be a desirable way to accomplish sustainable consumption goals.[16] Younger consumers seem to be particularly conscious when it comes to sustainability. Millennials and Gen Z cohorts are more likely than their older counterparts to spend more money on fashion products that have less negative impact on the environment.[17]

12 Cf. Ro, 2020.
13 Cf. Cao et al., 2014.
14 Cf. Statista, 2020a.
15 Cf. Thredup, 2021.
16 Cf. Sun et al., 2021.
17 Cf. Kent, 2021.

Sustainability: Noteworthy Companies

Corporations have been taking note as well and are starting to view sustainability initiatives as critical elements of their overall mission. According to a 2019 McKinsey survey, apparel companies regard sustainability and transparency as two of their greatest priorities.[18] The following highlights the results of recent research on the sustainability efforts of fashion companies.

To measure fashion's progress towards more environmentally and socially responsible business models, 15 of the industry's largest fashion companies were examined across six dimensions to develop the 2021 Business of Fashion sustainability index. The dimensions assessed were transparency, emissions, water and chemicals, materials, workers' rights, and waste. The companies were categorized as sportswear, high street, or luxury and were able to earn up to 100 points in each of the six dimensions.

In the sportswear category, Nike came in first place, with an average of 47 points. It scored highest in the area of transparency, which indicates how well supply chains are traced and how impact is measured (71 points). Nike scored lowest in the area of materials: it seems to fall short when it comes to the use of generative and circular materials (27 points). Nike topped Puma, the VF Corporation, Adidas, and Under Armour on the sportswear category's sustainability index.

In the high street category (which includes a number of fast fashion brands), the H&M Group came in first, with an average of 42 points. Like Nike, it scored highest in the area of transparency (54 points). The company scored lowest in the area of waste, seemingly lacking in ways to minimize waste and establish circular business models (26 points). Its competitors Levi Strauss & Co., Inditex (parent company of Zara), Gap Inc., and Fast Retailing rounded out the list in this category.

In the luxury category, Kering scored highest, with an average of 49 points. The luxury conglomerate includes brands such as Gucci, Saint Laurent, Bottega Veneta, Balenciaga, Alexander McQueen, and others. It scored highest in the area of transparency (68 points). Its lowest score was for two dimensions that were tied (32 points each): waste and workers' rights (i.e. the protection of human rights and equitable working conditions). PVH, Hermes, LVMH, and Richemont came behind Kering in the luxury category.

18 Cf. Berg et al., 2019.

The Kering Group was the overall winner in the 2021 sustainability index. Companies tended to fare best in the areas of transparency and greenhouse gas emissions (48 points on average each), and worst in the areas of waste (24 points) and workers' rights (27 points). Interestingly, as a group, the five luxury companies had a lower combined score than the five high street companies and the sportswear companies (average of 33 points/luxury vs. 38 points/high street vs. 36 points/sportswear). This unexpected finding questions the assumption that luxury brands are generally more sustainable and fast fashion brands are usually less sustainable. We need more research and a more differentiated view here. However, what becomes clear from these sustainability scores is that there is still a lot of room for improvement in terms of sustainability, regardless of the category.

Sustainability: Noteworthy Initiatives

The following examines a number of specific sustainability initiatives by fashion companies, in particular the concepts of circularity and B Corp certification.

Circularity

The United Nations Environment Programme (UNEP) outlines the principles of the circularity concept and its contributions to the promotion of sustainable consumption and production patterns. Circularity, in this context, can be defined as "a way to achieve sustainable consumption and production and other interlinked sustainable development goals."[19] In a circular economic model, the entire value chain matters (more than each individual stage). All stakeholders are engaged in changing the system and apply life cycle thinking that enables the identification of strategic intervention points. Natural resource use and environmental impact are disconnected from economic activity and human well-being. Circular models keep materials at the highest possible value along the value chain.

In a practical context, circularity can be applied in the fashion industry by using recycled materials (such as polyester from plastic bottles), focusing on repairs, and on business models based on rentals.[20] The industry needs to move away, as much as possible, from virgin raw materials (such as cotton or silk) and introduce resale and reuse. This, in turn, will reduce the demand for

19 UNEP, n. d.
20 Cf. Donaldson, 2021.

virgin materials. Overall, more investments in circularity are needed to bring it to scale. A good example of circularity in the fashion context is Eileen Fisher. This brand has built circularity into its business model, called "circular by design." Since 2009, the company has taken its clothes back to give them a new life by being resold or remade into new designs, with over 1.6 million pieces so far. There are three distinct stages in this approach to circularity: In the 'first life' stage, the focus is on designing versatile and timeless clothes that can be worn for many years. The clothes are made from the highest quality and the most sustainable materials. In the 'second life' stage, gently used Eileen Fisher clothes are bought back, cleaned, and resold. Lastly, for the 'third life', Eileen Fisher clothes that are returned torn or stained or beyond repair are deconstructed and reimagined into new pieces such as accessories, wall hangings, or pillows. About 25% of the clothes that are taken back fall into this category. Eileen Fisher aims to minimize clothing waste by applying this circularity principle. Customers can purchase first-life fashion items as well as second- and third-life products.[21] A report by McKinsey estimates that the fashion industry has the potential to become about 80% circular by 2030.[22] However, in order for this goal to be accomplished, significant corporate buy-in and investments need to happen.

Certified B Corporation

B Corps is a global certification that measures a company's social and environmental performance using a formal "B Impact Assessment." Certified B Corporations meet the highest standards of social and environmental performance, transparency, and legal accountability to balance profit and purpose. Five areas are assessed: environment, workers, customers, community, and governance. By undergoing a B Corp certification process, a company verifies its commitment to social responsibility and sustainability in all of these areas. Prominent examples of B Corps-certified fashion companies include Patagonia, Allbirds, Bombas, and Eileen Fisher.

For the purpose of this paper, Patagonia will be highlighted. It received B Corp certification in 2011. Patagonia is an outdoor and active clothing brand that is known for its minimalist style. The product designs focus on simplic-

21 Cf. Fisher, n. d.
22 Cf. Donaldson, 2021.

ity and utility. The company operates with four guiding principles as part of its environmental responsibility program:

1. Patagonia's goal is to make durable products to reduce energy and water consumption as well as waste.
2. It aims to provide full transparency to customers ("know how your clothes are made").
3. It provides options, through a program called Worn Wear, to buy used, trade in and fix one's gear.
4. Patagonia pledges 1% of its sales to the preservation and restoration of the natural environment. It is well known for its "don't buy this jacket" advertising campaign in 2011.[23]

Challenging the notion of consumerism, the company communicated that even the best product generates greenhouse gases, pollutes fresh water, and produces waste in the production process. Hence, "don't buy what you don't need." The campaign garnered quite a bit of press and attention from the public. Since then, similar campaigns have followed.

Sustainability: the Financial Piece

In 2019, the Global Fashion Agenda, a sustainability advocacy group, noted for the first time that climate change can contribute to financial risks. Changes to the climate were already having a negative impact on crucial raw materials like cotton and wool, causing fluctuations in quality and price. The luxury sector is said to be particularly vulnerable because of its reliance on access to high-end materials.[24] For some companies, even though sustainability initiatives bring lots of benefits, they also come with high costs.

Measuring the value of sustainable practices for the apparel industry has recently been facilitated by the development of the Return on Sustainability Investment (ROSI) framework. This framework helps companies such as Eileen Fisher, REI, and Reformation in their Environmental, Social, and Governance (ESG) strategies. For example, Reformation promotes circularity by partnering with ThredUp, an online consignment and thrift store. Customers send their gently used clothes to ThredUp for resale or donation. If ThredUp

23 Cf. Patagonia, n. d.
24 Cf. Kent, 2019a & 2019b.

accepts clothing for resale, the customer can earn shopping credit on Reformation's website. Using the ROSI framework, Reformation was able to realize a net benefit of 1.5 million U.S. Dollars in 2019 from its partnership with ThredUp (in part from purchases made with credits earned).

Recent research by Medcalfe and Miralles Miro investigated whether there is a relationship between sustainable practices and financial performance in fashion firms.[25] The authors examined publicly available financial data and information on sustainable practices from the Baptist World Aid Australia Ethical Fashion Reports. Their research showed that there is a strong positive correlation between sustainable practices and financial performance in fashion firms. The results of this research are promising in that they provide support for financial benefits that are often challenging to measure. More research is needed in this area.

There is no doubt that the need for sustainability has risen to the forefront of fashion firms' agendas. According to Boger et al., disruptive innovation is needed in the form of new materials, processes, technologies, and business models.[26] With its almost 2 trillion U.S. Dollar market size, the fashion industry offers major untapped opportunities for investors and companies. To bring the necessary innovations to scale, fashion brands, supply chain partners, investors, and others need to step up to create the conditions that accelerate innovation. Financing will flow into the fashion industry when investors are presented with manageable risk, attractive returns, and measurable impact.

Conclusion

Companies are realizing that the environmental and social impacts of the industry are too high to ignore. This article examines the state of sustainability efforts and current trends in the fashion industry, the state of sustainability efforts and current trends in the industry, as well as consumer perceptions and buying behaviors. Using various apparel brands to illustrate innovative initiatives, the concepts of circularity and B Corp certification are highlighted. The Return on Sustainability Investment (ROSI) framework and the relationship between sustainable practices and financial performance in the context of fashion companies are also discussed. Overall, more innovative practices and large-scale investments are needed to make a long-term impact.

25 Cf. Medcalfe & Miralles Miro, 2022.
26 Cf. Boger et al., 2020.

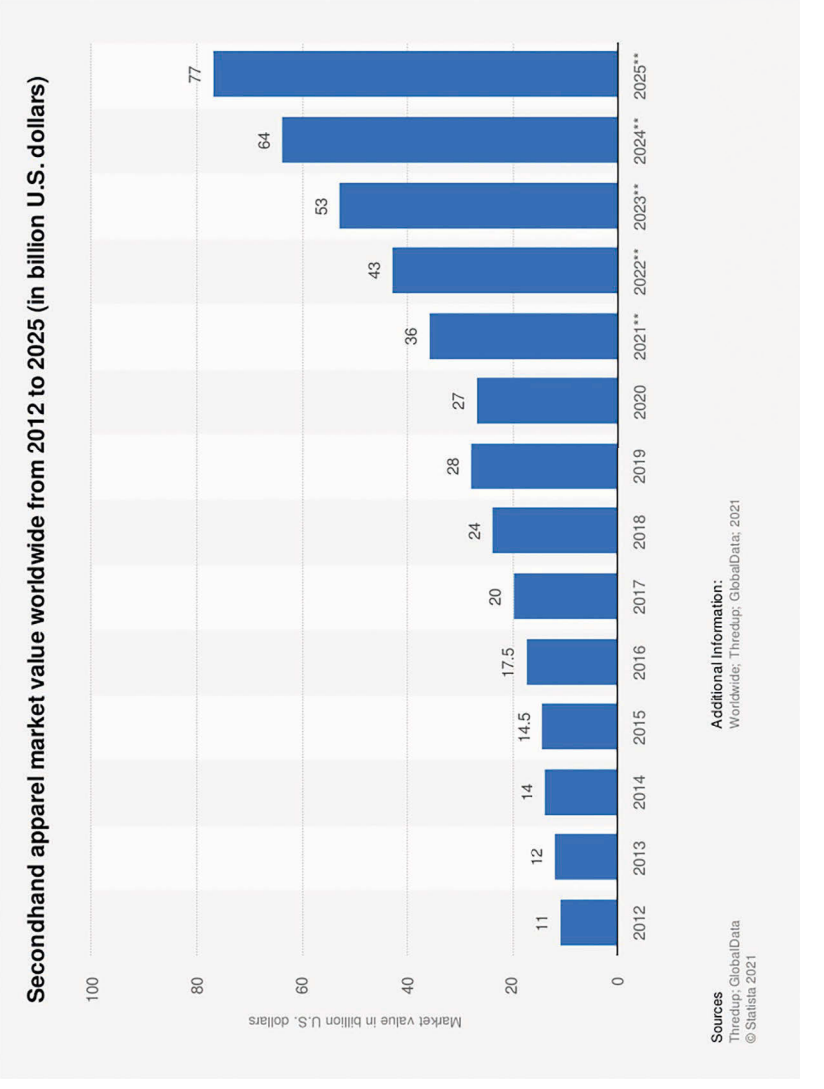

Secondhand apparel market value worldwide from 2012 to 2025 (in billion U.S. dollars)
Market value in billion U.S. dollars
0
20
40
60
80
100
11
12
14
14.5
17.5
20
24
28
27
36
43
53
64
77
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021**
2022**
2023**
2024**
2025**
Additional Information:
Worldwide; Thredup; GlobalData; 2021
Sources
Thredup; GlobalData
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Fig. 1

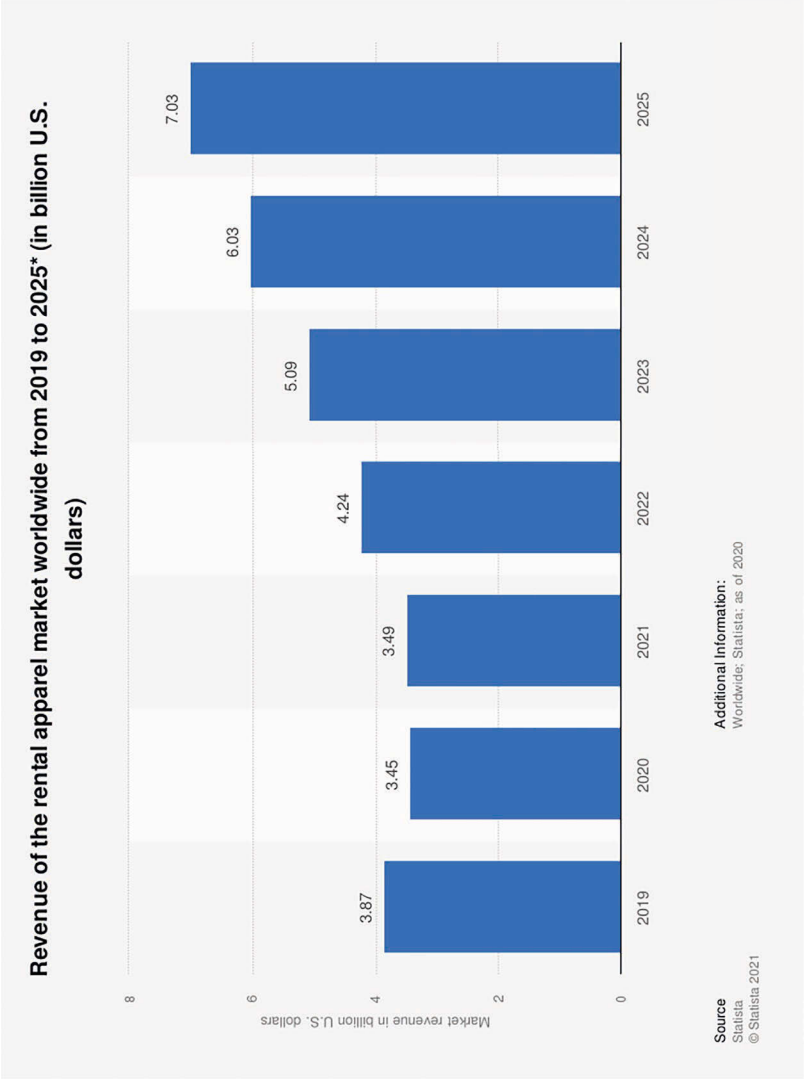
Revenue of the rental apparel market worldwide from 2019 to 2025* (in billion U.S. dollars)
Market revenue in billion U.S. dollars
0
2
4
6
8
3.87
3.45
3.49
4.24
5.09
6.03
7.03
2019
2020
2021
2022
2023
2024
2025
Additional Information:
Worldwide; Statista; as of 2020
Source
Statista
© Statista 2021

Fig. 2

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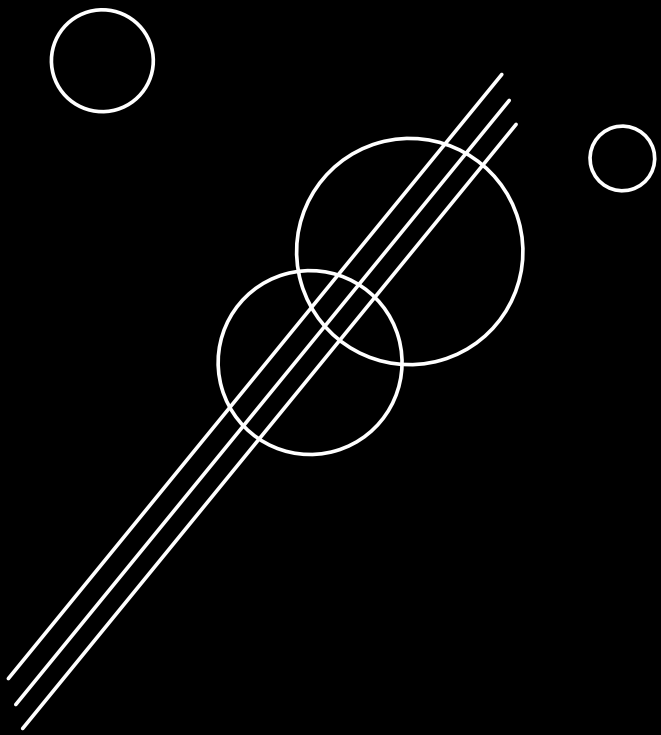
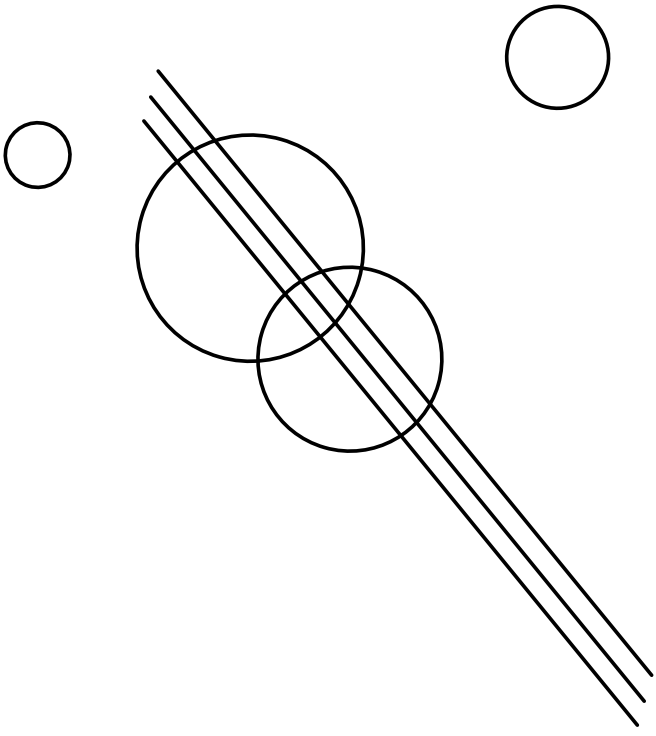
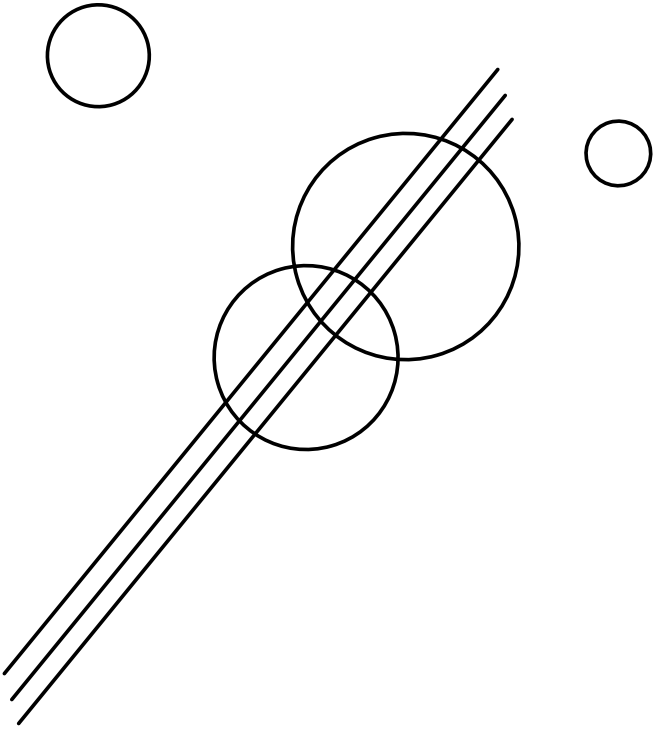
Fig. 1: Revenue of the rental apparel market, https://www.statista.com/forecasts/821415/value-of-the-global-apparel-market [30 Sep. 2021].

Fig. 2: Secondhand apparel market, https://www.statista.com/statistics/1195613/rental-apparel-market-revenue-worldwide/ [1 Dec. 2021].



Change in Arts and Cultural Education





Changing Memory – Shaping Power: The Sound of Music

Henry Keazor

If one puts the two phrases 'Changing Memory' and 'Shaping Power,' which serve as the title of this article, in relation to the title of the publication, "Changing Time – Shaping World," the former turn out to be specifications of the latter: 'time' manifests itself, among other things, in the form of 'memory,' since we only perceive time because we remember; and in order to be able to (re)shape the world, we need 'power.'

'Changing time' can be understood in two ways: Firstly, in the sense that time/the times are inevitably and constantly changing, and so is everything that is subject to time, including us; and secondly, meaning that we can, and should, try to use time to change and shape people and things (for the better). Both considerations come down to the actuality that we can take advantage of the fact that time changes us and things so as to consciously shape this process, and try to find a direction in which we can strive to (re)shape the world.

However, this takes orientation, for example through history, and thus 'changing memory' can be read in two ways: Once again, from the perspective that memory changes incessantly as time passes (we forget some things and remember others as the hierarchy between individual memories shifts), which in turn has consequences for our actions, as they depend decisively on what we perceive to be truly important (or less so), and also to the degree that we can consciously shape this process of changing memories, i.e. work on changing our memories by dealing with previously repressed issues – think of the current debate on colonialism, for example: this then also puts our actions into perspective, as we regard certain aspects as important, while others that were perhaps important before – such as the perspective of the colonial states – now appear less so. This is to say that there is not the one memory or the one history – as changing and altered memories al-

ways factor into a changing and altered history – and we are always confronted with previously unknown or hidden perspectives in our view of history, that is: with other histories.[1]

What we need, therefore, is both the availability of diverse stories and the willingness to open up to them, such that our own memories can be enriched and changed in order to gain, if necessary, new trajectories for a future, also in the sense of 'shaping power.' This is not about relativism in terms of "everyone has their own story and is therefore right in their own mind," but about becoming aware of, and perceiving, different perspectives and the resulting different stories that are to be put in relation to one another.

The Story of a Medium's Stories

This naturally raises the question of the 'how': How, then, can the diversity of memories and the resulting stories be communicated in the most broadly effective and appealing way possible?

A good option seems to be a medium that appears all the more suited to providing such different stories as it itself seems to be characterized by a multitude of different ones. For some observers, the music video genre only came into being with the launch of the music channel MTV on 1 August 1981, an event that raised the curtain for the genre's meteoric rise with video clips by such directors as Sophia Coppola, Chris Cunningham, Michel Gondry and Spike Jonze from the beginning of the 1990s onward.[2] The heyday of music video was reflected most emphatically in anthology DVDs released at the start of the new millennium. Series including the "Directors Label"[3] featured collections of music videos that had previously aired on music television channels such as MTV – until the outlet became increasingly obsolete as digital platforms (YouTube in particular, launched in 2005) became the primary distributor of short, video-based content. In February 2010, the American cable channel finally removed the words "Music Television" from its logo.

Yet the fact that MTV first went live at 12:01 a.m. on 1 August 1981 with a music video from 1979 – Russel Mulcahy's video for "Video Killed the Radio Star" by The Buggles – also shows that the genre must have existed before then, a circumstance that leads some to point to 1975 as another date mark-

1 See also the title of Paolo Mieli's 1999 book "Le Storie. La Storia."
2 Cf. for example Marino, 2001, pp. 8–9.
3 Cf. Directors Label, 2003–2010.

ing the start of the history/histories of the music video. That year, the British band Queen appeared on the music chart television show "Top of the Pops" not in person, but in a film made shortly before by Bruce Gowers. The band can be seen singing their song "Bohemian Rhapsody."[4] Of course, a closer look at Mulcahy's video for The Buggles reveals that there seem to be other, more justified candidates for the start of the history of the music video. In the clip, just when the chorus line "Video killed the radio star" is being intoned for the second time (01:25), the camera pans to a television monitor on which two women appear to be singing these very words (Fig. 1). They are positioned in such a way that the singer on the left is seen in profile, while the singer on the right is shown frontally – analogous to the 16mm promo films for the band ABBA. Shot as early as 1974 (that is: one year before Gowers's clip for "Bohemian Rhapsody") by the Swedish director Lasse Hallström, they were made to represent the group on music shows in lieu of live performances (Fig. 2). Taking his cue from films by his compatriot Ingmar Bergmann, Hallström positioned the two ABBA singers in the way described as early as 1975 in videos for songs including "Mamma Mia" and "I Do, I Do, I Do, I Do, I Do."[5] The extent to which this was apparently already perceived as a trademark for late-1970s ABBA videos is evident in Mulcahy's homage in "Video Killed the Radio Star."[6]

However, if we look at the function of these promo films, which was to advertise the visualized pieces of music, we also find corresponding precursors as early as the 1960s in the form of the so-called Scopitone, a type of coin-operated jukebox featuring 16mm film shorts (Fig. 3). In other words, just like today, when you can select individual music videos on the Internet and – unlike with MTV – do not have to wait for the desired clip, a Scopitone user could pick a film by pressing a button as early as 1960. Scopitones gradually lost their appeal after the late 1960s, when music shows and similar genres gained ground on color television.[7]

Scopitones share this media-progress-related demise with their predecessors, the Soundies: popular in the 1940s, these visual jukeboxes showed black-and-white 16mm musical films (Fig. 4). Like MTV after 1981, they offered no control over when which film would be shown, as clips were played one after another from a single, large film reel. While Scopitones were superseded

4 Cf. for example Marino, 2001, p. 8.
5 Cf. Keazor & Wübbena, 2011, pp. 66–67.
6 Cf. Keazor, 2022.
7 Cf. Keazor & Wübbena, 2011, pp. 62–63.

by color television, Soundies lost their appeal when more and more private black-and-white-television sets found their way into households. Nevertheless, Soundies anticipated some of the musical visualization ideas found in 1970s music videos, as can be seen, for example, with a comparative look at a scene from Gjon Mili and Norman Granz's 1944 short film for the jazz song "Jammin' the Blues" (Fig. 5) and a moment from Bruce Gowers's 1975 video for Queen's "Bohemian Rhapsody" (Fig. 6).

But if you thought that Soundies were the first chapter in music video history, you are mistaken, because Thomas Alva Edison's Kinetophone, introduced as early as 1891, was originally developed to reproduce, for example, opera performances at any time.[8] And in 1916, the French film production company Gaumont made a short film to advertise the song "Anna, qu'est-ce que t'attends?" [Anna, what are you waiting for?], interpreted by the Belgian performer and comedian Bruno François Fieremans (also known by the pseudonyms "Blond'hin" or "Blon-D'hin") with a plot acted out in outdoor scenes and working with lip synching.[9] Depending on the point of view, various efforts have been made to trace the ancestors of music video even further back to the 18th century,[10] or in fact to Leonardo da Vinci.[11]

Revision and Progress

In view of this/these very long (pre-)history/ies and the broad social impact that has become clear, it may be all the more surprising that before 2008, music video was hardly seen as a noteworthy means of social or political influence but was apparently 'only' regarded as a medium of entertainment or realization of certain aesthetics. A possible political use was at least conceived in the fictional genre of the feature film: "Bob Roberts" is a 1992 mockumentary directed by Tim Robbins, who also played the title character, a conservative folk singer and self-made millionaire who wants to win the 1990 Senate elections in the state of Pennsylvania as a Republican by all means available – legal or, especially, corrupt. The protagonist uses music videos in his election campaign to re-vision American history in both the literal and figurative sense: in a clip strategically released on election day, which takes the top of the music charts by storm, Roberts stages himself in the uniform of an American sol-

8 Cf. Keazor & Wübbena 2011, p. 61.
9 Cf. Keazor & Wübbena, 2010b, p. 224.
10 Cf. Keazor & Wübbena, 2010a, pp. 23–24.
11 See the compilation in Keazor & Wübbena, 2011, p. 59.

dier who, at the end of the American War of Independence, victoriously duels a devious supporter of his (present) opponent, Democratic Senator Brickley Paiste (Fig. 7).

The supporter, dressed in a mix of historical uniform and batik shirt with Paiste's campaign button on, tries to kill Roberts from behind with a grenade weapon, while Roberts himself only has an 18th-century handgun at his disposal. Paiste, the indirect adversary of Roberts in the scene, is fighting for American independence and is therefore defamed as an enemy of the United States. Images of young men in anachronistic modern business suits, who seem to have fallen as martyrs but come to life again toward the end of the clip, establish a reference to the present election, in which Roberts has shortly before been the victim of a (fictitious) political assassination attempt, but which he pretends to have survived seriously injured. The programmatic title of the song in the music video – "I want to live" – is a decisive factor in the video's resounding impact and the song's chart success, as well as Roberts's eventual election victory over Paiste.

In a more figurative sense, however, Roberts re-visions American cultural history earlier in the film with a clip of his "Wall Street Rap." The song is taken from his album "Times are Changin' Back," which makes the video a direct response to Bob Dylan's 1964 song "The Times They Are a-Changin'" in general and Don Alan Pennebaker's 1965 version of Bob Dylan's "Subterranean Homesick Blues" in particular,[12] which has been adapted and referenced again and again in great abundance for the most diverse purposes and occasions[13]: here as there (Fig. 8–9), the performers are standing against the backdrop of a dreary back alley to the right of the scene. Instead of lip-synching, they are scrolling down cue cards with a stoic expression and not always in sync. The cards feature individual words from the lyrics, which are interpreted musically in a rhythmic chant.[14] But while Dylan has the pop poet Allen Ginsberg and his fellow folk singer Bob Neuwirth standing next to sacks of cement, Roberts's clip shows two American businessmen talking on their cellphones and standing in front of bags of money that they then carry away. Moreover,

12 Incidentally, a promo film that is sometimes also considered the first music video in history (see, for example, the undated "Rolling Stone: The 100 Top Music Videos" chart, where the clip holds number seven).

13 Cf. Keazor & Wübbena, 2011, pp. 443–446.

14 Which is why the "Subterranean Homesick Blues" was later seen as an early precursor of rap ("Is this the very first rap song?" Christopher R. Weingarten asked in 2010).

whereas Dylan's alley remains empty, there are business girls in white shirts, ties and short skirts dancing in the "Wall Street Rap."

The clip also counteracts Dylan's statements in terms of content, most prominently in the album's title "Times are Changin' Back." Dylan narratively sketches a spectrum of US society in the mid-1960s with just a few words, using a series of rapidly alternating vignettes, and urges the audience to be vigilant and authority-critical and use their brains ("Look out, kid [...] You don't need a weatherman to know which way the wind blows"). Roberts, on the other hand, acts exactly like one such authority who, based on his opposing view of US society and from the vantage point of a right-wing conservative neoliberal, gives the advice: "By all means necessary: Make Millions" (Fig. 9).

In 1992, it may have seemed like a fantastic thing to use music videos in election campaigns, but this became a reality when the presidential candidate Barack Obama's famous "Yes We Can" speech was made into a music video after the primary in the state of New Hampshire on 8 January 2008. The clip, which was directed by Bob Dylan's son, Jesse Dylan, and produced by the American rapper, singer, songwriter and record producer will.i.am, features 37 celebrities including actors and musicians such as Scarlett Johansson, Nicole Scherzinger, John Legend and Herbie Hancock. These echo Obama's words, which are played in the background of the clip, both acoustically and visually, either spoken or sung in sync. The speech took an optimistic approach to American history. It addressed major global political problems and the attempt to achieve justice, prosperity and world peace, and referenced analogous past achievements in the refrain "Yes, we can." These words became the campaign slogan, which explains the enthusiasm that the performers increasingly display in the course of the clip. Their zeal is carefully balanced by the seriousness shown elsewhere and especially at the beginning by participants who – in line with the strict black-and-white aesthetics of the clip – appear just as thoughtful, assiduous, and determined.[15]

15 For the creation and structure of the video, see Vernallis, 2011.

Alternative Views

In conclusion, two examples illustrate alternative ways of communicating (American) history.

On 5 May 2018, the video for the song "This is America" by the American rapper Childish Gambino (real name: Donald Glover), directed by Hiro Murai, was published on YouTube. It received 12.9 million views within 24 hours (according to Wikipedia, the video had been viewed more than 800 million times by November 2021). If one were to describe the video in purely formal terms according to its elements, one might be inclined at first glance to classify it as a typical hip hop video, since it bears the hallmarks of hip hop: the bare-chested performer (i.e. Childish Gambino) moves through the video in an elaborate choreography (by Sherrie Silver), indulging in brutal gun violence. Cars from various years of construction are shown, and on one of them sits a beautiful woman (US singer SZA, real name: Solána Imani Rowe) like a hood ornament.

On closer inspection, all these elements are brushed against the grain, as it were, since they tell an alternative, critical history of the USA through rapidly succeeding and merging scenes from a country dominated in an almost surreal way by firearms and fetishism revolving around these arms, as well as police violence and mobile phone voyeurism. Murai's video sketches a panopticon of contemporary America and critically highlights racial stereotypes when Childish Gambino briefly strikes a pose at the beginning of the video before executing a hooded man from behind with a shot to the head (Fig. 10), referencing old racial stereotypes such as that of "John Crow" (Fig. 11).[16] This character was popularized from the 1830s onward by the US actor Thomas D. Rice, who performed in blackface and embodied various prejudices against African Americans. By appropriating the characteristics of this figure in a caricature-like manner, Childish Gambino indirectly asks whether the clichés epitomized by it are still effective in contemporary America.

Barack Obama and the rock musician Bruce Springsteen undertook a completely different, decidedly more positive yet no less critical endeavor: they had become friends in the course of the 2008 presidential election campaign, during which Springsteen had performed. From February 2021 onward, they debated not in the format of a music video, but on an equally widely received eight-episode podcast series entitled "Renegades: Born in the USA," which was intended as a kind of 'cultural response' to Donald Trump's presidency.

16 Cf. Kasambala, 2018.

In October 2021, the conversations appeared as transcripts in the form of a book under the same title. Their encounters are enriched with private photos, song texts and contemporary documents. This is fitting insofar as Obama and Springsteen not only exchange private memories, but always do so in awareness of and against the backdrop of American history, to which they add their different, sometimes contradictory memories and stories. The fact that it is all about correcting and complementing the 'great American narrative' is made clear by opening and closing chapters: "What does it mean to be an American?" is a question asked at the beginning. The answer – "The stories and habits of mind that bind us together as people" – is immediately called into question in the following passage by Obama:

> For most Americans growing up in the fifties, the answers were pretty simple. […] That's the story we told ourselves, anyway. But it wasn't the whole story. It left a bunch of stuff out, whether it was the continuing discrimination against brown and Black people or all the ways that women were expected to stay in their place, or some of the ugly realities of our foreign policy during the Cold War. Bruce and I came of age as young people were challenging a lot of America's most cherished myths about itself. The result was a growing bitter divide in the country. A political and culture war that in a lot of ways we're still fighting today.[17]

The conversations that follow revolve around how different personal perspectives can complement each other rather than clash. These are closed by the question of how to find one's way back to a supra-personal level and tell a "new, unifying story about the country that is true to our highest ideals while at the same time giving an honest accounting of where we fall short[.]"[18] As an example of such shortfalls, Obama and Springsteen state that in American history "[t]he arch of history bends towards justice. But not in a straight line."[19] Obama and Springsteen by no means underestimate the challenges and obstacles that stand in the way of the pursued "new, unifying story about the country." In fact they explicitly address the ambivalent role of social media, such as the podcast used by themselves for "Renegades": "It's not an easy thing to do in these cynical times, especially when we've got a thousand different me-

17 Obama & Springsteen, 2021, p. 47.
18 Ibid., p. 251.
19 Ibid., pp. 146–147.

dia outlets and internet platforms that have figured out you can make lots of money fanning people's anger and resentment."[20]

But optimism has the final word: "Somehow, though, in some kind of way, we both believe that such a story is still there to be told and that folks across the country are hungry for it. We are convinced that, for all our disagreements, most of us long for a more just and compassionate America."[21]

The book ends on a personal note when Obama tries to sum up the outcome of the conversations, conceding that he "learned something," and Springsteen concludes, "So did I"[22]: the shared view of the personal stories considered in the context of the "big" story/stories and their repercussion on the perception of the "big" story/stories has changed the view of the memories. Perhaps the desire and power for change can arise from what was learned in the process.

20 Ibid., p. 251.
21 Ibid.
22 Ibid., p. 282.

Fig. 1

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Figures

Fig. 1: Russel Mulcahy, The Buggles, "Video Killed the Radio Star," 1979.

Fig. 2: Lasse Hallström, ABBA, "Mamma Mia," 1975.

Fig. 3: Advert for a Scopitone machine from 1963.

Fig. 4: Advert photo for the Panoram Visual Jukebox, ca. 1940.

Fig. 5: Gjon Mili/Norman Granz, Illinois Jacquet/Sweets Edison/Barney Kessel/Marlowe Morris "Jammin' the Blues," 1944.

Fig. 6: Bruce Gowers, Queen, "Bohemian Rhapsody," 1975.

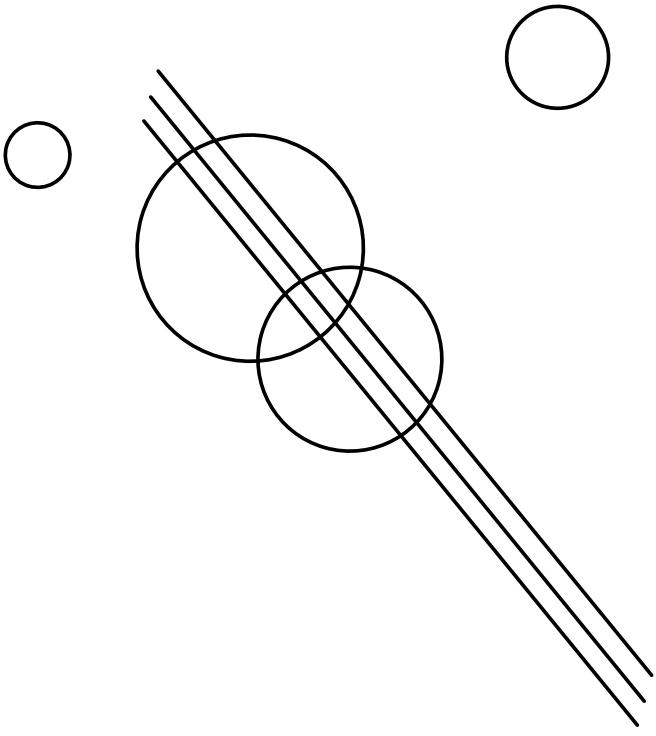
Fig. 7: Tim Robbins as "Bob Roberts," 1992.

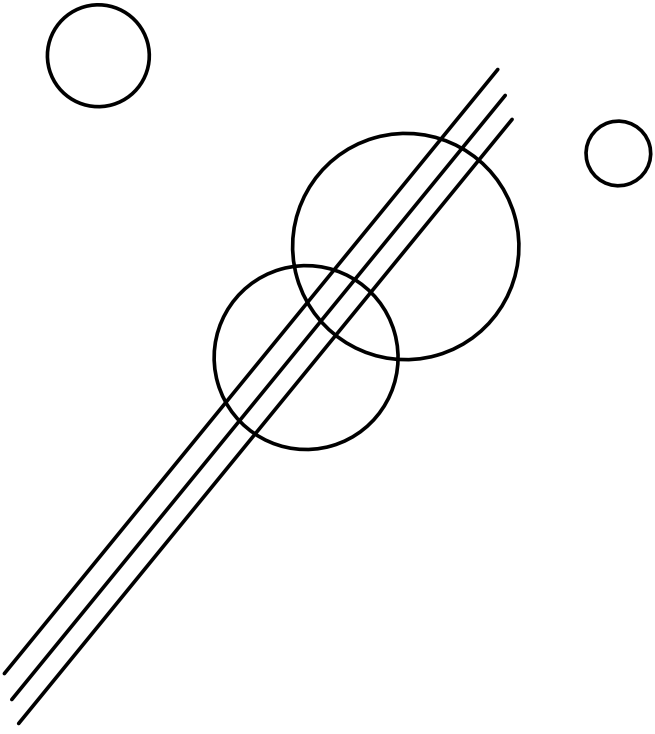
Fig. 8: Don Alan Pennebaker, Bob Dylan, "Subterranean Homesick Blues," 1965/67.

Fig. 9: Tim Robbins, "Bob Roberts," 1992.

Fig. 10: Hiro Murai (choreography: Sherrie Silver), Childish Gambino (Donald Glover), "This is America," 2018.

Fig. 11: Edward William Clay, Cover for an edition of "Jump Jim Crow" – sheet music, ca. 1832 with Thomas D. Rice as "Jim Crow."





Creativity-Based Learning & Competency Building through Public Art

Elif Ucan

Educational public art initiatives serve as potent, creativity-based learning environments capable of effectively imparting the transformative competencies, meaning skills and habits of mind, needed to navigate and shape the uncertain and rapidly shifting social, environmental, political and economic ecosystem.[1] While foundational curricula remain crucial in preparing young learners to succeed in their lives beyond school, educational public art initiatives provide a premise wherein young learners may expediently exercise agency, autonomous action, collaboration and problem solving, amongst other things, while providing a platform to become civically engaged. All of these are crucial competencies for addressing future complexities and participating in the digital and innovation-driven economy.[2]

Current and future demands require new ways of thinking, working, collaborating and expressing voice. To position actors in society for success, learning design must align itself with demands of the future. Societal and global interdependence requires stakeholders – irrespective of physical proximity or language – to interact with one another and to comprehend the system in its entirety, while understanding that a single action can create outcomes and ripple effects across the entire ecosystem.[3] Young learners must be afforded practical experience in navigating systemic interdependency and obtain the

1 Cf. Reimers & Chung, 2016, pp. 6–12; OECD, 2018, p. 3, p. 5; Ucan, 2020, p. 199.
2 Ibid., pp. 199–200.
3 Cf. Arnold & Wade, 2015, pp. 669–678.

knowledge necessary to lead innovatively with digital prowess, an unwavering commitment to environmental sustainability and an insistence on social inclusivity. From economic, social, civic and environmental perspectives, a quantifiable incentive to craft learning opportunities which exercise skills and competencies needed for the future supports this value proposition.[4] Creativity-based, alternative learning environments pose an asset-based, efficacious premise from which transformative competencies needed to thrive in economy, citizenry and society are imparted.

Alternative Learning Environments: Incubators for Transformative Competency Generation

The ever-shifting world requires expedient, solution-oriented approaches to action, all of which can be achieved through the deployment of transformative competencies. Foundational literacy and numeracy skills must therefore be supplemented with learning experiences, which cultivate transformative skills that are often referred to as '21st-century skills,' 'soft skills,' or 'general thinking dispositions.'[5] Transformative skills are considered valuable skills that "lack specific associations with particular disciplines and that cannot easily be measured with psychometric tests."[6] Transformative skills include, but are not limited to, cognitive and meta-cognitive skills (e.g. empathy, efficacy and collaboration), practical skills (e.g. digital fluency, creative problem solving) and value-oriented mindsets (e.g. respect for diversity and different cultural perspectives).[7]

Transformative competencies envelop both skills and habits of mind, which are also referred to as specific intellectual behavior, meaning "dispositions toward behaving intelligently when confronted with problems, the answers to which are not immediately known,"[8] which represent the tools needed to effectively engage with and contribute to greater society. A compelling and effective avenue for disseminating these skills and dispositions is afforded through 'alternative learning environments' or project-based learning ex-

4 Cf. Mankins, Garton & Schwartz, 2021.
5 Cf. Clapp, Ross, O'Ryan & Tishman, 2017, p. 28; Ucan, 2020, p. 203.
6 Clapp, Ross, O'Ryan & Tishman, 2017, p. 28; cf. Ucan, 2020, p. 203; Farrington et al., 2013, p. 4.
7 Cf. Clapp, Ross, O'Ryan & Tishman, 2017, p. 28; Ucan, 2020, p. 203.
8 Costa & Kallick, 2008, p. 24, p. 48, p. 72.

periences, i.e. learning interventions outside of foundational curricula typically provided through national education policy.

Alternative learning environments prepare young learners in an expedient manner, prompting participants to learn in different, unconventional ways that mirror the complex environment in which we live. Creating asset-based microcosms in which young learners can practice the critical skills and engagement needed to excel in the future provides them a chance to problem-solve, negotiate, exercise conflict resolution, and harness their creative voices to achieve tangible goals. The more learning environments mirror real-life action and challenges, the more students will be able to live well and lead.

Contributing to the advancement of learning from a premise focused on multiple 'futures' – i.e. teaching skills specifically useful for wielding and maneuvering the diverse and varied economic, social, civic and environmental futures ahead – will allow learners to flourish.[9] The knowledge and experiences provided by alternative learning environments are able to enhance young learners' skills and tools for life beyond school.[10] Developing multi-disciplinary, resiliency-centric education models through alternative learning environments aids societies in achieving a socially and economically prepared society capable of excelling through change.[11]

Public Art as a Medium: A Microcosm for Learning

The Microcosm

Education can embolden youth to make a positive contribution to the world through responsible, sustainable and inclusive action.[12] Designing learning environments aimed to model and mitigate future challenges while building resiliency enables participants to practice competencies while balancing systemic demands, whether environmental, societal or economic.[13] By design, educational public art initiatives serve as incubators wherein youth can equitably participate and engage in a simulation of an ecosystem through co-agency with fellow participants, community members and global observers.[14] This

9 Cf. OECD, 2021, p. 3, p. 11, p. 34.
10 Cf. Costa & Kallick, 2008, p. 11, p. 59.
11 Cf. OECD, 2021, p. 1, p. 3, p. 11.
12 Ibid., p. 5.
13 Cf. Clapp, 2017, p. 9; OECD, 2018, pp. 3–4.
14 Cf. Ucan, 2020, pp. 202–203.

exercise poses an opportunity to hone transformative skills and conclude the experience better prepared to thrive in an increasingly interdependent world.[15] Public art making initiatives form a microcosm in which young learners are offered an ideal environment to exercise vital competencies. As learning, development, and creativity largely occur through interaction with others and can be viewed as socially inspired and participatory processes, it is crucial to offer youth collaborative, problem-solving learning opportunities.[16] Collaborative, multi-faceted public art projects afford a learning environment that helps young learners better understand themselves, their peers and a particular context.[17] For example, the skill of collaboration, achieved through effective communication and negotiation, is required and exercised throughout public art making initiatives.[18] During the development and production of such an initiative, participants must consider the project system in its entirety, meaning the interdependence of each of its individual components, and become cognizant of how their aesthetic, mission-related and practical actions will affect the final outcome.[19] Young learners are invited to be agile and grasp how one action in a given sector of the learning environment will influence another.[20] Navigating the learning environment of public art allows young learners to practice operating in an integrated manner and mimic the realities of extracurricular engagement.

The Medium

Public art is art in the public realm and therefore accessible to all. It can prompt people to slow down, look closely and reconsider their surroundings.[21] By providing unencumbered access, public art removes boundaries to viewing art, including actual or perceived institutional intimidation and economic barriers, and invites the public to experience and engage with art.[22] Public art can generate awareness for a specific theme and inspire people to explore multi-faceted points of view; imagine the perspectives a work of art may in-

15 Ibid., p. 203; OECD, 2018, p. 3.
16 Cf. Clapp, 2017, p. 7, p. 32, p. 45; Ucan, 2020, p. 203.
17 Cf. Clapp, 2017, p. 7, p. 32, p. 45; Ucan, 2020, p. 203.
18 Ibid.
19 Ibid.
20 Ibid.; OECD, 2018, pp. 5–6.
21 Cf. Tishman, 2018, p. 35, p. 37, p. 40; Ucan, 2020, p. 199.
22 Cf. Brara, 2019; Linzer & Munley, 2015, p. 28.

spire within a peer group, community and the world at large, where ripple effects are boundless.[23]

Public art is rooted in active listening and observation, as art is often a commentary on the specific context in which it resides.[24] Art in a public forum illuminates realities and aspirations while inviting individuals to discover diverse perspectives through visual provocation.[25] Public art can act as a physical manifestation of public voice and often prompts an asset-focused discussion amongst constituents. Whereas other means of unbridled public expression, such as the right of assembly or protest, often focus on systemic deficits in both content and manifestation, artistic expression in the public realm utilizes an asset, namely cultural contribution, to express a discursive issue.[26]

Inviting youth to participate in the creation of large-scale, outdoor public art is particularly impactful for young learners as it supports the acquisition of critical skills while empowering them to become civically engaged. Those who produce public art are offered the experience of tangibly interacting with their communities in a thoughtful, creative and autonomous manner. Educational public art initiatives can be youth-driven or co-crafted with an artist or teacher and can exist in many forms, such as muralism, performance art, installation or digital art. Through hands-on, collaborative participation, learners contribute to a community's visual landscape and take pride in, and ownership of, their environment while exploring a new medium of expression.[27]

The Competencies

Offering learners an awe-inspiring, unconventional experience such as large-scale, outdoor art making can yield profound results and support the transmission of competencies while boosting interest in academic participation, innovative habits of mind, and well-being.[28] The public art making platform creates an ideal premise to exercise transformative skills needed for the future while embracing the platform's inherently civic character to further goals of social and environmental change.[29]

23 Cf. Ucan, 2020, p. 199.
24 Cf. Boomgaard & Brom, 2017, p. 14.
25 Cf. Ucan, 2020, p. 200.
26 Ibid.; see also Scales & Leffert, 1999.
27 Cf. Ucan, 2020, p. 202.
28 Ibid.
29 Ibid.

Throughout educational public art initiatives, equitable engagement occurs organically within the participant group by virtue of project structure and thus puts forth an example of equity in action. This is achieved by offering all participants an equal opportunity to contribute and by allowing each a premise from which to participate.[30] Equal opportunity participation does not imply a "one-size-fits-all" approach. Rather, it means that each participant is empowered with an equal opportunity to design how they wish to participate.[31] Offering varied avenues for participation increases access to the learning experience and offers an entry point to meet the specific needs of each learner. The project ecosystem offers multiple options for engagement and allows learners to choose how they will contribute, thus enabling them to exercise a plethora of competencies within any given project.[32] As public art initiatives create a system as a whole, options such as organizational management, production, artistic and aesthetic contribution, activism and public outreach are present, thus establishing an organization with many points of access for managerial, procedural, creative or communicative participation.[33]

Due to its large-scale and public-facing nature, educational public art initiatives are inherently civic and pose an opportunity to exercise civic participation, a key 'future competency.' Youth are more likely to become active members of their community and advocate for causes they care about in a broader public forum when provided with an outlet for civic voice.[34] Empowering youth to become agents of change by affording them this opportunity represents a strong mechanism in driving fundamental social advancement. Efforts made by artists in the public realm – for example by Danish artist Olafur Eliasson, whose "Earth Speakr" project motivates youth to "speak up for the planet and for adults to listen"[35] – underscore the value proposition that community leaders and constituents are more susceptible to listening and accepting a mission when social change values are presented through young voices.

Because of its 'real world' simulative nature, the alternative learning environment of public art is particularly effective in imparting competencies which support resiliency in young learners, specifically autonomous action, problem

30 Ibid., p. 204.
31 Ibid.; Clapp, 2017, p. 10.
32 Cf. Ucan, 2020, p. 204; Clapp, 2017, p. 10.
33 Cf. Ucan, 2020, p. 202.
34 Cf. United States Government, 2021; Ucan, 2020, p. 202.
35 Eliasson, 2020; see also United Nations, 2019.

solving, and agility. Projects spark autonomous action by prompting learners to rise to the occasion, take ownership and responsibility of their work and project; in turn, their investment in the project is reflected in its outcome. Autonomous action furthermore strengthens individual commitment to a project and inspires participants to collaborate with their peers while taking accountability for their contributions.

As a creativity-based, alternative learning environment such as public art making begins with an asset-focused premise, it invites participants to exert free thought and output, thereby practicing problem solving, agility and perseverance. When problem solving is coupled with an asset-focused, positive exercise, learners are more likely to push past the 'pain point' to find a solution, and enjoy doing so.[36] Providing opportunities for young minds to practice adapting quickly and associate problem solving with a positive, affirmative experience increases the likelihood that future problems will be met with perseverance rather than ceding under pressure or discouragement (Fig. 1–4).[37]

Field Dispatch: Spoke Context – Youth-Driven Public Art in Action

The global nonprofit education organization Spoke Context leverages the agency and advocacy power of public art to impart transformative competencies needed to prepare young learners for the future in communities around the world. Spoke Context partners with schools, artists, youth organizations and the public and private sectors to realize powerful, large-scale, collaborative educational public art exhibitions. Collaborations between youth and international contemporary artists generate public-facing art installations that enable engagement with a new culture, creative media, and community through visual expression. Spoke Context projects exercise transformative competencies while illustrating how asset-focused, collaborative community engagement can generate positive outcomes. Spoke Context projects embody a learning environment in which students can hone critical skills before contributing to the world.

36 Cf. Damon, 2004, p. 13, p. 17, p. 19, p. 22.
37 Ibid.

Featured Project: *Spoke Context x Mittelschule Eichstätt Schottenau featuring* Hiroyasu Tsuri, in partnership with the Catholic University of Eichstätt-Ingolstadt

Where: Eichstätt, Bavaria, Germany
What: Youth-generated public art created through analog art making utilizing digital media and presented as a large-scale mural in Eichstätt, Germany
Who: Middle school students collaboratively creating works of art using techniques taught by Japanese artist Hiroyasu Tsuri through virtual communication applications
Impact:

- *Exercising transformative competencies, specifically autonomous action coupled with collaboration, creative problem solving and civic agency*
- *Embracing new media for expression and creative output*
- *Understanding new cultures and co-agency across borders, irrespective of physical barriers*
- *Increased confidence and student well-being*
- *Proud ownership of co-generated work of art and accountability for its output*

At Mittelschule Eichstätt Schottenau, a middle school in the state of Bavaria in southern Germany, students aged 10 to 12 virtually joined Japanese artist Hiroyasu Tsuri and Spoke Context to create a collaborative work of art using both analog and digital art making techniques. Participating virtually in the classroom from abroad, Tsuri led students in various art making tutorials during a multi-day project which enabled them to not only learn from him, but also interact with him, share their work and observe him co-creating works of art simultaneously.

The final work of art, a film installation comprising the group's analog and digital art making efforts and Tsuri's artistic contributions, was projected in large scale onto the main wall of the Catholic University of Eichstätt-Ingolstadt's central campus courtyard, a place that is open to any passerby or member of the community. Students practiced applying transformative competencies in a real-life setting and experienced how collective, creative, solution-oriented efforts can achieve remarkable collaborative results.

Transferable Principles: Tenets for Creativity-Based Alternative Learning Environments

The microcosm created by public art initiatives is only one example of a creativity-based alternative learning environment and serves as a reference point for other intervention models striving towards similar goals. Core tenets of creativity-based alternative learning environments can be transferred to a multitude of disciplines, whether it be design, architecture or sciences, to create learning premises which exercise transformative competencies and prepare young learners for meaningful participation in life. Regardless of the conduit at hand, key characteristics such as the mimicking of a holistic system, the creation of an asset-focused premise, and the incorporation of public components help to achieve learning outcomes that are particularly suited for the global demands young learners must contend with.

A) Create an environment which mimics an entire system

The goal is to provide learners with the opportunity to practice being in the world, to prepare them for their role in society, their civic responsibility and their engagement in the economy. Learning environments which mimic life outside of the classroom can better prepare learners for successful participation in every facet of society.[38] Creating a system in its entirety provides access points for engagement for everyone involved. There is a role for everyone to assume, exhibiting systemic interdependence and gaining a deeper grasp of the causal link between actions and the way they affect the system as a whole.

B) Create an asset-focused learning environment

Creating an asset-based premise allows learners to work through challenges with heightened ease by placing an emphasis on their talents, strengths and joys while engaging in a positive environment.[39] Drawing from Positive Youth Development theory, 'asset-based' purports that by focusing on assets at hand rather than on deficits, a mindset often associated with 'problems,' or the need for 'problem solving,' will help young learners obtain the habits of mind and skills needed to succeed.[40] The more the problem solving process can be connected with positive premises and exercises within a safe, asset-focused en-

38 Cf. Arnold & Wade, 2015, pp. 669–678.
39 Cf. Damon, 2021, p. 13, 17, 19, 22.
40 Ibid., p. 13, 17.

vironment, the more learners are inclined to act with resiliency and perseverance and derive enjoyment from their work and problem solving.

C) Make it public

When a learning environment has a public engagement component, it serves as an entry point into the world and invites learners to practice engaging with their communities and society in a broader sense. Offering young learners a direct entry point for engagement and an opportunity to raise their civic voice can help them gain a deeper understanding of 'otherness' and of how working together in society can establish and secure a stronger, equitable society where voices are represented and heard. Especially communities undergoing a period of fundamental cultural, socio-economic and/or demographic change can benefit from an asset-focused, youth-driven message provided by an alternative learning environment.

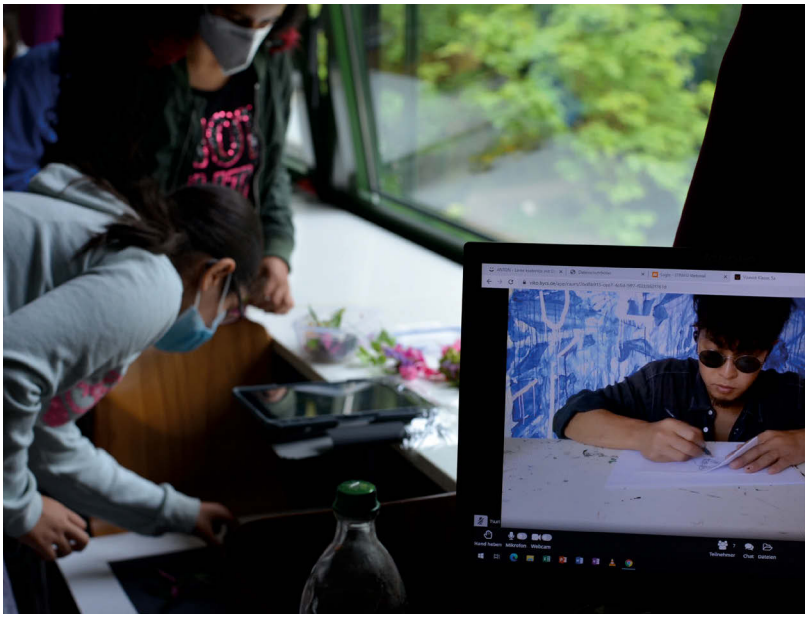
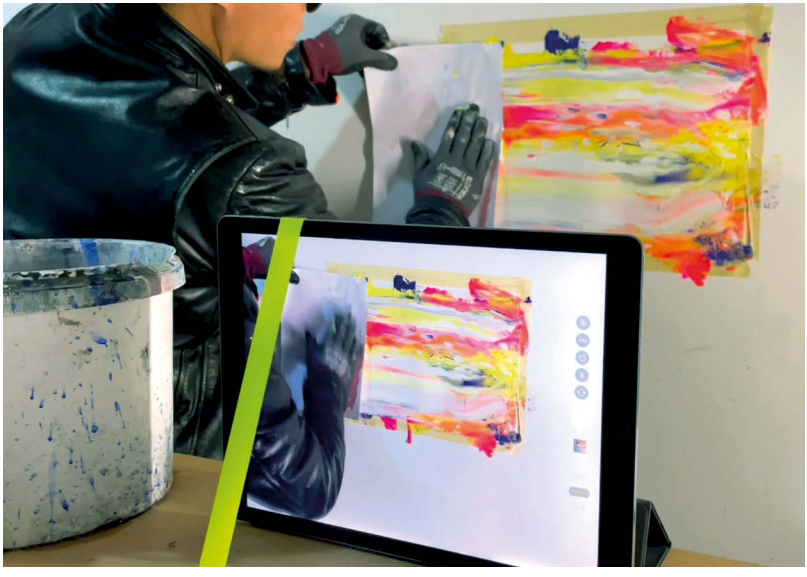


Fig. 1



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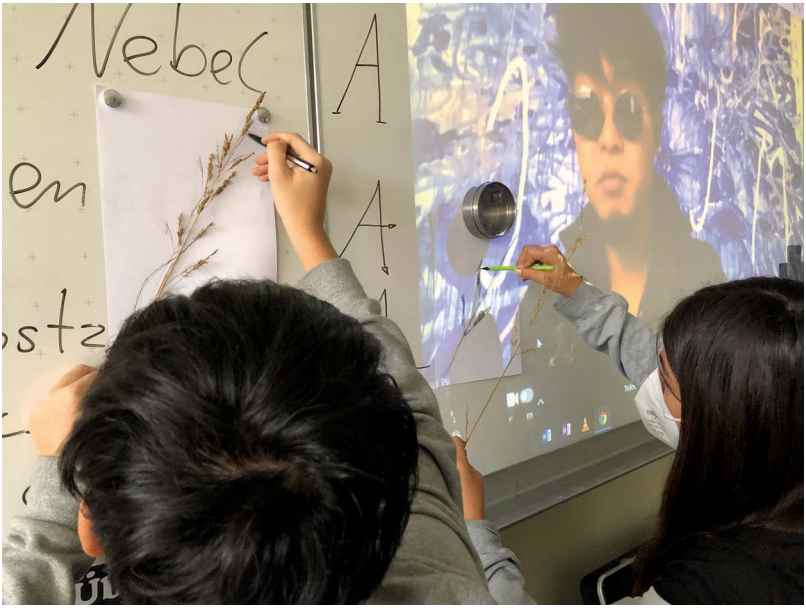

Fig. 3

Fig. 4

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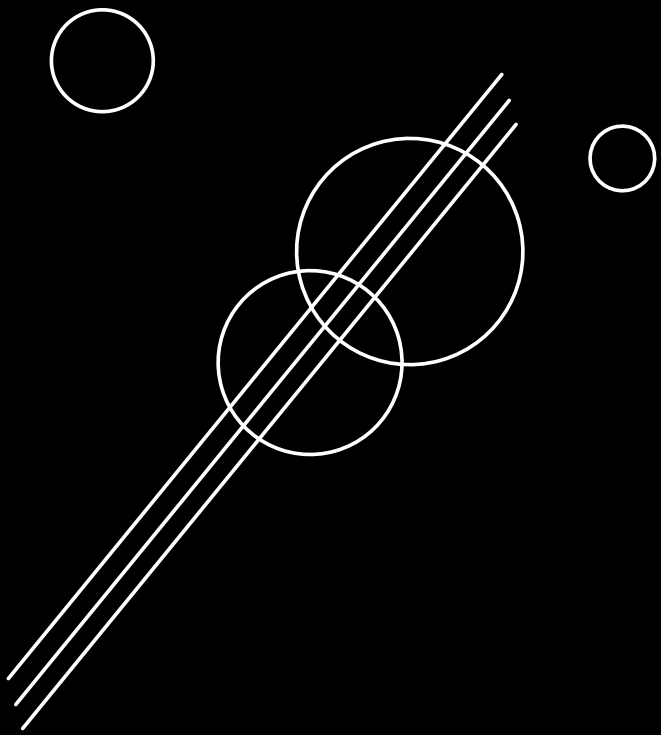
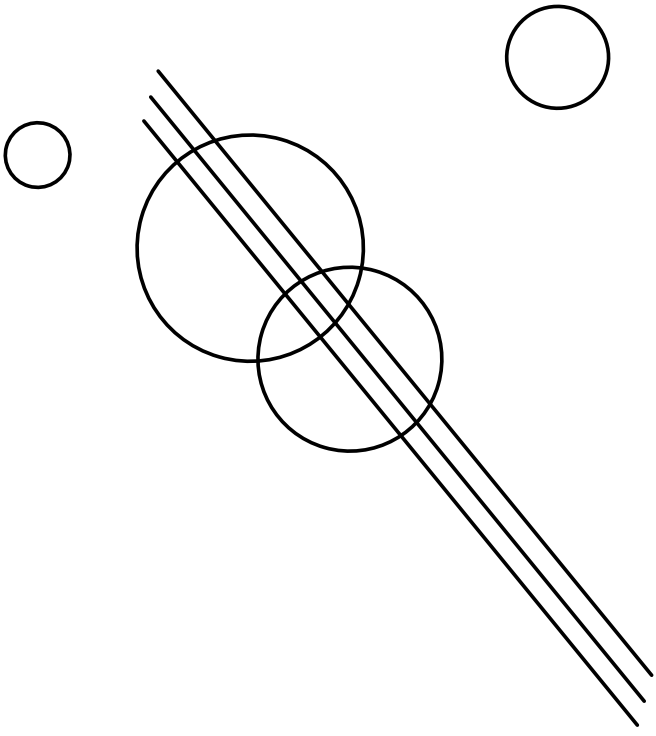
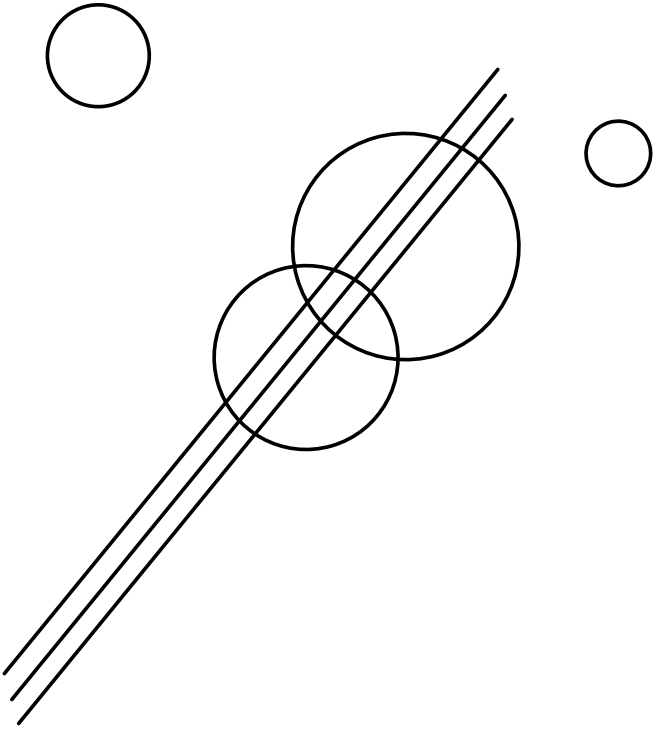
Figures

Fig. 1–4: Students at Mittelschule Eichstätt Schottenau creating artwork at the intersection of analog and digital engagement with artist Hiroyasu Tsuri. Photo © Spoke Context gUG, November 2021.



Conclusion





From Conclusion to Coda

Anna Maria Loffredo,
Rainer Wenrich, Oliver Ruf

"If I were inclined to make prophetic judgments, and if I were a betting man, I would here and now predict that the next decade will bring some truly fundamental changes in the theory and practice of art education, changes which will be comparable only to those overwhelming transformations that took place within our profession during the late nineteen twenties and early thirties."[1]
(Manuel Barkan, 1962)

"We're gonna groove."[2]
(Led Zeppelin)

Transformation is movement added to a particular situation; change implies its implementation. Turning, with that statement in mind, to the considerations that prompted the present contributions, we can see that the status quo is in need of redefinition. After all, we find ourselves at a significant turning point with regard to the relationship between art and education – a turning point that is simultaneously also an important connection point, a node, or 'knot,' as it were. Its significance is twofold, arising at once from the observation that something is currently changing and from the finding that change is indeed necessary. This observation and this finding are for their

1 Barkan, 1962, p. 12.
2 From the album "Coda," 1982.

part also fueled by change – creating new 'knots' along the way, which is to say that threads are being re-woven to create new connections. This is precisely the kind of alliance that art and education will need to forge in the years ahead. The changing labor market, transformations in life and in the necessary learning environments, technological inventions and social erosion call for a kind of 'smART education'[3]: a means of finding smart ways to coax this multi-layered change toward a new learning culture. That change, in practice, amounts to a personnel-related, organizational and cultural evolution of universities and schools.[4] This, as the essays in this publication suggest – both on the whole and from different perspectives – means implementing an overall project *that is digital*.

An interlinked e-learning concept consists of various elements that both stand alone and build upon each other as advancements. Learner activation in e-mode is classified as such when geographically – and possibly temporally – separated teachers and learners come together for 'good teaching.' The e-learning cooperation between the Zurich University of the Arts (ZHdK) and the Catholic University of Eichstätt-Ingolstadt laid out in this publication also privileged this core criterion of e-learning in an effort to transform the internationalization and hybridization strategies of teaching. Self-directed and networked learning is facilitated through a combination of synchronous and asynchronous parts with their respective multicodal characteristics; a network-like composition of learner-friendly elements reforms traditional linear learning concepts, sparking interactive engagement. The interplay of a dedicated website,[5] podcasts, synchronous lectures (which could segue into open discussions with participants, featuring 30-minute keynote lectures by our guests), modcasts based on those lectures,[6] and finally the open access anthology presented here culminate in a mosaic-as-network that spells out a concept for (self-)education. Taken together, this educational offering is able to draw connections between diverse perspectives – both within the respective disciplines of study and beyond. The didactically choreographed overview of this lecture series aims to constitute a prelude to that end – one that is also accessible to a non-university public and can always be tapped for fu-

3 Cf. Uskov, Howlett & Jain, 2021.
4 Cf. Reisman, 2016.
5 Cf. www.changingtime-shapingworld.com [27 Dec. 2021].
6 Cf. https://modcast.zhdk.ch/t/CTSW [27 Dec. 2021].

ture re-combinations with other disciplines at the cutting edge of the field.[7] This is explicitly a creative act involving dialog on an overarching topic and the ability to situate one's own positions in broader social contexts, on the basis of which new notations rhythmically emerge. Keeping with the metaphor: Just as a metronome sets the rhythm for a piece of music, the thematic framework guides the inner structuring of engagement, setting the pace for reflection on one's own thought processes, feelings and actions with regard to future scenarios.

Inter- and transdisciplinarity, as we have practiced in "Changing Time – Shaping World" and will continue to practice, constitutes an essential prerequisite for realizing the necessary consolidation of our fields of work and research.[8] Like a kaleidoscope, perspectivizations featured in this project offer a range of normative as well as interpretative frames of reference, evidence-based through lines of a diagnosis of the times, frameworks that translate the abstract into the concrete, and best-practice models that could be contextualized with the introductory reflections on the genesis of the e-learning concept implemented in the winter semester of 2021/22.

"Changing Time – Shaping World" can be seen as a kind of contemporary, temporary lab structure for examining the role of art in education, the relationship between the two fields, and their significance for future social coexistence with the help of various specialist perspectives. It is a type of conceptualization with a number of different role models; it is, in essence, about harnessing the potential of inter- and transdisciplinarity for an in-depth

7 One could imagine, for example, e-learning as part of an elastic approach to rigid educational structures: even high school students interested in certain teachers or content could conceivably earn their first course credits toward a university degree by attending college-level lectures. Motivation and especially volition are known to boost school engagement. Free participation in 'compass events' such as these could offer a way to overcome social and geographic barriers. On their own initiative, with guidance from trained teachers, high school students could lay important cornerstones for the future, including making gains toward potential academic scholarships or securing funding for a start-up idea. An accelerator – as episodic involvement in other learning environments often proves to be – could be a gamechanger for future generations, providing an early sense of orientation in the world beyond the usual canon of school subjects and, in other contexts, allowing them to view themselves as part of an interdependent future to be shaped in cooperation with others. The modcasts, as asynchronous, multimodal teaching material, are well-suited to addressing different types of learners of different ages (see also Kerres, 2016).

8 Cf. Foucault, 1970.

exploration of fields including (especially) digital technology and its impact on contemporary society[9] – a further prerequisite for a conscious recognition of the lab structure and its reality-generating potential. Over 30 years ago, Karin Knorr Cetina described labs as local contexts of action wherein precisely those contexts become the 'social form' of science.[10] In one of her groundbreaking analyses, Knorr Cetina notes:

> The characteristic of laboratories is that the original objects of investigation become invisible in them; they are 'denatured' into impulses, reaction components and the like. One can measure the extent of a science's laboratorization by the extent to which the objects of investigation are detached from their original form of existence and reconstituted as objects in the laboratory.*[11]

This is indeed a movement that implies transformation. Since the 1980s, Bruno Latour has advanced the notion of *science in action*,[12] a concept whereby the 'culture(s)' of science(s) can be associated with individual 'places,' for example with an 'observatory,' or 'field,' or indeed a 'laboratory.' These 'places' are about 'doing' science. The practice of science bears no other seal, no other signature than that of the *configuration* of science.[13] We speak of it here because it is not a fixed state we are after, or unchanging status, but the creation of something new: as a lab experiment, the outcome of which we do not (yet) know, as the "particular life-form and mode of existence of the scientific real that the experiment represents,"*[14] the changeability implications of which we wish to reflect upon. "As on the scientific level itself, epistemological reflection is also about making visible: not of something that lies beneath or beyond, but of links in the planar."*[15] If we again assume with Knorr Cetina that reality in laboratories is not described but created, then the underlying ideas can also be applied to the concept of "Changing Time – Shaping World." In the lab-like and condensed operating context of interdisciplinary organized sessions, individual subject areas are [decoupled] from their "'natural' organiza-

9 See, among others, the médialab founded by Bruno Latour: https://medialab.sciencespo.fr/en/ [27 Dec. 2021].
10 Cf. Knorr Cetina, 1981.
11 Knorr Cetina, 1988, p. 87.
12 Cf. Latour, 1987.
13 Cf. Rheinberger, 2001.
14 Rheinberger, 2021, p. 9.
15 Ibid.

tional conditions and ['reconstituted'] within those of cultural actors."*[16] The result is a relational bond between actors; cultural interaction leads to accelerated innovation development within the 'art' and 'education' operation pair.

Educational sciences have become increasingly receptive to the value of the arts in their various manifestations: analog, digital, hybrid, educational and applied, performative and participatory – the arts permeate our lives. Wherever shaping and creation is possible, (we) shape and create, and this in turn determines the way we see, feel, and (will) live. Wherever we make ourselves and the things that surround us visible, wherever we perceive our world between selfie and a drone's perspective, as Nicholas Mirzoeff[17] has demonstrated, we shape the world.

"Changing Time – Shaping World" makes a vivid contribution to this discourse, as it itself is characterized by different *ways of worldmaking* – as understood by Nelson Goodman:

> While we may speak of determining what versions are right as 'learning about the world,' 'the world' supposedly being that which all right versions describe, all we learn about the world is contained in right versions of it; and while the underlying world, bereft of these, need not be denied to those who love it, it is perhaps on the whole a world well lost.[18]

We pursue these paths because we have long recognized occasions that make change seem necessary. A look beyond, to the place where utopia is conceived, realities are recognized and romance is felt – but also inward, where changes are experienced, modeling is calculated and ideas are reacted to – effectively prevents understanding "Changing Time – Shaping World" as a reset.[19] We begin where existing structures are analyzed and in need of being linked to innovations, taking account of the big issues of our time; proceed from 'how we see the world' to 'how to see the world'[20] – yesterday, today and tomorrow. Not everything that was is discarded, not everything that is has to be changed, but what we see can be used to further the world in its development: to change it in an agile, 'moving' way.

The focus of our considerations is still on the comprehensive contexts of education and the arts. It is not about adhering to the limited view of pure 'art

16 Knorr Cetina, 1988, p. 88.
17 Cf. Mirzoeff, 2016.
18 Goodmann, 1978, p. 4.
19 Cf. Latour, 2016.
20 Cf. Mirzoeff, 2016.

education' with all its historical ballast – a discipline with a seemingly questionable future in the existing form, given its scarce participation in currently urgent scenarios. It is, in essence, about the pioneering role of the arts in education and consequently their position in society as a whole. The arts have limitless potential when it comes to tackling the central issues of our time, exploring and engaging with such topics as digitization, sustainability, and inclusion, and using the means at their disposal to develop solutions. The spaces of the arts and those of education must therefore work together closely in the future; they must come together anew, continually forming turning points as nodes. Symbolizing this notion are the so-called 'infinity spheres' by Anthony James, an artist whose spherical steel, glass and LED sculptures create 'gripping' portals for the viewer to peer into (Fig. 1–2). Resulting from it are small and large cosms, those configurations in space. Such cosms in turn give rise to new educational programs, study formats and research projects. Already one can point to the so-called third pillar, which is to say the impact of scientific or scholarly knowledge on society as a 'third mission' in addition to teaching and research. Given that art – by virtue of its openness and its willingness to join the public laboratory – is paradigmatic of that mission anyway, one could easily imagine a localization of undreamed-of synergies with similar social effect.[21]

A convergence of knowledge as we present it in this synopsis of "Changing Time – Shaping World" represents one of the first steps toward making this kind of social responsibility visible and realizable. The anticipatory potential of the findings and their particular presentation, linked as they are to future prospects from current projects, should be brought to the attention of educational administrations and put up for discussion there. After all, we are firmly convinced that the arts have the necessary firepower to both participate in discourse on the significant issues of our time and to point the way to possible solutions.

"Changing Time – Shaping World" is ultimately aimed at evolution and progression; it seeks equal opportunity and professionalism, is eager to detect and reinforce 'windows of opportunity,' sets store by dialog and a securing of the ability to participate in democracy. Our inter- and transdisciplinary design for "Changing Time – Shaping World" was created with the intent of

21 Examples include initiatives by Olafur Eliasson (https://www.olafureliasson.net [27 Dec. 2021]) and Theaster Gates (https://www.theastergates.com [27 Dec. 2021]).

having a certain scholarly environment become aware of it and, in so doing, activating a critical mass (in terms of Malcom Gladwell's 'agents of change' theory).[22] Clearly, we want this aspiration of ours to be understood as both an offer and an invitation to act. Those who want change, move!

22 Cf. Gladwell, 2000, p. 33.

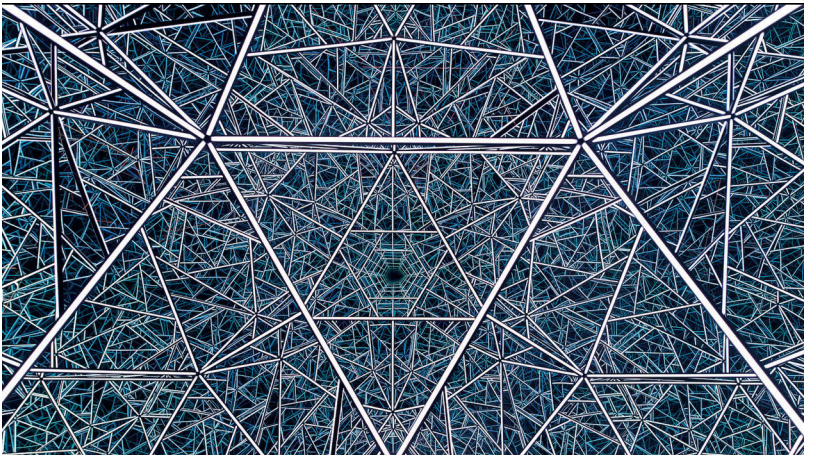


Fig. 1

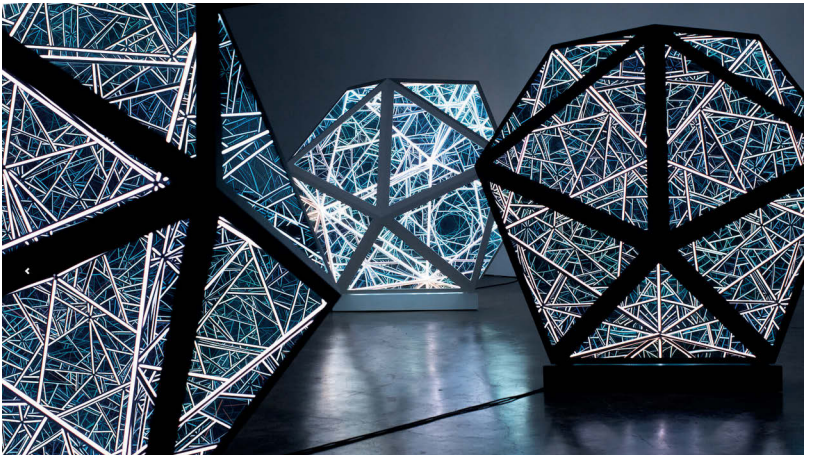


Fig. 2

Fig. 3

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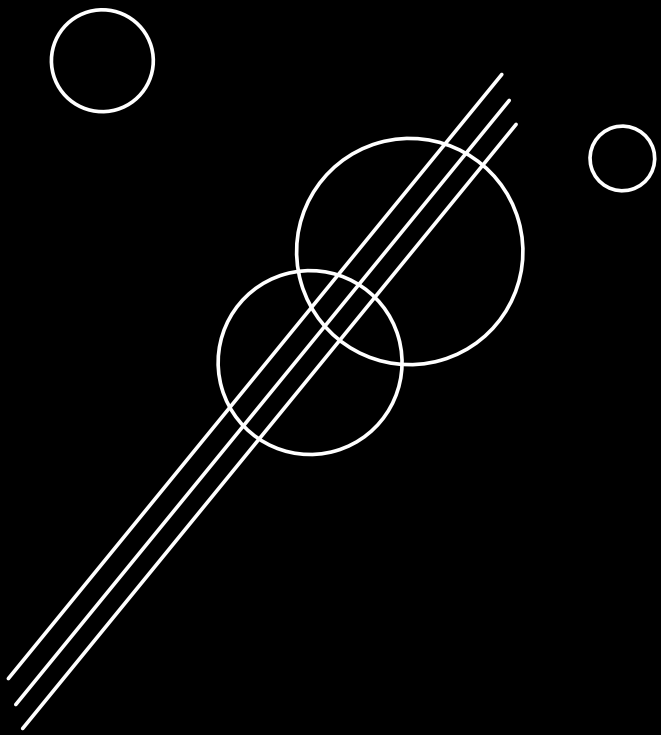
Figures

Fig. 1–2: Anthony James, Portals, Platonic Solids, Archimedean Solids, 2008–today, stainless steel, glass and LED lights, shown in variations, photo courtesy of the artist © http://www.anthonyjamesstudio.com/ [30 Dec. 2021].

Fig. 3: QR-Code website www.changingtime-shapingworld.com.



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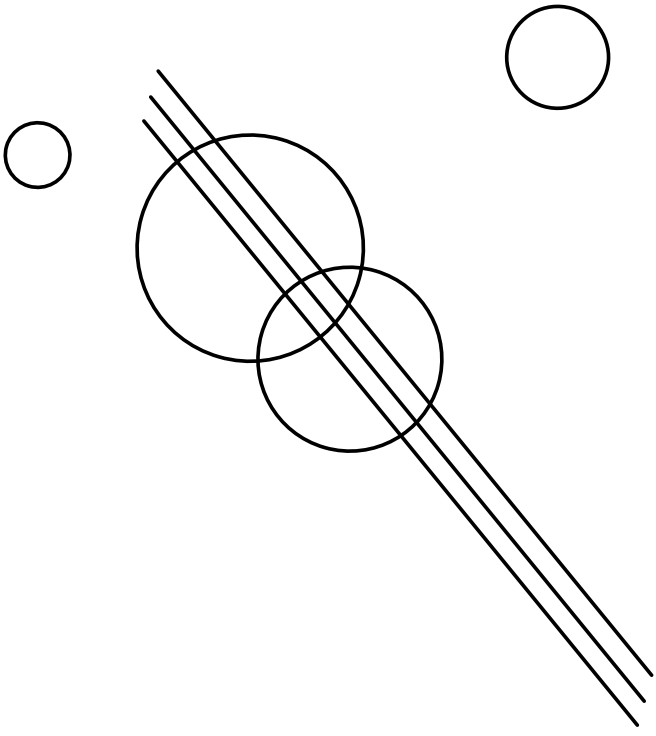

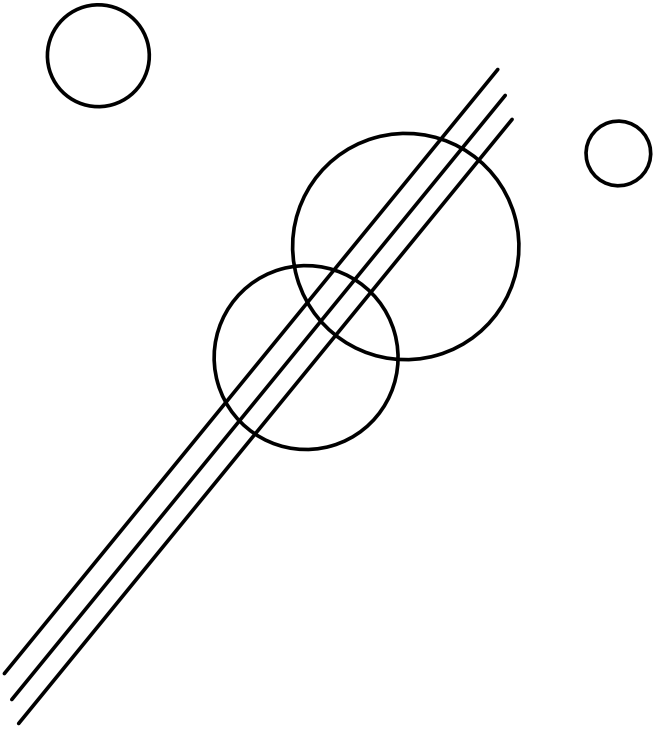

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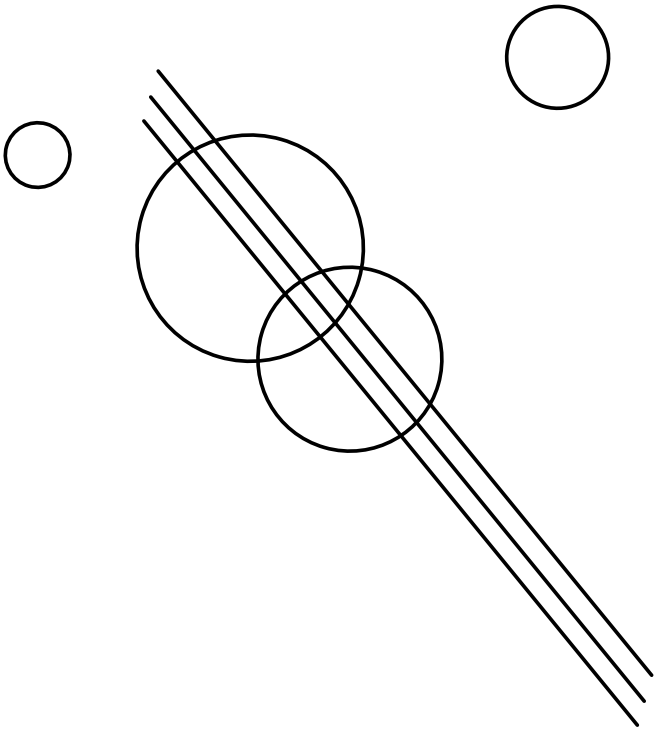

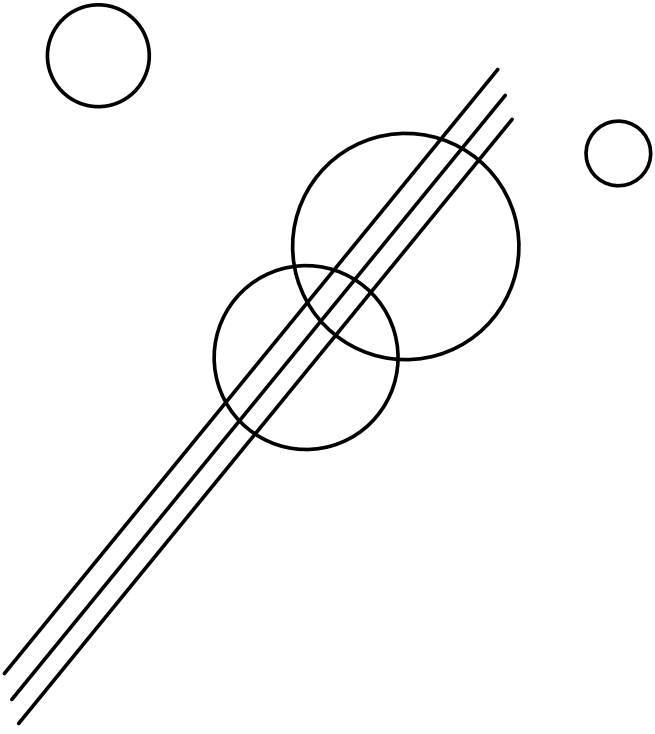

Glossary

AE	Ars Electronica – Festival for Art, Technology & Society
BDA	Bund Deutscher Architekten [Association of German Architects]
BMC	Black Mountain College
CNC	Computerized Numerical Control
COE	Council of Europe
DigiLLab	Digitales Lehr- und Lernlabor der KU [Digital Teaching and Learning Lab at KU]
DIW Berlin	Deutsches Institut für Wirtschaftsforschung Berlin [German Institute for Economic Research]
ESD	Education for Sustainable Development
EUA	European University Association
GFD	Gesellschaft für Fachdidaktik e.V. [German Society of Subject Didactics]
HPA	Hypothalamus-Hypophysen-Nebennieren-Achse [hypothalamic-pituitary-adrenal axis]
IBA	Internationale Bauausstellung [International Architecture Exhibition]
KU	Katholische Universität Eichstätt-Ingolstadt [Catholic University Eichstätt-Ingolstadt]
KUKA	Association for Robots in Architecture
MoMA	Museum of Modern Art NYC
MTV	Music Television
NEC	New Education Circle
OECD	Organisation of Economic Co-operation and Development
OER	Open Educational Resources
PBSA	University of Applied Sciences Peter Behrens School of Arts Düsseldorf

PsychThRefG	Psychotherapist Reform Act
PsyFaKo	Psychology Student Council Conference
SYNS	Sympathetic nervous system
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
WdKA	Willem de Kooning Academy Rotterdam
WFI	Ingolstadt School of Management at the Catholic University of Eichstätt-Ingolstadt
WVSA	World Values Survey Association
ZCCE	Zurich Centre for Creative Economies
ZHdK	Zürcher Hochschule der Künste [Zurich University of the Arts]
ZKSD	Zurich Knowledge Center for Sustainable Development

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Henning Mohr, Diana Modarressi-Tehrani (Hg.)

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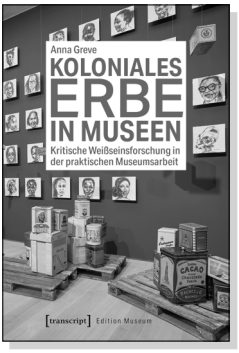

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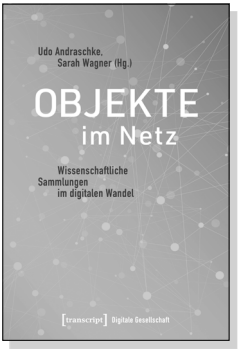

Udo Andraschke, Sarah Wagner (Hg.)
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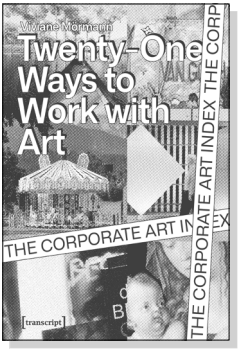

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