Report from the EU H2020 Research and Innovation Project Artsformation:
Mobilising the Arts for an Inclusive Digital Transformation

The Role of Art in Enterprise

Tom O'Dea, Ana Alacovska, and Christian Fieseler

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 870726.

arts formation

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Mobilising the Arts for an Inclusive Digital Transformation

State-of-the-art literature review on the role of Art in enterprise

Tom O'Dea[1], Ana Alacovska[2], and Christian Fieseler[3]

[1] Trinity College, Dublin
[2] Copenhagen Business School
[3] BI Norwegian Business School

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About Artsformation: Artsformation is a Horizon 2020 Research and Innovation project that explores the intersection between arts, society and technology Artsformation aims to understand, analyse, and promote the ways in which the arts can reinforce the social, cultural, economic, and political benefits of the digital transformation. Artsformation strives to support and be part of the process of making our communities resilient and adaptive in the 4th Industrial Revolution through research, innovation and applied artistic practice. To this end, the project organizes arts exhibitions, host artist assemblies, creates new artistic methods to impact the digital transformation positively and reviews the scholarly and practical state of the arts. The following report is one part of this ongoing effort.

For more information, please visit our website: www.artsformation.eu

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1. Executive Summary

The digital transformation refers to a wider range of changes brought about by digital and computing technologies across society. Artsformation aims to understand how art can be an actor in the digital transformation with the intention to harness the transformation for greater social benefit. In order to do so, this report examines how enterprises and artists have engaged with each other. The report details historical and contemporary examples grouped under three headings: residing, consulting and embedding. These headings reflect different relationships between artists and industry, ranging from those where the artist work remains separate to the business practices, to those where the artistic and business practice are indistinguishable. Through the examples the report suggests five areas of further study necessary in understanding and potentially harnessing artist industry engagement for the digital transformation. These are; understanding the intentions of each actor, navigating the asymmetric relationships that exist between actors, understanding the competing measures of success that may apply, negotiating the complex structures that dictate the rules of the collaboration and exploring the policy frameworks that can help to promote beneficial engagements. Thus, this report forms a basis to guide further research within the Artsformation project.

2. Introduction

2.1. The digital transformation

The digital transformation refers to a wide range of changes taking place throughout society across the EU and globally. From changes in the ways decisions are made or actions carried out by autonomous systems, artificial intelligence (AI) and the Internet of Things (IoT) to the widespread use of data and surveillance technologies in all areas of life from traffic and building management to the mapping of human relationships and bodily activities, these changes have broad implications for humans and non-humans through their positive and negative impacts on community, privacy, work practices, autonomy, psychology, energy use and resource use. The pace of change, the scale of these transformations and the often-unpredictable directions in which these technologies lead are such, that in many cases there is little time to analyse their impacts until they have already taken place. While many of these technologies have been developed in specialised engineering research contexts, their impacts expand far beyond these domains in ways that suggest the need for new and broad disciplinary approaches to understanding these technologies and the ways they are produced and used. It is within this context that art practices suggest themselves as potentially useful for helping to understand, critique and influence the digital transformation and its outcomes. Although art practices range across a wide array of fields, many practices and methodologies share common features that make them potentially powerful tools for helping to impact on the digital transformation. In particular, by employing wide ranging critical and creative knowledge practices, it is hoped that art can help to identify and reinforce social, cultural, economic, and political benefits of the digital transformation.

Whilst the digital transformation impacts across all areas of society, in many cases the changes are being driven by enterprise, and many of the most powerful digital technologies are developed and employed by private technology companies. As such, it is important to ascertain

whether art practices can be employed in this domain to help direct these technologies towards wider social benefit. In order to ascertain the opportunities and mechanisms through which art and enterprise can interact to impact on the digital transformation, this report will provide a comprehensive and state-of-the-art review of art and enterprise engagements. The report will examine cases of art practice working in industries that relate specifically to the digital transformation, as well as examining models of art-enterprise interaction in business areas that do not relate explicitly to the digital transformation, but which provide interesting models of art-enterprise relations. This literature review, conducted through academic, archival, and discourse analysis, will provide a historical and contemporary context for how art practices have been integrated within organisations and organisational decision-making, and how artists have imagined new forms of enterprise.

2.2. Methodology

The report consists of a desktop-survey of relevant academic literature from peer-reviewed journals, academic publications and other relevant sources. In relation to both explicitly identified artist engagement with enterprise (Section 2) and emergent modes of artist enterprise engagement (Section 4), the choice of sources responds to the relative lack of academic and critical literature about the topic. As such the review incudes and analysis of press and publicity literature relating to specific actions and programmes, as well as literature produced by participants, both art and enterprise, engaged in such programmes.

2.3. Art in enterprise – Three Formations

The report examines the interaction of art and enterprise in three primary formations that reflect different levels of embeddedness, identification and diffusion of art, artists and artist methodologies into the workings of different enterprises.

- Residing - the report will examine cases in which artists are explicitly identified as such and their work with enterprise is in the role of artist.
- Consulting - the report will examine cases in which artists and artist methodologies are employed by enterprise for specific, usually short term, engagements and which often have identified aims and goals.
- Embedding - the report will examine cases where art practices are central to the enterprise functioning or operations, even though they might not always be explicitly identified as such within the enterprise.

The three sections represent three different ways of thinking about art-enterprise relations. It is important to state that the boundaries between these categories are not always rigid and there exist examples that fit comfortable in more than one category. Generally however, these three sections can be seen as representing a movement along an axis from the explicit recognition of the work of the artist as producing art works that are separate to the activities of the enterprise, to the more implicit position of producing goods or services outside of traditional art production. As the position of the work of the artist moves along this axis, so too the explicit

identification of the artist as "artist" alters such that in some cases it becomes difficult or even impossible to make explicit such a categorisations or identification. Although this presents a challenge for academic study, this blurring of the artists role in artist-enterprise engagement is perhaps central to understanding the future potential of artist-enterprise engagement in the context of the digital transformation. The examples contained within these sections are drawn from industries that directly connect the digital transformation, and from other industries where the digital transformation may seem less central. In doing so this report aims to identify artist-enterprise engagements in other areas of industry that may be transferable across industry.

3. Residing

"Rauschenberg and I always said that if E.A.T. was successful it would automatically disappear, because once everybody understands the idea of artists and engineers working together there is no reason for E.A.T. to exist" - Billy Klüver, Experiments in Art and Technology

Since 2012, a number of companies at the centre of the digital transformation have initiated programmes to bring artists into direct contact with their organisations. Google, Facebook, Microsoft, Adobe are all examples of this wider movement amongst technology companies in the creation of Artist-in-Residence (AIR) programmes. These programmes, although differing from company to company, generally exist as short-term artistic production residencies in which the company provides studio space within its offices to artists to produce new works often in addition to some form of financial support. Despite the emergence and adoption of these programmes amongst the major tech companies within a short period of time (2012 – Autodesk, 2013 – Facebook, Planet Labs, 2014 – Google Labs, Microsoft Research, 2015 – Adobe, 2017 – Nokia Bell Labs), these residencies exist in a historical relationship with previous artist and technology residency programmes that developed as part of the 'Art and Technology' movement of the 1960s and 1970s, such as Experiments in Art & Technology (E.A.T.) (1966), Art & Technology at LACMA (1967) both based in the United States and European projects such as Artist Placement Group (APG) (1966) in the United Kingdom and Experimenten in Kunst en Technologie (EKT) (1970) in the Netherlands. Between these two distinct periods of activity there also exists one significant outlying example, namely Xerox PARC Artist-in-Residence programme (XEROX PAIR). XEROX PAIR, which ran from 1993 until 1999, not only marks a midpoint in time between the older Art and Technology movement and the contemporary AIR Programmes, but also marks a conceptual midpoint between these two differing approaches to artist-enterprise engagement.

In this section we will examine the history of, positioning of and response to these different programmes. Each can be said to follow the same basic pattern - bringing artists into the workplace of enterprises in order to produce work within the physical location of the enterprise, and in close relation to the working practices, technologies and individuals within the enterprise. Despite this similarity, what this section will show is that although there are interconnections and commonalities between many of the programmes, there is also a great level of difference between them, in their aims, in the expectations placed on the different parties involved and in the reception and critique they received within enterprises, in art worlds (or their invisibility in these worlds) and amongst the public.

3.1. Art and Technology

The history of art is inextricable from that of technology, from technologies of representation in cave art, through performance assisting technologies in the classical architectures of the Greece and Rome, the mathematical techniques of middle eastern art, the engineering design of European Renaissance sculptures, or the experimental audio techniques of early twentieth century futurists. Throughout this history the relationship of the artist and technologist at times overlapped, combined, or diverged. As industrialisation increased throughout the twentieth century, so did specialisation across many disciplines, which led to what was perceived by many as an increased distance between the world of art and artists and the world of technology and its producers. The advent of computation, advanced communications technologies and the mechanisation of the labour that followed from the Second World War appeared only to increase this separation, giving rise to the declaration by British novelist, scientist and civil servant C.P. Snow that there now existed, 'two cultures', that of science and technology and that of art (notwithstanding that both of these cultures appeared as white, western and male) ("The Two Cultures"). There are lots of examples to suggest that the divisions may not have been as strict as Snow suggested, such as historical examples above or by contemporaneous examples from around the globe such as in the Soviet constructivist art of those such as Tatlin or the Hooter Symphonies of Avraamov, in the development of tape and electronic audio techniques in Asia by El-Dabh, in Europe by Stockhausen or in the United States by Cage, or in the intersection of engineering and composition in film production. Nevertheless, it was against this perceived backdrop of division that in 1967 artists Robert Rauschenberg and Robert Whitman along with engineers Billy Klüver and Fred Waldhauer proposed *Experiments in Art and Technology (*E.A.T.*),* with the stated purpose to -

> *Maintain a constructive climate for the recognition of the new technology and the arts by a civilized collaboration between groups unrealistically developing in isolation.*
>
> *Eliminate the separation of the individual from technological change and expand and enrich technology to give the individual variety, pleasure and avenues for exploration and involvement in contemporary life.*
>
> *Encourage industrial initiative in generating original forethought, instead of a compromise in aftermath, and precipitate a mutual agreement in order to avoid the waste of a cultural revolution.*
>
> (Experiments in Art and Technology 1)

The proposal to formalise E.A.T. as an organisation to encourage interaction between artists and technology enterprises, derived from Rauschenberg, Whitman, Klüver and Waldhauer's collaboration the previous year on the performance exhibition *9 Evenings: Theatre and Engineering* (1966). *9 Evenings* consisted of a series of performances and exhibitions held in New York's 69th Regiment Armory and included work by prominent artists of the "neo-avant-garde" (Beck and Bishop 17) such as John Cage, Lucinda Childs, Öyvind Fahlström, Alex Hay, Deborah Hay, Steve Paxton, Yvonne Rainer and David Tudor along with engineers from Bell Laboratories. It is worth noting that Bell Laboratories was at the time one of the most successful commercial research

establishments in the world, hailed by Fortune as 'The world's greatest industrial laboratory', (Bello 150). Not only did its engineers produce a near continuous flow of new technologies and patents in the field of electrical and communications engineering --which themselves formed the basis for many of the technologies utilized by today's communications technologies enterprise such as Google, Facebook or Microsoft- but Bell Laboratories itself acted as a model for the modern dynamic commercial research centre itself.

The intention of E.A.T. however, was to expand beyond the short-term interaction of this group of artists with engineers from Bell Labs, and to create a framework for the ongoing collaboration of artists and engineers generally. In order to achieve this, the structure of E.A.T. was to exist as independent from any one company and to create an artist engineer matching service called the Technical Service Programme. E.A.T. funded its activities though a mix of private benefactors, arts funding sources such as The National Endowment for the Arts or New York Arts Council and from corporate contributions. Through this, E.A.T. aimed to find appropriate engineers and enterprises that could collaborate in the realisation of new types of artistic projects with the intention that this would also, 'influence [the engineer's] directions and give human scale to, his work' (Rauschenberg & Klüver 1). By 1969, more than 2,000 artist and more than 2,000 engineers had expressed interest in collaborating, and local E.A.T. branches were formed throughout the United States. The relationships that E.A.T. facilitated intended that both artist and engineer would, 'operate freely within his own environment', and that this would lead to, 'an intersection of these environments' and further to, ' new possibilities which will benefit society as a whole' (ibid). Despite the large numbers of reported interest in collaborations, there is no publicly available record of how many collaborations took place, between which members and in the creation of which artworks.

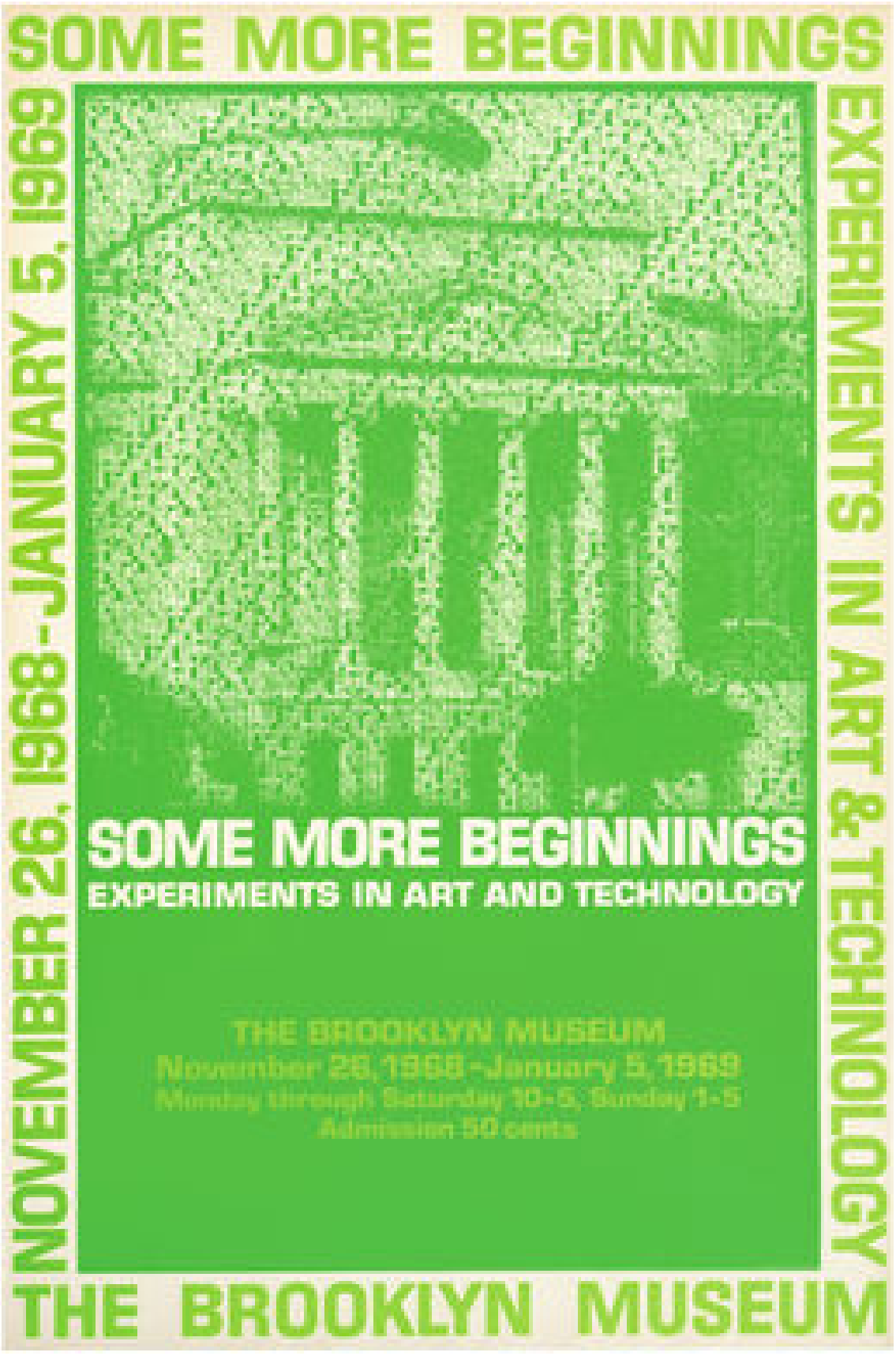

Figure 1: *Some More Beginnings poster, E.A.T. 1968 – image: Monoksop.org*

Beyond the ongoing work of the Technical Services Programme and associated meetings, talks and lectures, E.A.T.'s most highly visible outputs were a series of artworks that were produced under the E.A.T. banner. These included *Some More Beginnings* (1968) at the Brooklyn Museum in New York billed as, 'one of the first major art and technology exhibitions'. The exhibition included 145 new works that were created in response to the E.A.T. Competition. The competition, which was judged by engineers, aimed to solicit the production of single work for an exhibition in MoMA entitled *The Machine as Seen at the End of the Mechanical Age* (1968). The competition works were to be produced either through the E.A.T. Technical Services Programme or as new collaborations. Due to the scale and quality of the response it was decided to exhibit all of these works in the Brooklyn exhibition (Experiments in Art and Technology 4). Following *Some More Beginnings* E.A.T. began working on its most notable project *The Pepsi Pavillion* at *Expo '70* in Osaka, Japan. As with previous exhibition projects *The Pepsi Pavillion* was led by key members of the original E.A.T. line-up including Klüver and Whitman. The pavilion was funded through a collaboration with drinks company Pepsi and was successfully completed by a large team of artists and engineers including Fujiko Nakaya, Robert Breer, Frosty Myers and David Tudor. However, whilst the pavilion itself received positive reviews and public response (McCray), the cost overruns in its construction led to a complete breakdown in the relationship between E.A.T. and Pepsi. This led to the cancelation of the ongoing programme of performances that were to form the artist programmed "software" to the engineer's "hardware" of the pavilion. This breakdown in relations between E.A.T. and Pepsi tarnished the image of E.A.T. as a mediator between the corporate world of enterprise and that of art and also lead to misgivings by artists about the organisation's aims in facilitating their practice (Burnham). Following *The Pepsi Pavillion,* the range, number and scope of E.A.T.'s project diminished, however, some activities continued into the 1970s taking the form of individual and group engagements between core members of the original team and other related artists.

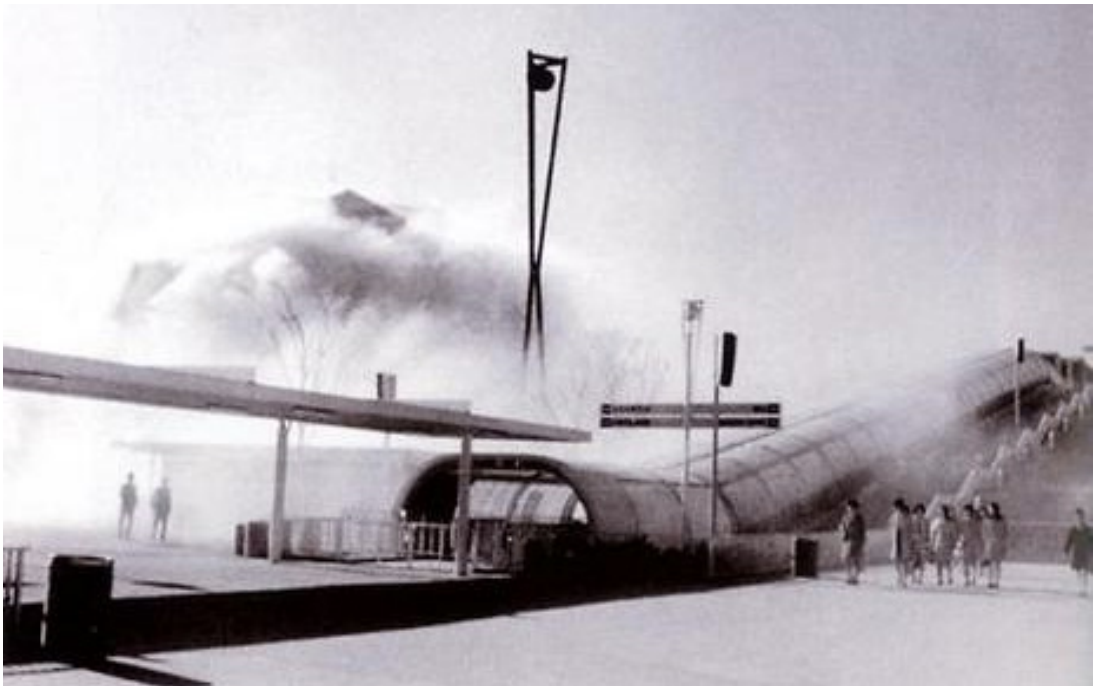

Figure 2: Pepsi Pavilion for Expo '70 exterior view (detail) - image: Fujiko Nakaya

At the same time as E.A.T. was forming around the engineering and technology base of Bell Laboratories in New York, curator Maurice Tuchman had recently moved from New York to the United States' new industrial technology heartland of California. Tuchman noted the concentration of advanced technology companies in aerospace, computing and entertainment technology in the vicinity of his new employer, the Los Angeles County Museum of Art (LACMA). In 1967, Tuchman approached the board of the Museum with the proposal to run a programme in which high profile artists would work within the facilities of technology enterprises with the aim to producing new artworks for exhibition in LACMA. As with E.A.T., LACMA would act as an intermediary between the artist and enterprise and would act to pair relevant parties and define the relationships and expectations on each participant. In the LACMA model, enterprises would generally put forward the money to pay for the programme, paying wages and production costs to the artists. Enterprises were engaged in three different forms, as Patron Corporations who contributed to the programme and hosted an artist, as Sponsor Corporations who only hosted an artist but did not contribute, and Benefactor and Contributing Corporations who contributed financially to the programme. Unlike E.A.T., once participating corporations had been identified, Tuchman and the team at LACMA identified artists for each residency which would take place for three months. The artists selected were all high-profile artists, in a manner similar to the initial E.A.T. artists, however in this case the cohort lacked racial and gender diversity, as it was entirely composed of white men. High profile names included, James Byers, John Chamberalin, Jean Dubuffet, Hans Haacke, Robert Irwin, Donald Judd, Robert Morris, Bruce Nauman, Claes Oldenburg, Robert Rauschenberg, Richard Serra, Tony Smith, Robert Smithson, Karlheinz Stockhausen, Andy Warhol, Robert Whitman (Tuchman).

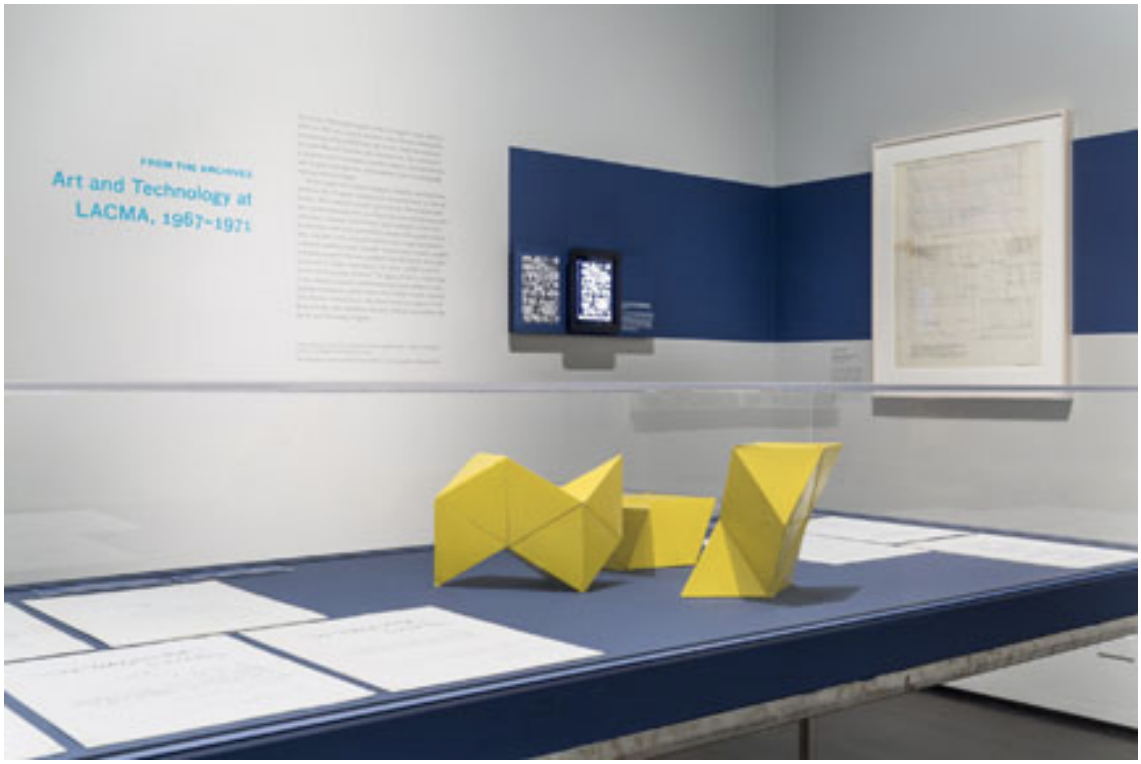

Figure 3: From the Archives: Art and Technology at LACMA, 1967–1971. Installation view. Los Angeles County Museum of Art - image: Museum Associates/LACMA

The LACMA residency programmes, being based on-site at the offices and factories of the participating enterprises, had a focus on producing art works for exhibition in LACMA but whose production was firmly grounded in the activities of the enterprise. Following the initial contacts and negotiations twenty-three artist enterprise collaborations were arranged and began in 1967. The works produced predominantly consisted of sculpture or installation works that adopted and utilised the technologies or technical specialities of the host enterprises. However, some, such as James Byars and John Chamberlain, focussed their work on the host organisations themselves and produced work that would fit more comfortably in contemporary categories like institutional critique and/or performance. During the residency process the opportunity came up to exhibit some of the works being developed at the Expo '70. Claes Oldenberg's *Giant Icebag* (1970), Tony Smith's *Cave*, Robert Whitman, Boy Mefferd, Newton Harrison and Rockne Krebs' rooms and Roy Lichetenstein and Andy Warhol's film all formed part of the *Expo '70* programme. Based on the positive reaction it was decided that all of the works produced within the programme would be shown at the Art & Technology exhibition at LACMA which opened later in 1970 and ran until 1971.

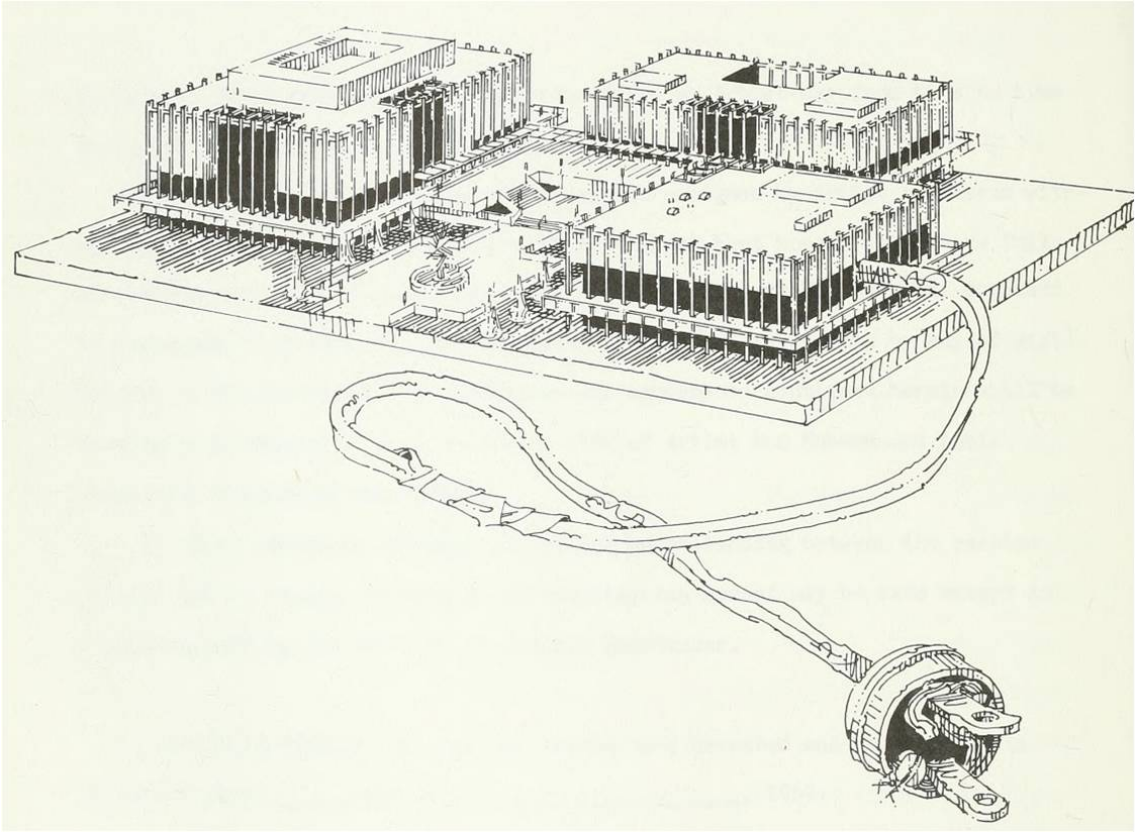

Figure 4: William Crutchfield detail from A Report on Art and Technology, 1971, LACMA

At the same time that both E.A.T and A&T LACMA were being developed in the United States, artists Barbara Steveni (then Latham), John Latham and Joan Hills were developing a proposal for artist residencies in enterprise in the United Kingdom. The Artist Placement Group (APG) (1966), which operated under the tagline 'The context is half the work' reflected a conceptual move away from an object-based understanding of artistic production towards one grounded in

social production (Henning and Jordan). This move, contrasting with much of the focus of the American Art & Technology movement reflected a wider social turn in European and other American art practices (Bishop 163). Rather than having a focus on the production of particular art works, APG placements were focussed more on the artist's process of being embedded within the enterprises. As described in the Tate Gallery Archives, 'The artist would become involved in the day-to-day work of the organisation and be paid a salary equal to that of other employees by the host organization, while being given the new role of maintaining sufficient autonomy to acting on an open brief'. Nevertheless, 'the placements resulted in a variety of artists' reports, films, photographs, interviews, poetry and art installations' including by (again predominantly white male) artists of international repute such as Keith Arnatt, Ian Breakwell, Stuart Brisley, George Levantis and David Hall (Tate Gallery Archives "Overview").

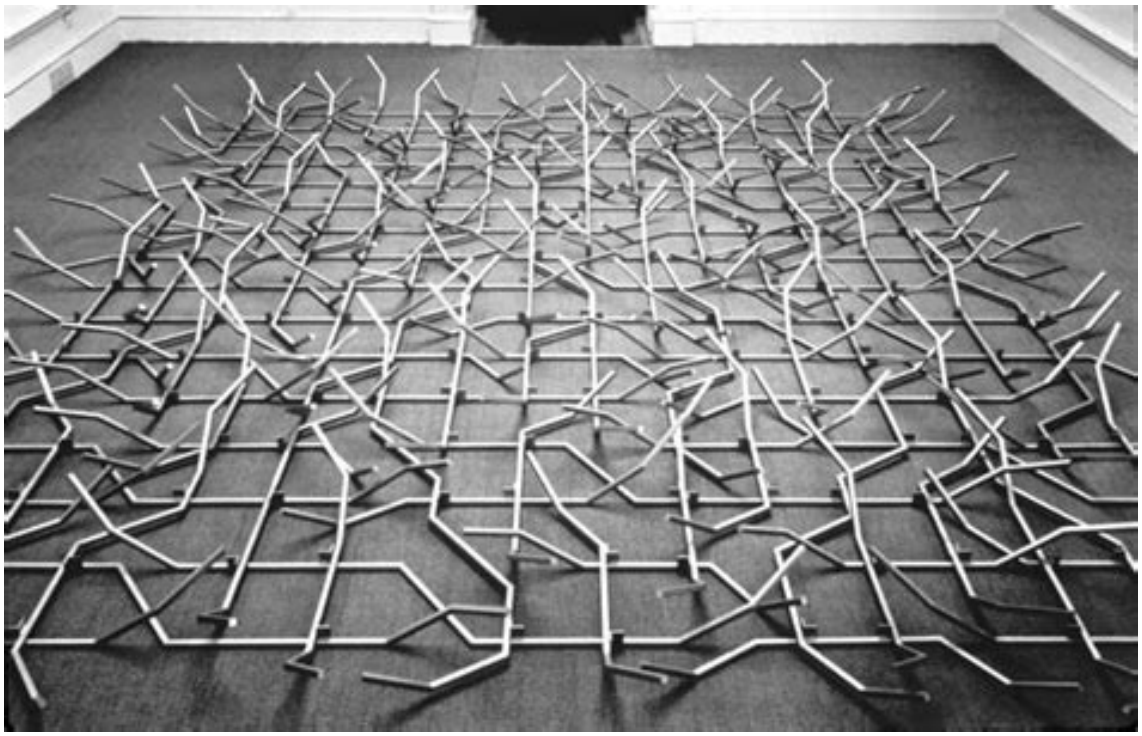

Figure 5: Breakdown, 1971, Steel - image: garethevans.com

The early visible work of APG was in the form of publications and events, including the opening publication *A Study by Latham / Hills* and *Artist Placement Group* both by Steveni and Joan Hills and which lay down the group's purpose, conceptual framework, and listed the groups trustees (Hudek). These documents laid out the main premise of APG as based on the 'open brief' wherein the, 'artists would be paid a wage by the host organisation regardless of the material output of their placement. Both the host organisation and the artist were contractually bound to enter the agreement without precondition (except for a general compliance with the organisation's rules' (ibid). Nevertheless, individual artists engaged in placements began to produce work, including a series of film works produced by David Hall on his placements at British European Airways and Scottish Television, an article written by Garth Evans during his placement at British Steel and a series of sculptures by Stuart Brisley on his placement at the Hille Furniture Company. Other placements in this period included Leonard Hessing working with ICI Fibres Ltd,

Lois Price working with Milton Keynes Development Corporation, Ian Monro and Marie Yates joining Brunei University and John Latham at the National Coal Board and Intensive Care Unit of Clare Hall Hospital (Tate Gallery Archives "Chronology"). Notably, Brisley's output also included proposals and suggestions to the management of Hille Furniture to change specifics of the company's operations based on suggestions by workers, some of which were adopted by management (Bishop 167-8).

Figure 6: The Sculpture (installation view), APG, The Hayward Gallery, 1971 - image: thecontextishalfthework.org

In parallel to the early placements, APG organised a series of events and performances the first of which, *Industrial Negative Symposium* (1968), in London's Mermaid Theatre featured, amongst other speakers, Billy Klüver of E.A.T. Similar to E.A.T.'s stated intentions, Latham stated in the symposium material the ultimate objective of APG, 'That in time (say 5 years) it will become common practice for all large organisations to have a realistic economic relationship with artists, equivalent to other professionals' (Hudek). In 1971, APG produced a further symposium/performance for the exhibition *Between 6* at the Städtische Kunsthalle in Düsseldorf, which features other highly renowned artists including Marcel Broodthaers. APG's contribution, *The Sculpture,* consisted of a series of talks and discussion by artists and industry involved in the APG. APG's most prominent output, however, was the exhibition alternately called *Inno 70* and *Art and Economics* and which took place in the Hayward Gallery in London in 1971. The exhibition which featured documentation of work by artists on APG placements along with *The Sculpture* was received negatively critically, publicly and by the APG's primary funding body the Arts

Council (Hudek, Bishop). The fallout from *Inno 70* led to internal tensions within APG and prominent members such as Latham, Brisley, Munro, Flanagan and Steveni resigned from important roles. Additionally, the Arts Council withdrew primary funding from APG based on a perception that the APG was 'more concerned with social engineering than with straight art' (Bishop 175). Despite this, APG still continued organising placements and sporadic public activities including an address to the German Federal Republic, the German Democratic Republic and to other members of the EEC', at Joseph Beuys' Free International University at *documenta 6* in Kassel (Hudek).

Figure 7: Joseph Beuys and John Latham at the Kunsteverin in Bonn, Germany - image: APG/Tate Archive

At the same time as the structured artist-industry engagements of E.A.T., A&T LACMA and APG, there existed a number of other contemporaneous art and technology programmes that are worthy of a brief mention. In the Netherlands, The Experimenten in Kunst en Technologie (EKT) foundation was set up in 1970 at the University of Utrecht. In a manner similar to E.A.T. the intention of EKT was, 'to act as an intermediary between artists in need of technological or scientific assistance and the persons and institutions capable of providing it' (Blok). Organised without funding, EKT functioned initially only as a discussion group and knowledge exchange. However, following a one-off grant from the Dutch Ministry of Culture, EKT produced a publication exploring five themes central to the understanding of the relationship between technology and art. The publication focused not only on the potential for use of technology in the realisation of artistic work but also on the perceived epistemic differences between art and science, on technology's role in contemporary society, on the formal and formative nature of science and on the use of algorithms in art practice (ibid). Following this publication there are no other documented outputs of EKT. At the same time in the United Kingdom the Computer Art Society

(CAS) was similarly aiming to, 'promote the creative use of computers in the arts, and to encourage the interchange of information in this area' (Computer Art Society`). Founded by architect John Landsdowne along with computing researchers George Mallen and Alan Sutcliffe, CAS included artists such as Malcom Le Grice. Although much of the output existed in the form of bulletins including the quarterly publication *PAGE (1969-1985)* and research writing, CAS organised the 1969 exhibition *Event One* at the Royal College of Art in London. Including advertising for technologies such as the Rand Univac computer, the catalogue for *Event One* included acknowledgements to a number of technology companies for their support.

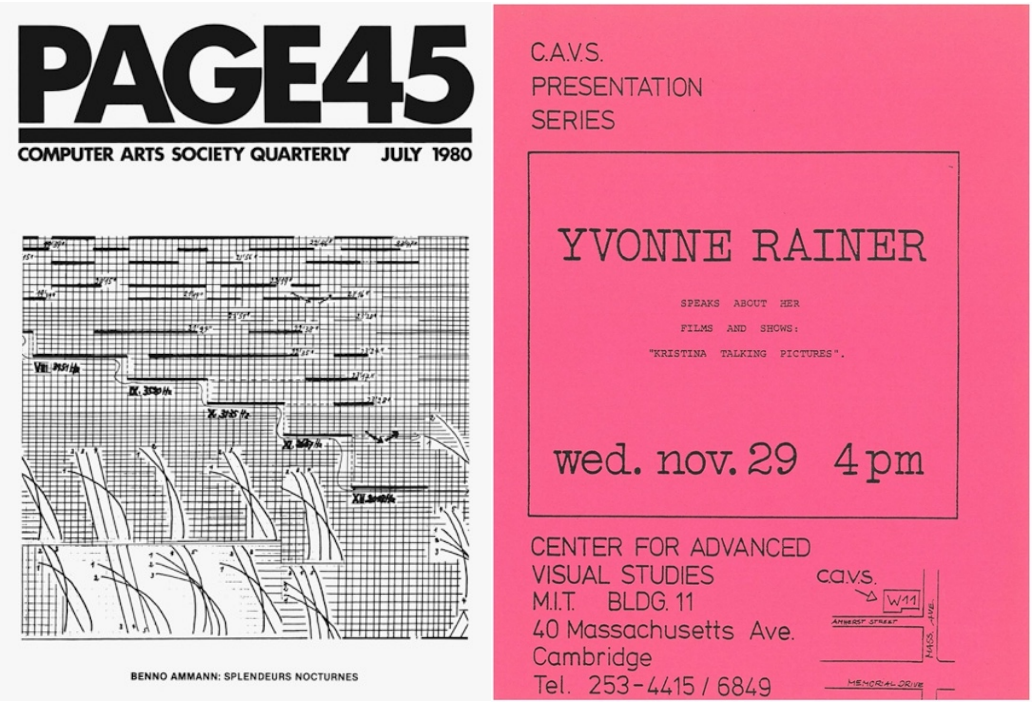

Figure 8: Cover of PAGE issue 45, 1980 - image: Computer Arts Society, London (left) / Poster for Yvonne Rainer at CAVS Presentation Series - image: CAVS, MIT (right)

Around the same time, another research led artist-technology initiative was taking place in the United States. The Centre for Advanced Visual Studies (CAVS) at Massachusetts Institute of Technology (MIT) was founded in 1967 by artist György Kepes with the initial mission, 'to facilitate "cooperative projects aimed at the creation of monumental scale environmental forms" and to support participating fellows in the development of "individual creative pursuits"' (Finch). CAVS initially welcomed high profile artists with international repute to work with advanced technologies that were available in MIT, including laser and audio-visual technologies and advanced materials, many of which were developed within the cold-war context of government funded military technology. Despite the military context for many of the technologies, Kepes initial programming was focussed on a civic understanding and engagement with both art and technology and intended as an, 'exploration of new ways in which the work of art and the public can come together' (Kepes), through understanding advanced technology. Further high-profile outputs included the sculpture *Centrebeam* (1977) at Documenta 6 in Kassel under the directorship of Kepes' successor artist Otto Piene. Artists who worked with CAVS include prominent names (including female artists) such as Otto Piene, Jack Burnham, Stan Vanderbeek, Maryanne

Amacher, Joan Brigham, Peter Campus, Piotr Kowalski, Yvonne Rainer, Tamiko Thiel, Don Ritter, Luc Courchesne, and Bill Parker. Unlike its contemporaries which required continued external sources of funding, CAVs situation within a well-funded institution meant that it continues to this day, although it has been combined into the larger MIT Program in Art, Culture and Technology.

Figure 9: CAVS fellows test Centrebeam - image: CAVS, MIT

3.2. Artist-in-residence

The 1970s and 1980s saw a gradual decline of the programmes of the Art and Technology movement, discussion of which is contained below. Before moving on to the recent resurgence in artist-enterprise engagements in technology companies, which includes the resurrection (in name at least) of E.A.T., and A+T at LACMA, it is worth briefly examining the PARC Artist-in-Residence (PAIR) programme at Xerox's Palo-Alto Research Centre (PARC). PAIR which began in 1993 during the first wave of internet companies exists in conversation with the previous art and technology projects discussed above and as a protype for the later artist-in-residence programmes run by Silicon Valley tech companies discussed below. Unlike the historical examples PARC was wholly contained and organised within the structure of a commercial enterprise. Created by Xerox chief scientist and director of PARC John Seely Brown, PAIR was organised by technologist and artist Rich Gold. PAIR existed within the wider research context of PARC in which the ethos was to, 'connect people from interdisciplinary backgrounds in order to create a conglomerate that is able to build new technologies including hardware and software from the basic idea up to the final product'. Through PAIR, 'artists could be included in this community

and work collaboratively with scientists, researchers, and engineers on new ideas. The idea behind that was to use this shared knowledge between artists and scientists (on media, methods, or specific questions) as a starting point for collaborative exploration and creation of ideas' (Schnugg 10). Gold identified a series of principles that defined the artist-enterprise relationship in PAIR. These specifically identified the process, rather than artistic output as central to the residencies, aiming instead to, 'alter, nudge, and in a minor way redirect the creative forces of PARC by providing alternative viewpoints, theories, personalities, and methodologies within the halls, offices, and long corridors and around the steaming coffee pots of the community' (Gold 13). As part of Gold's PAIR ethos, the artists who were chosen for the programme generally consisted of artist based local to Palo Alto in the San Francisco area rather than artists with international reputations. These included Margaret Crane & Jon Winet, Jeanne Finley & John Muse, Cathy Marshall, Judy Malloy, Dale MacDonald, Scott Minneman, Paul De Marinis, Michael Black, David Levy, Pamela Z, Joel Slayton. Little documentation of the work produced on the PAIR programme exists in the catalogues of museum or gallery exhibitions or collections, however, some documentation of both process and output is contained within the Craig Harris edited volume about the programme, *Art and innovation: the Xerox PARC artist-in-residence program*. The PAIR programme was wound down in 1999 and John Seely Brown left Xerox in 2002 when PARC was "spun out" of Xerox. Rich Gold died in 2003. Despite its relatively short existence and localised output, PAIR exists as a role model for the later artist-in-residence programmes of other Silicon Valley technology companies (Schnugg 10).

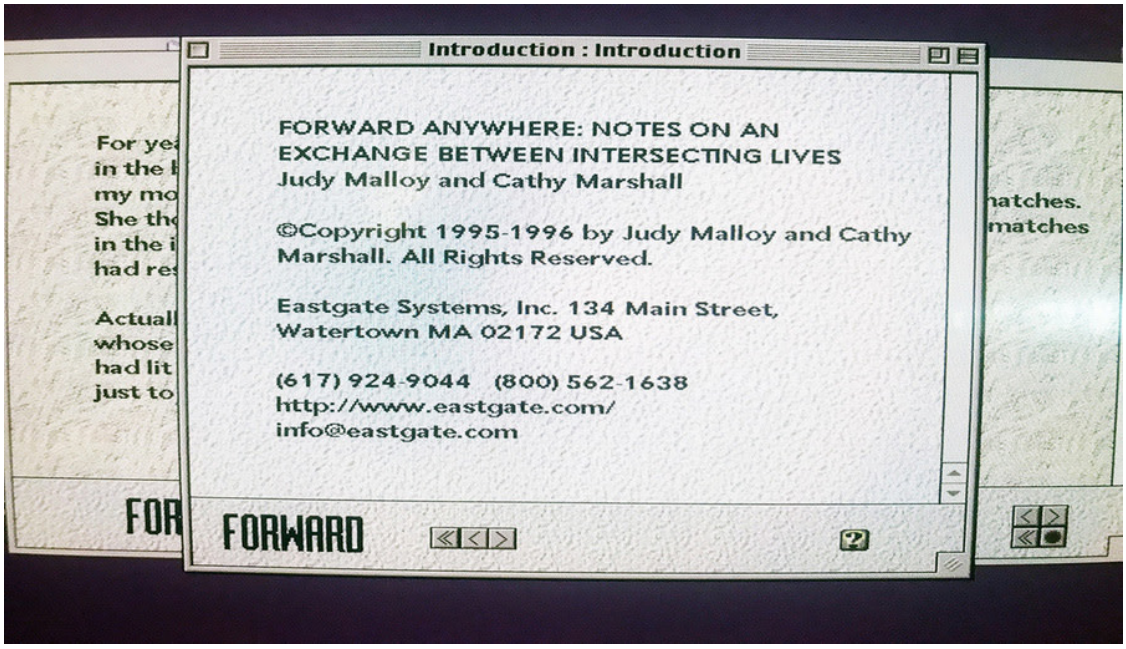

Figure 10: *Figure 11 - Forward Anywhere, Judy Malloy and Cathy Marshall, 1996 - image: are.na/blog/women-in-hypertext*

Since 2012, a number of high-profile California based technology companies have initiated artist-in-residence programmes across their offices and research campuses. Autodesk, which initiated *Autodesk AIR* at its Pier 9 research office in San Francisco, can be considered to have led the charge on this front. The Pier 9 residency was a four-month residency for which artists

received a stipend and access to Autodesk's advanced manufacturing technologies along with support from fabrication technicians. In addition, artists received support in using Autodesk's software tools from Autodesk engineers. Autodesk AIR was run by Noah Weinstein who described the process as being designed to, 'bring together different creative practices and perspectives on projects and technologies, and to create an exchange between the creatives and Autodesk employees' (Schnugg and Song 10). Weinstein described the process as free, but which produced artworks to be presented at an exhibition in Autodesk's offices and which produced open-source instructions on how to manufacture the works via the online platform *Instructables.com*. In this context it is possible to consider the Autodesk residency as a fabrication residency, where Autodesk makes its particular tools, technologies and the skills needed to apply them available to artists, whilst at the same time giving the developers of these tools access to users working with them at the boundaries of their capabilities. Despite Autodesk management describing the residency as a success that, 'has been instrumental in shaping the culture and community within [their] organization' (The Artian), the artist-in-residence programme was replaced in 2018 by a new residency programme focussed on "innovators", start-ups, academics and not-for-profits.

Figure 11: Autodesk Pier 9 Workshop - image: rhizome.org

Soon after the launch of the Autodesk AIR programme, other Silicon Valley companies began to launch similar initiatives on their own campuses. Planet Labs, an earth imaging company that launches small satellites into space, launched its own AIR programme in 2013. Planet Labs AIR was run by illustrator Forest Stearns who met with one of the Planet Labs founders at a VC conference and became the programme's first artist-in-residence (Hart). The Planet Labs programme interacts with art and artists in a number of specific ways. Firstly artists are given the

opportunity to decorate satellites that will be put in to orbit with laser etched images, secondly the artist is given a studio space to produce works that will be displayed in the offices of Planet Labs and finally, the artist gives practical workshops to the staff of Planet Labs in skills such as drawing, painting etc. The artists are paid a monthly stipend of $1,000 for the duration of the three-month residency after which they retain ownership of any work produced following its documentation. Artist are expected to engage in “community activities” within the organisation for the duration of the residency (“Planet AIR Programme”).

Figure 12: Planet Labs art workshop - image: Planet Labs

The Facebook artist residency launched in 2012 at the company's Menlo Park campus and was organised by artist and Facebook early-shareholder Drew Bennett. Initially, artists were brought to the Facebook headquarters for a fixed residency period and provided with materials and a stipend for participating in the programme. In the intervening years the programme expanded to other Facebook offices globally and also switched to a commission model wherein artists are selected by Facebook AIR’s inhouse curation team currently led by former commercial gallerist Josephine Kelliher. Unlike in previous examples, the primary focus of Facebook AIR is the production of works owned by Facebook and for the Facebook offices. Bennett described the role of art in Facebook as serving the staff by encouraging them to see their own work as creative (Turner 7), a position echoed by Facebook chief Mark Zuckerberg who suggest seeing artist creating work throughout the campus encourages Facebook staff to see their ongoing work as a ‘work in progress’ (Droitcour 84). As such, Facebook artists tend to be focussed on the production of wall-based works such as murals, posters and prints along with wall mounted and

hanging sculpture. Unlike similar programmes above, such as Autodesk AIR, Facebook AIR has no mechanism for interaction with the technology used by Facebook or the technical staff who produce it. Despite this, there exist two early examples of artist work that had as its subject the work or organisation of Facebook itself. David Wilson one of the first residents invited employees to spend fifteen minutes with him outside in the nearby salt flats and Anthony Discenza whose text based work *Why Aren't We Talking About* __ tried to open up conversations that weren't present on the campus. Discenza also attempted to create a work that explored the last posts of people before shutting their Facebook accounts but which was abandoned because of difficulty in engaging with Facebook staff to produce works that may be seen as critical of or antagonistic to the company's aims (Droitcour 86).

Figure 13: *Facebook office mural - image: facebook.com/artistinresidence*

The AIR programmes in Autodesk, Planet Labs and Facebook, in contrast to the high-profile artists in the Art and Technology movement generally consist of artists without international profile and received little attention in gallery, museum, art-writing or other traditional "art worlds". However, these were generally more positively received in business, innovation and design communities (such as artbusiness.com, Hart, Lesser, Thayer). This profile led to further adoption by other Silicon Valley companies of the AIR model including by Microsoft Research, Google Labs and Adobe. There is little written about many of these programmes outside of the PR material provided by the companies themselves and much of this is replaced as the programmes are updated or change direction, and so it is difficult to describe their process and outputs in great detail. Microsoft AIR is described on the company's website as, 'program is a collaboration between researchers and artists working with new and emerging technologies that are not yet available to the public. Designed to influence culture within the company, the

program merges the strengths of art with cutting-edge scientific research to expand audiences' understanding of humanity as the rightful center of technology '(Microsoft Research "About"). In contrast to previous examples such as Planet Labs and Facebook, the Microsoft AIR appears to engage the artists directly with researchers in order to achieve a particular project or outcome. Works such as Instance by James George (2015), Every No One (2015) by Aduén Darriba Frederiks and in particular Ada (2019) by Jenny Sabin involved significant input from or collaboration with senior Microsoft researchers. Principal Electrical Engineer at Microsoft Research Jonathon Lister described its benefit saying, 'Microsoft having programs like this is hugely valuable. If we were to make decisions solely based on the financial, there would be missed opportunities. The Artist in Residence program encourages people to think in new directions. People get to try new things, do experiments with technology that would not be possible elsewhere' (Microsoft Research "Ada").

Figure 14: *Project Florence publicity image, Helen Steiner, 2015 - image: Helen Steiner*

Similarly, Google Labs AIR attempts to bring artists into working proximity with some aspect of the research at Google Lab. Organised in collaboration with the 89plus, the research project of high-profile curators Simon Castets and Hans Ulrich Obrist, the Google Labs AIR is a ten-week residency as part of Google's Cultural Institute. Documentation of the process and outputs of these residencies are extremely difficult to unpick from documentation of other initiatives with which they overlap as part of the wider Google Cultural Institute activities. Nevertheless, the majority of the work can be considered as employing advanced technologies within some form of predominantly audio-visual spectacle. Amongst these are the 3D drawings created at tiltbrush.com and the wearable tech project *Jacquard by Google* both of which employ artist who experiment with Google technologies. Another project, *Artists + Machine Intelligence* selects six

artists who work with Artificial Intelligence (AI) and provide them with funding of $10,000 and research support as well as access to Google AI platforms. Whilst specific output requirements are not outlined, documentation of the work and process will be used by Google on its Cultural Institute website ("Artists + Machine Intelligence Grants"). The initiatives of the Google Cultural Institute are notable in the context of the wider AIR movement by involving institutions and curators with significant cultural reputations such as Hans Ulrich Obrist or high-profile museums like Musée d'Orsay or the Guggenheim.

Figure 15: *Google Tilt Brush - image: tiltbrush.com*

Adobe, a California software company that produces software primarily used in creative industries, most notably Photoshop, also runs an AIR programme called the Adobe Creative Residency. The Adobe residency is tailored towards Adobe's technology and tools. As these tools are commonly used by artists in wide-ranging practices, the tools themselves are not generally the subject matter of the residencies but rather provided as support in the artists existing practice. Adobe describes the residency arrangement thus, 'Adobe Creative Residents receive access to the best creative tools and resources, along with guidance from advisors and a compensation package. In return, residents proactively pursue their own personal creative projects while sharing their processes, insights, and inspirations with the community along the way' (Adobe Inc). The Adobe residency is significant in that it identifies "creatives" as a class that includes artists but also a wider field of connected activities including design (Thayer).

Figure 16: *Brit(ish), Isable Lea - image: create.adobe.com*

This resurgence in artist technology enterprise engagement has also led to the reinstatement, at least in name, of both E.A.T. and A+T at LACMA (although now with a '+' instead of an '&'). A+T at LACMA was instituted in 2014 sponsored by Korean car manufacturer Hyundai with support from other enterprises including Accenture, SpaceX, Youtube and Snapchat. Unlike other California residency programmes, A+T is run by an art institution and operates on the basis of grant funding of $50,000 to artists to work on specific proposals within the context of their own practice (Williams). Perhaps due to the higher budget and prestigious institutional affiliation A+T at LACMA has attracted artists with internationally recognised practices such as Rashaad Newsome, John Gerard, Tavares Strachan, Taeyoon Choi and E Roon Kang and Diana Thater. Notably, the artists selected for A+T no longer consist an entirely white male cohort. Although supported by commercial enterprises A+T contrasts with other AIR programmes in that the artworks are not focussed on the use of particular technologies, however, particular artworks were developed with the help of technologists or enterprises as coordinated by the team at LACMA, such as John Gerard's *Neural Exchange* or Tavares Strachan's *ENOCH,* the former which included a neural network developed in collaboration with advisors from Google, Hyundai and Nvidia, the latter a sculpture put into low earth orbit required transportation from SpaceX.

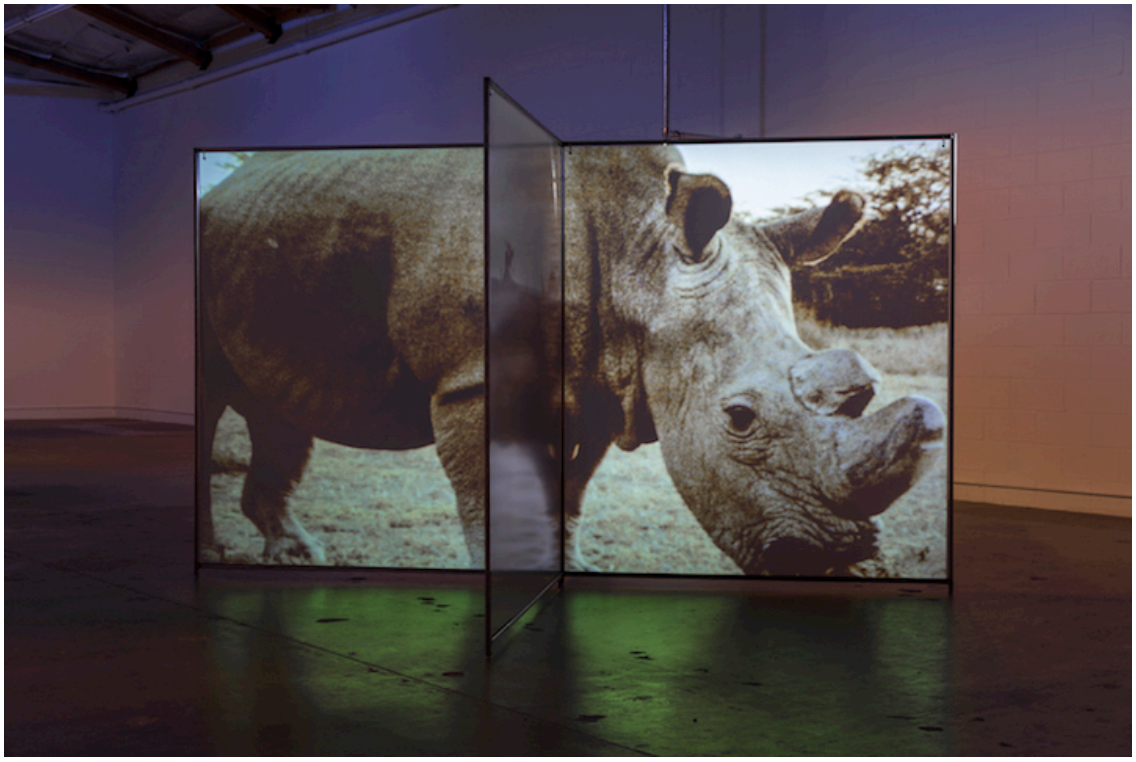

Figure 17: *The Zeroth Law (installation view), Diana Thater, 2017, LACMA - image: LACMA*

Having been “spun out” and purchased by telecoms company Nokia, Nokia Bell Labs reinstated the Experiments in Art and Technology Programme in 2017. Describing the new venture on their website Bell Labs state, ‘Our AIR program involves deeply embedding the artists within our research community for the best part of a year. We provide studio space, access to world leading scientists and access to world leading technology. The artists take part in team and project meetings where there is an overlapping interest and they become extended team members to foster the greatest levels of collaboration. We also provide equipment and materials budget to accelerate and realize their creative ideas and we support a large scale and highly visible realization of the art created during the residency’ ("E.A.T. Now”). Working with a mix of artists, academics and designers the work of E.A.T. since its reinstatement has primarily focussed on audio-visual and large-scale spectacle works. In addition, Nokia Bell Labs have partnered with other institutions both academic, such as Stevens Institute of Technology, and cultural such as The New Museum in New York.

3.3. Discussion

The chronological arrangement of the artist-in-residency programmes of contemporary technology companies and of the art and technology movement of the mid twentieth century already acts as one form of differentiation between the various programmes discussed above. It is useful however, to discuss these programmes a little further based on their position in relation to a number of other factors including, the relationship of the artist and the enterprise, the role, possibility or existence of critique as part of the artists’ work, the response to the work of the

artists within and outside of the enterprise and the impact of the work on the enterprise and the artist. In doing so it will hopefully be possible to identify areas of concern that require further investigation in understanding the potential of art industry engagements.

The first issue worthy of discussion is the role or purpose of the artist-enterprise engagement. Across the range of programmes discussed it is possible to suggest that the role of the artist or the role of the enterprise or the technologists within it varies from one of equal collaboration towards one in which one partner acts in service of the other – either in the production of art-works or in the production of some service for the enterprise. In E.A.T. as with both A&T and A+T at LACMA the stated intention, perhaps stemming from their initiation by artists and curators, was to produce new types of art works that would be enabled by input from the specialist skills of technologists in partner companies. This process of engagement was intended as a catalyst to, 'stimulate the involvement industry and technology, with the arts' (E.A.T. 1), which in turn, as Maurice Tuchman described, 'might benefit [companies] immeasurably, in both direct and subtle ways, merely from exposure to creative personalities' (Tuchman 9). For APG, this intention, to alter the way in which enterprises worked was considered primary, and the production of art objects was secondary to the production of critical research into the wider social conditions of the enterprise (Bishop 176). In the case of APG however, this position of the artist as an observer within the managerial structure of the enterprise led to criticism of the APGs activities as being too aligned with the concerns of management rather than of workers (ibid. 166). Equally, their production of processes rather than traditional art objects, particularly in the historical context, led to the work of APG not being read as art (ibid 146). In contrast to these programmes in which criticism of the work and workings of the enterprise was either explicit or secondary aim, the AIR programme at Facebook is almost exclusively a-critical with respect to the enterprise itself. On the contrary, in what little critical writing exists about the Facebook AIR programme, seems to point to the fact that the programme is positioned as presenting an image of the company, publicly and to workers, that is at odds with the reality of Facebook's business activities (Droitcour) (Turner). In particular, the focus on art practice that promotes social openness and tolerance or the valorisation of human rights activists or trade union activists such as Dolores Huerta, are seen as directly in opposition to the company's anti-union policies, closed data environment and role in the targeting and profiling of data subjects based on discriminants such as gender, race or socio-economic categorisation (Turner). Turner argues that the role of AIR in Facebook is, 'an aesthetic infrastructure for surveillance capitalism', in which the role of artworks produced for display inside Facebook's offices is to convince workers that the needs of Facebook are aligned with the needs of the public, and that individual self-expression, rather than political or social organisation, is the sufficient limit of political engagement. If the Facebook AIR exists at an actively acritical end of an axis bounded at the other end by the critical practices of APG it is possible to suggest that other contemporary AIR programmes can be positioned in proximity to the Facebook AIR. In the case of Planet X for example the work of AIR artists can be broadly seen as agnostic to the activities of the company or as engaging with them at most at an aesthetic level (through the use of themes relating to space in the work of AIR artists). The artist input into the workings of the company is only through the facilitation of social activities positioned outside the normal operations of the company.

Similarly, in the Adobe AIR programme artists are given access to the finished tools created by the company and as such are not inserted into the productive processes of the company. In these cases, it is possible to suggest that role of the AIR is not one of mutual exchange but one in which the AIR hosts views itself as patron wherein the benefits to the enterprise are not accrued through the process or production of art, but rather through the existence of the AIR programme itself. In this position, the role of AIR can be seen as a signalling function in respect to the company's culture or values. The Google, Microsoft, Nokia Bell Labs and Autodesk AIR programmes can be suggested as somewhat more engaged in parts of the company activities than some of their contemporaries. In these examples the collaboration of engineers with artist creates at a minimum the possibility of collaboration and knowledge exchange across disciplines. despite these activities generally being tangential to the primary business areas of each of the enterprises.

The intended role, or that which develops in practice in the residency programmes, gives rise directly to possibility, or lack thereof, of critique within the artist-enterprise engagement. As highlighted by Bishop, artists of APG such as Stuart Brisley and Ian Breakwell directly engaged with the working practices of the host organisation in which they were placed. Both were involved in the proposal of reforms in existing working practices which were implemented by management (167, 172). Similarly, John Chamberlain at Rand Corporation, James Byars at the Hudson Institute, Mel Bochner at Singer and Muse & Finley at PARC all engaged directly with the organisation of their host organisation in terms of its physical space and the its internal process of communication (Tuchman 46)(Didier and Pluot)(Harrison 40). This contrasts sharply with, as highlighted by Droitcour, Anthony Discenza's inability to engage with Facebook staff on projects that were seen as critical of Facebook's practices (86). The extent to which engagement with the process of other host organisations occurred is difficult to determine from the works produced by artists on other residency programmes.

It is possible also to examine this range of artist-enterprise engagement in terms of the response to their output. Here too, it is possible to identify a marked difference between the work of the Art and Technology movement and the more recent AIR programmes. In discussing the more historically situated work however, it is necessary also to identify that responses to these works at the time of their production and exhibition in many cases differ from the response to them now or their positioning in an art-historical context. It is also notable that for much of the work of contemporary AIR programmes there is little or no response to these within the "art worlds" that consist art writing, high profile or publicly funded museums or galleries, or academies. Instead what little response to these works exists is contained within publicity materials of the programmes themselves or in business and innovation magazines. Finally, it is worth noting that the Art and Technology programmes of the sixties and seventies included a cohort of artists that already had international profile at the highest level of contemporary art, whereas in most cases the artists involved in contemporary AIR programmes are for the most relatively low profile.

The example that perhaps best demonstrates these differences is the Artist Placement Group (APG). As discussed above, the APG's primary public output was the exhibition *Inno 70.* As Bishop notes in Artificial Hells public and critical reaction to *Inno 70* at the time was highly critical. In particular, she highlights the critics' reaction to the corporate appearance and atmosphere of

the exhibition – which is seen as indistinguishable from bureaucratic process and corporate image making (170). Bishop notes however, that the type of exhibition making and presentation within, *Inno 70* and APG's subsequent decision not to use an exhibition format but to present its projects through panel discussions throughout the 1970s, anticipate the 'discursive platform' as a contemporary exhibition strategy, and the symposium as a viable way to present non-object and process-based art' (175-6). Work such as Bishop's or Howard Slater's *The Art of Government,* along with the acquisition of the APG archive by the Tate in 2004 and archival exhibitions such as The Individual and the Organisation: Artist Placement Group 1966-79, point towards a rethinking of APG's work in the contemporary context. This renewed focus on APG highlights the strong conceptual and political underpinnings that were present in the work of APG, but which broadly appear absent in similar contemporary programmes. Similarly, A&T at LACMA received negative critical responses including protests against the gender imbalance of the programme. Jack Burnham and Max Kozloff both criticised the exhibition in Artforum articles entitled *Corporate Art* and *The Multimillion Dollar Art Boondoggle*. Both paid particular attention to the position that art was placed in service of corporate interests. Similar, Collins Goodyear notes that by the time of its exhibition the generally negative attitude by those in the art world and large parts of the public to the connection between technology companies and the Vietnam war, meant that the art of A&T was seen as implicated in the military industrial complex. Despite this reaction, the legacy of A&T has been somewhat revisited, LACMA's archival exhibition in 2015 was more positively received (Thomas). Critically, the contemporary A+T programme at LACMA which coincided roughly with the archival exhibition draws heavily on its connection to the historical A&T programme, however, without discussion of its critical reception. As Beck and Bishop highlight in T*he Return of the Art and Technology Lab*, 'Without a politically utopian driver, it is hard to see what innovation in art and technology collaborations can be other than more product and more spectacle. The belief in experimenting a way out of any problem was both the best and worst aspect of 1960s labs and a fantasy that remains in the twenty-first century' (238).

Contemporary AIR programmes such as Autodesk, Planet Labs and Facebook which produce output for display only within the companies' own facilities generally do not feature within critical art discourses. The profile of Facebook as a company and its implication as a major factor in various political and social trends in contemporary society, however, have marked out its AIR programme for critical responses such as by Turner and Droitcour discussed above. Even Google's various programmes which have engaged large cultural institutions or big-name curators are broadly invisible from art world discourse. At the same time, the work of tech giants such as Amazon, Facebook and Google are regularly the direct subjects of art practice and critique by artists outside of their programmes. Notable examples of which include Kate Crawford and Vladan Joler's *Anatomy of and AI*, works by Aram Bartholl such as *Never Worry Again* and *Map*, Ben Grosser's *Orders of Magnitude* and demetricator series, Gretchen Andrew's SEO based *Vision Boards*, Constant Dullart's *100,000 Followers for Everyone*, Kennedy-Browne's *Redaction Trilogy* amongst many others.

The question of visibility draws together the issues of the artist's role and their potential for impact within the organisation – and for society at large. Work such as that of APG, in particular the examples of Brisley and Brakewell mentioned above, had definite and clear impact on the functioning of the host organisations. The impact of Breakwell's work, whose placement was at

the Department of Health and Social Security Architects Division and included a placement in Broadmoor Special Hospital, was received both positively and negatively. Within the DHSS architects' division, it was receive positively noting, 'Ian has succeeded in giving us a real and lasting image, from his point of view, of the insanity surrounding insanity. This work should be reproduced and distributed to all our contacts, especially those who deceive themselves that all is right in the Mental Health world. We should also keep it on hand and read it ourselves periodically 'lest we forget' '(Kemp). At the same time the management of Broadmoor stated his work 'embarrassed the DHSS hierarchy' and 'stepped outside their brief as architects' (Bishop 172). From an artistic perspective Breakwell produced a notebook and film of his time there called *The Institution* (1972) along with slides to be presented to the DHSS. This highlights a tension that exists in the role of artist with enterprise, namely, at what point and to what audience is the artist's labour directed? In the case of Breakwell, Brisley or other examples such as Chamberlain and Byers on A&T or more recently Discenza on Facebook AIR, the work was process-based and intended to be received by and influence the management and workers of the organisation. In so doing, these works tended towards not producing monumental works that could be exhibited within traditional art settings or documented as imagery online withing public relations material. Conversely, it is possible to suggest that many works that are designed to be highly visible or spectacular such as Google's Tilt Brush works or the AV shows of Microsoft Research, Nokia Bell Labs E.A.T. or the screen-based works of Adobe AIR have little impact on the internal workings of the organisations to which they are host. However, as Turner suggests, the presence of artistic work within the organisation is in itself impactful albeit not as a form of critique but as a way of evading and diffusing it.

Despite their initiation by artists, AIR programmes as described above are perhaps best described by a power asymmetry in the favour of enterprise. Not only due to financial asymmetry but due to the fact that, placed into the workings of a large enterprise, the knowledge of the artist would be subject to unequal power relations and epistemic injustice in relation to that of the enterprise. As detailed above, from the Art and Technology examples at LACMA to the recent AIR programmes at Facebook, the position of the artist within the enterprise generally leads to the production of a-critical work or spectacle that serves primarily to promote the image of the company in the eyes of the public or its staff. As highlighted by Bishop, the critic Gustav Metzger suggest the power inequality means that any attempt to steer two unequal knowledge systems and intentions towards a "third way" invariably leads to the right (Bishop 170).

4. Consulting

4.1. Art and Management – Unlikely Bedfellows?

Art and management have been for a long time considered to be starkly opposed and hence irreconcilable and mutually exclusive entities. The arts are irrational, iconoclastic, unruly, imaginative, disruptive, subversive, while management is rational, based on calculation, risk-assessment, modelling and assiduous performance metrics and measurements. However, from the nineteen-eighties onwards, the business and managerial discourse became increasingly more dominated by the notion of disruption and innovation as prerequisites for staying ahead of the competition and economic growth.

Since, management thinking increasingly began to regard the arts as tools that promise to bring generative, disruptive and subversive thinking within organisations as modes for amplifying the innovation and creative capacities of companies (Schiuma, 2011). The idea that businesses have to rely on innovation, continual organizational change and business transformations, has for all intents and purposes embodied a predominant mindset of organizations and their members, leading to an increased emphasis to be imaginative, creative and open to embrace and promote new solutions (Carlucci & Schiuma, 2018).

Much modern management thinking accordingly prescribes to well-managed organisations the capability to shift from mere mechanistic production to meaningful production, from monetary capital to human capital, from established routines to improvisational or responsive skills (Austin & Devin, 2003). This movement towards an increased production of affective labour and social skills in enterprise (OECD) creates a shift of managerial attention towards novelty, renewal and resilience resembles more a creative or design task rather than an analytical or administrative one. The ability to work creatively, to improvise and to experiment with new ideas and concepts—historically the remit of artists—is now a high-demand highly-valued skill in management and leadership, as Adler (2006) has convincingly argued. Consequently, management terminology has experienced an artistic revamp by management scholars but also management gurus poaching basic arts-based vocabulary and baking it into management discourse. Terminology that used to be the purview of the arts, such as inspiration, emotion, stimulation, passion, reflection, experimentation improvisation and energy, is now increasingly being co-opted by contemporary business thinking (Ferreira, 2018). A widely-documented deficit of creative thinking within organisations that adversely impacted a business's ability to stay relevant and competitive, posited a renewed need for new ways of thinking, a re-imagination of processes and routines, and a search for new ways to reenergize an organisation's mission, culture and values, so as to foster innovation and new product development (Sundgren & Styhre, 2003; Troilo, Cito, & Soscia, 2014; Zhou & Hoever, 2014).

The arts seem to offer the magic stick to ameliorate the crisis of imagination and creativity within organisations and management. Arts furnish managers with a set of tools and an assortment of novelty-producing technics and heuristics that facilitate the ability to shift focus, recharge imagination, alter attention, and offer alternative views on the already known and the status quo (Strati, 2000). Some scholars go as far as arguing that taking inspiration from art will make management (or business) a work of art itself.

When management is based on artistic techniques and interventions, then 'work becomes more like art' and organizations tend to switch from an 'industrial-making' to an 'artful-making' paradigm (Austin & Devin, 2003, p.2). As part of a wider dot-com boom reverberations, as well as the rise of digital entrepreneurialism in the 1990s, businesses started to champion the values of self-expression, fluid identities, autonomy, self-realization as the basis of workers' self-management and self-governance (Neff, 2012; Ross, 2003). Such 'artistic critique', Boltanski and Chiapello (2005) argued embodied 'the new spirit of capitalism' that touted artistic attributes, lifestyles and mindsets against the traditional organizations' bureaucratic discipline, rigid work regimes and mind-numbing assembly-line production rhythms. Consequently, a new generation of management gurus celebrated and extolled the virtues of bridge-building between corporations and the arts. The rise of the new information economy at the turn of the twentieth century embodied most notably in agile software development and programming, was widely modelled on the premises of self-expressive, passionate, contemplative qualities of the arts. A slew of hybrid arts-management vocabulary testifies for the Zeitgeist in arts-management, and aesthetics-business convergence: 'the beautiful corporation', 'the aesthetic manager', 'art firm' (Dobson, 1999; Guillet de Monthoux, 2004). Arts have been frequently thus used as a metaphor for organizing in times of post-modernity and 'society of spectacle' (Boland & Collopy, 2004). Hjorth (2007) for example uses Iago, from the Shakespearian play, as a metaphorical concept with the help of which one can read off the dominant opportunity creation traits of entrepreneurship.

Indeed, the theatre arts were most prominently harvested for inspiration and development of templates upon which to model future-of-work and future-of-corporation managerial injunctions. Management scholars have exploited dramaturgy and stage aesthetics as generative metaphors upon which to model recommendations for 'artful', 'playful' and 'innovation-stimulating' management. Austin and Devin (2003) use the collaborative and playful rehearsal dynamics of stage arts, to model the 'joy of working' for a technology corporation that unleashes a state of inner felicity, good vibes and inhibition-free agile software development. As they (p. 162) famously propose: 'the activities of a wise manager … need not be much different from those of a theatre director'. Pine and Gilmore (1999) exploit theatrical performance clues to influentially proclaim the advent of the 'experience economy' in which 'work is theatre' (p. 101). Firms operating in the experience economy are not only concerned with the consumption of goods or services, but in 'staging a total experience' (p. 42). By the same token 'an experience economy managers' has to emulate the practices of drama and performance arts in order to stage memorable, multi-sensory, pleasurable and passionate experiences of a service delivery.

Some managerial lines of thinking have also argued for the importance of a radical rapprochement between aesthetics and the organization. In this view the aesthetic element in organizational life – 'aesthetic' being defined as the entire range of sensory and perceptive faculties and sensible experiences (Strati, 1999) plays a definitive role in the construction of an 'organizational aesthetics' that positively impacts, via the engagement of multisensory experiences and artistry, the businesses outcomes (Beyes et al., 2019) and the experiences of work (Carr & Hancock, 2003; Guillet de Monthoux, 2004; Linstead & Höpfl. 2000; Strati, 1999; Taylor & Hansen, 2005).

Although such bold managerial visions for a sweeping arts-management reconciliation fell short of an actual materialization—corporations in principle have failed to metamorphose into

genuine or authentic 'aesthetics', the generative role of the arts within organizations is still invested with much hope, enthusiasm and zest. Arts-based interventions within organizations, taking various forms and shapes ranging from theater to visual arts, installation and mural painting, have been casted, by management scholars, as catalysts fostering an organisation's creative capacity and latent creative energy (Schiuma, 2009). Arts help organisations challenge established mindsets that have become stuck in stale behavioural and thought patterns, help develop new skills and capabilities, new forms of working and team behaviour, and help turn work generally into more meaningful, pleasurable and playful endeavours (Adler, 2006; Berthoin Antal & Strauß, 2014; Meisiek & Barry, 2014; Schiuma, 2009; Styhre & Eriksson, 2008).

If on the one hand business and management have betted on the promise offered by the arts for revamping and reimagining business and even the whole economies, the arts have on their part, also relished in the promise of businesses and organisations to provide a stable, gainful and attractive employment opportunity. Artistic labour markets in the art world, the cultural and creative industries have been long characterised by a heightened level of precarity, including insecure, irregular, casualized and non-insured employment, long, asocial and intense working hours with no health benefits of welfare protection (Alacovska, 2013; 2018; Gill and Pratt, 2008; Abbing, 2002). The precarity has been further exacerbated by severe cuts in governmental arts-subsides across Europe in the last two decades (Belfiore, 2018). However, notwithstanding the fact that the stereotype of the poverty-stricken and fringe-inhabiting artist, never really chimed in with reality, precarisation and poverty have been long considered generative and propitious conditions of possibility for art making. For long, the deep precarisation of artistic labour markets was (erroneously) taken to act out the myth of the suffering genius: the artist rejecting to compromise the real 'aesthetic' value of their art with pecuniary aspirations or monetary benefit (Negus and Pickering, 2004). Artists are intrinsically prone to accept low and insecure wages in the name of pursuing their calling—creating art-for-art's sake.

The art and the economy, the art and the market, the art and commerce have been historically mutually exclusive domains. Under the influential Frankfurt School conception of the arts and culture, Western scholars have long treated arts and markets as separate phenomena. 'Real art' can only happen in spaces sheltered from the market; 'real art' refuses to cave in to market dictates or to accommodate mass taste. 'Real artists' have therefore been painfully aware of the detrimental consequences of 'selling out' that is producing art that follows the market-based principles of sellability, branding and profit-making.

However, empirically driven sociological accounts have started demonstrating lately, how in the face of artistic labour markets being in dire straits, some artists migrate towards other, comparatively distant fields such as social care as a source of more predictable and relatively gainful employment within hospitals, hospices or elder homes (Alacovska, 2020). Similarly, traditional organisations and corporations presented themselves as viable employment spaces for leveraging the artistic skills that the businesses have already managerially championed as desirable and hence also in high demand: improvisation, collaboration, creativity, invention. During the late 90s and the beginning of 2000s, new internet entrepreneurs and the rapidly rising new media sector have most tellingly imitated the artistic mentality, clothing and work ethos as reliable industrial processes by employing artists to assist in the rapid 'boheminization of workplaces' (Ross, 2003; Neff, 2012). In a critical account of the anesthetization and bohemianisation of

ordinary workplaces, Ross (2003: 138) argued that managers tend to incorporate artists and their artistic temperament into the organization, as artists 'come with a training in what could be called sacrificial labour' – a learned predisposition to regard the job as a work of art itself and so to accept lower pay in exchange for job gratification and self-actualization.

Such artistic mentality appeared as a godsend for managers. Accordingly, management studies as well as human resource management, have focused on the arts as a harbinger of new models of work, i.e. passionate, self-expressive, and artful types of making and working (Svejenova et al., 2011; Townsend, 2000; Devin and Austin, 2003). The ideology of art—playfulness, spontaneity, deviance from the norm also became the template for the organisation of 'cool' digital and creative workplaces (Neff, 2012; Turco, 2016).

Figure 18: Jeremiah Britton WeWork Installations II, Everybody Hustle, mural at the WeWork Soho West lobby in New York City - image: jeremiahbritton.com

However, the work of artists as consultants within organizations as opposed to entire organizations embracing the artistic ethos and mentality, has remained relatively unrecognized and hence under-researched. Artists have been found to increasingly see consulting jobs as attractive and as a solution to the radical precarisation of artistic labour markets as well as the rapidly shrinking public arts subsidies. When taking on the role of consultants, artists 'advise' on innovation, organizational change and strategy implementation (Chemi and Kawamura, 2020). This is not to say that the role or identity of the artist-as-consultant is a straightforward or unproblematic category, or that bringing the arts into business is always a welcome or smooth process (Stenberg, 2016). In order to start untangling the rather complex, uneasy and tension-fraught marriage between the arts and management, we review the extant literature that has already touched upon the cross-over between arts and management. In so doing, we look at the wide

variety of practices and processes in which the artist has been refashioned into *a business consultant* and the work of art and the adjacent artistic methods into a *vehicle for transforming organisational and business processes.*

4.2. Arts-based Management

There is already a well-established tradition in which managers actively invite, welcome and embrace the arts within the organisation and implement the arts directly into managerial processes (Berthoin-Antal, 2013; Schiuma, 2013). A wide variety of studies identify a variegated and heterogeneous set of basic operative principles of art-based management in a multifarious range of organisational contexts via equally manifold artistic forms, such as hosting artistic residences at innovation centres to boost inventiveness (Harris, 1999); staging dance performances in the banking sector to foster more attractive workplaces (Reinhold, 2017), commissioning theatres troops for supporting seamless organisational change (Meiseik, 2014); or mobilizing 'great literary fiction' as a blueprint for the study of organisational transitions (Czserniawska, 2010). The terminology to refer to such variegated forms of arts-management cross-over proliferate. Some of the most notable labels are: arts-in-business (Darsø, 2004), artful making (Austin & Devin, 2003), artful leadership (Adler, 2007), arts-based managerial methods (Taylor & Ladkin, 2009), arts-driven leadership development (Sutherland, 2013), aesthetic understanding in organizational learning (Strati, 2003), artistic interventions (Sköldberg, Woodilla, & Berthoin Antal, 2016), arts-based learning in management (Nissley, 2002), art work (Nissley, 2010) or in education (Chemi, 2018; Chemi & Du, 2017).

There exists a growing number of typologies that disentangle the complex and ambiguous arts-management relationship. Darsø (2004) in her study sees four functionalities through which the arts are applied in a business context: (1) art as decoration; 2) art as entertainment; (3) art as a tool; and (4) art as change process. Overall, the arts are conceptualized as a form of metacommunication, either as an embellishment of physical frames or products, or as joyful experiences or as a creative tool for specific tasks (such as interpreting body language, communication, interpersonal relationships, observation skills) or as a creative facilitation of complex change processes. On their part, in their typology Taylor and Ladkin (2009) describe four types of processes of how the arts are embedded into managerial action. First, they argue the arts are used as a projection, implying the use of art as a metaphor for specific organizational concepts, as a symbolizing process and as arts-based tools for non-verbal expression and reflection. Second, they argue art is used as illustration, the arts function here similarly to Darsø's (2004) notion as decoration or dissemination tool. Third, art can be employed in making, in the form of applying arts-based interventions to the facilitation of change processes or the coaching of individual or team development. Finally, fourth, art may be engaged for the transferring skills, specifically the transfer of knowledge from the arts to non-arts sectors. Sköldberg et al. (2016) discuss the discourse surrounding artistic practices in organisations which range from the (1) managerial (the discourse of growth and improvement); to (2) aesthetic-inspired ('*the arts as inspiration for action*', p. 8); to (3) metaphoric (art as '*translation to organization theory*', p. 9); and (4) multi-stakeholder conceptions (discourses about participants' experiences, similar to social innovation and participative practices).

Although the hopes and the zest for the 'promised' benefits brought about by the arts to the organisation are widely espoused, promoted and endorsed by management scholars, there exist no exact definition of 'artistic intervention' (Berthoin Antal & Strauss, 2013). The term artistic interventions typically comprise of several tentative features. First, an artistic intervention can refer to *a single, one-off event* that usually lasts for one day or just a couple of days and coincides with a corporate innovation jam or a hackathon. Second, an artistic intervention can take the form of *a project* when the length of the initiative is longer than 2–3 days and is characterized by a series of integrated and coordinated interventions planned over a period of time, usually ranging from one to six months, to achieve a robust overall business performance objective. Third, the artistic intervention can be considered *a programme* when the initiative has a plurality of objectives and straddles a set of different projects, although ascribable to the same strategic goal. That goal is usually related either to the definition or renewal of the business model or to developing organizational performance in line with strategic direction (Schiuma, 2011). With such interventions, there can be up to four categories of beneficiaries: the individual, the group, the organization and the public domain. Continuous conversations take place between and among these stakeholders, allowing for the generation and exchange of benefits, usually long after the initiative has ended. The artists can come from any domain, and they may or may not use their habitual art form in their intervention (Berthoin Antal & Strauss, 2013).

According to Strauß (2017), the productive coupling of the arts and management does not have to be a hierarchical endeavour in which managers have an upper decision-making hand and control (pre-define, commission) the artistic process. The arts-management cross-over should instead be a shared and reinforcing practice, which does not require consensus between arts and management but allows for differences to coexist. In other words, when arts–business partnerships are valued and designed as dialogues between equals, learning occurs reciprocally so that both partners end up being transformed through the experience. These ambitions have been formulated with specific nuances in the subdisciplines of management scholarship.

Figure 19: *Training artists for Innovation Cover*

As the values, merit and virtues of arts-based management were sung ever more loudly in both trade press and scholarly publications, its appeal within the artistic community started to grow gradually (although not completely without resistance). Policy-makers and arts educators progressively started recognizing the job-creation potential of a new occupational niche that promises to offer the much-needed employment steadiness, stability and certainty lacking in traditional artistic labour markets. Some educators called for developing 'artistic competencies for a new context' (Heinsius and Lehikoinen, 2013) and 'skills at creative partnerships' (Biehl-Missal and Berthoin Antal, 2011; Strauß, 2017) that would help the artist leverage their skill-set at artistic inquiry and research to the achievement of corporate goals, attainment of organizational well-being and the resolution of business challenges. One of the most prominent areas of artistic skill leverage is in the management of organizational change processes especially in light of mergers and acquisitions, rounds of lay-offs or digital transformations.

4.3. Arts-facilitated Organisational Change

The role and usefulness of the arts within organisations has been most consistently investigated in times of crisis. The studies of organisational change study empirically, through interviews and organisational ethnography arts-based interventions at the workplace. They so investigate the arts as a strategic resource of creativity, disruptive thinking, idea-generation and a tool-kit for dealing with organizational ruptures, crisis communication and the radical uncertainty of innovation and intrapreneurship (Ancelin-Bourguignon, Barry & Hansen, 2008; DePree, 1992; Dorsett & Azambuja, 2019; Hansen et al., 2007; Kamoche et al., 2002). The processes of artistic inquiry including divergent thinking, simplicity, shifts in the point of view, are found to be valuable for management during crises as the arts help managers imagine the unknown, articulate the uncertain and the unspeakable future, and hence also overcome the change-induced anxiety.

Barry and Meisiek (2010b) have coined the term 'workarts' to stress *the work* that art, especially theatre art, does in challenging ingrained managerial ways of doing and thinking rather than the final produced artwork. A new type of artistic-managerial form, that of 'organisation theatre', has occupied a central stage in the analysis of arts-based organisational change (Clark and Mangham, 2004a; 2004b; Meiseik, 2014). Parush and Koivunen (2014) show that such artistic interventions make participants more willing to accept contradictory and unexpected demands. Berthoin Antal et al. (2016) show that artistic interventions help coping with identity tensions and with the conformity versus creativity paradox. Artistic interventions are often seen as learning-oriented relationships between arts and organisations. Nisula & Kianto (2018) for instance describe the case of a Finnish municipality undergoing a merger process of six separate divisions into one. Creativity workshops based on improvisation techniques, helped participants with spontaneity and self-expression. Chemi and Kawamura (2020: 25) similarly argue that organizational theatre serves as an educational tool that supports and facilitates organizational change through worker engagement and participation which aims at 'involving bodies that were used to factory work and leading them to dance, enjoy, reflect and talk to one another'. There is an implicit expectation that the artistic project will disrupt an organisation's ingrained routines

and reference frames. The arts are hoped to serve as a counterpoint to organizational orthodoxy. Traditional creativity techniques such as design thinking and brainstorming are most applicable where there is a definite problem or opportunity to target but changing the organizational culture to facilitate a higher overall level of creativity is clearly a much broader issue (Formica, 2020). Hopefully, an intervention yields more than just more organizational creativity, rather a 'holistic flexibility that allows to approach issues from new perspectives, and an agile capability to grasp new opportunities' (Nisula & Kianto, 2018, p. 485).

Figure 20: *Unilever Archive Facebook post screengrab*

4.4. Arts-driven Innovation

Besides being championed as catalysts of organisational change, the arts are equally invested with the overzealous promise of enhancing, amplifying and recharging innovation and innovative processes within organisations. Managerial studies have celebrated the arts as the founda-

tional principle of novel, innovative and original thinking and 'artful' processes of working (Austin & Devin, 2003; Carlucci & Schiuma, 2018; Styhre & Eriksson, 2008). The literature of creativity and innovation has long glorified 'the great geniuses' of liberal arts as extraordinary creators and innovators (Akrich, Callon & Latour, 2002; Sternberg, 2003). The arts in this line of thinking helps make abstract things more tangible (Barry & Meisiek, 2010a) while enabling and materializing the 'anticipatory creativity' requisite for designing future research and innovation initiatives (Adler, 2007; Schiuma, 2011). Central to these studies is the transferability of skills from the domain of art to the domain of management such as for example attentive listening, insightful observation, spirited argument, 'thinking differently' and questioning of established and well-tried premises (Sköldberg et al., 2015; Taylor & Ladkin, 2009).

Figure 21: Infrastructure of the Future, TILLT Workshop, Malin Bellman, 2019 - image: tillt.se

The artistic interventions geared towards facilitating innovation within organisations can take up a wide variety of forms. One of the most prominent especially within technology design companies is the hackathon. Sandberg (2019) describes a 'hackathon' in which performing artists, including theatre actors, were hired to engage with the ideation process. The presence of the artists had a positive impact on the generation of ideas; the artists were very likely to ask profound questions and would take time to understand the context fully; they would observe 'intensely' and be 'exceptionally alert and sensitive'. Some artistic innovations stretch over a longer period of time in the form of a series of artist-led innovation workshops. In such case innovation alliances between the artist and the company are formed as the basis for the collaboration. In a study of 19 innovation alliances, in which companies spent a year trying to become

more innovative with the help of artists, and why some of the alliances delivered good results and others were derailed, Meisiek and Barry (2018, p. 476) identify a 'sweet spot' on the context of problem formulation, goal setting, and closure, and the iterative movement between problem finding and creating. More often it is the artistic methods employed as fundamental tools of inquiry within an interactive workshop context that make the difference. Some of the most prominent methods mobilized are design thinking methods and most notably the 'speculative fiction' methods in which the future is invoked and envisaged by fictional and possible world-making techniques mobilized from the artistic domains of literature, design, poetry and similar (Rowe, 1987). By way of speculating about the future, the design thinking methods enable organisations to innovate new product development in a sustainable and imaginative manner and to design novel and efficient organisational re-structuring processes (Barry and Rerup, 2006). Similarly, the practice of 'slow looking' (Tishman, 2018) inherent in the artistic process, has lately received increasing attention from management scholarship. Tsoukas and Chia (2002), for example, suggest that art helps us hone in on and perceive what has been unnoticed and overlooked. It fine-tunes our ability to identify and notice small changes and to form 'sensible' knowledge (Höpfl & Linstead, 1997). Further, it facilitates an appreciation of the dynamic complexity of reality.

Despite the 'great' enthusiasm with which the arts are managerially celebrated as catalysts of organisational change and innovation, there is actually very little knowledge on how artists themselves navigate, negotiate and experience the tensions inherent in the consultancy role. As artistic interventions implemented in organisations are based on close collaboration with employees and managers, on relationship building, copious amounts of relational work, pedagogical acumen and knowledge about working relations (Chemi and Kawamura, 2020; Nisula & Kianto, 2018) a new set of skills appears to become increasingly necessary and complementary to the traditional artistic methods, practices and knowledge. Very few studies actually examine artistic wellbeing and artists' responses to workplace-embedded art. An exception is Stenberg's study (2016) that found evidence of emotional burnout and mental exhaustion as the artists negotiated relations within the organisation and sought legitimacy of their own role within the workplace.

Outside of enthusiastic managerial discourses, several studies originating from health sciences, cultural policy and economics have evaluated the impact of artistic interventions within the organisation (usually also as part of donor audit schemes). Such studies typically find some (although still inconclusive) evidence of a positive and stimulating influence of artistic projects in the workplace mainly with a view of fostering a change mentality, collaboration, dialogue and empathy between employees and managers and among colleagues (Styhre & Eriksson, 2008; Robins, 2020). However, the evidence on which these evaluation studies are based is typically still anecdotal, limited to specific local initiatives and circumscribed which as Antal (2009: 19) argues makes it 'difficult to distinguish between the effects that have really occurred and those which people would like to see occur'. In prior research, Meisiek and Barry (2014) found that for every successful arts-based intervention in an organization, there was at least one other that went nowhere, became derailed and was lost along the way.

4.5. Arts-fuelled Leadership

Another area in management that championed the beneficial qualities of the arts is leadership. Leadership gurus have embraced enthusiastically the promise of the arts as a source of augural inspiration for navigating turbulent organizational settings. In this lens, artists and the arts represent a new role model for reimagining both charismatic leadership and science-based management (Adler, 2007; Hatch, 1999; Guillet de Monthoux et al. 2007; Seifter, Economy & Hackman, 2001). Somewhat assumed in this compatibility is a conception of leadership that is marked by courage, vision, creativity (cf. Adler, 2006; Schein, 2013).

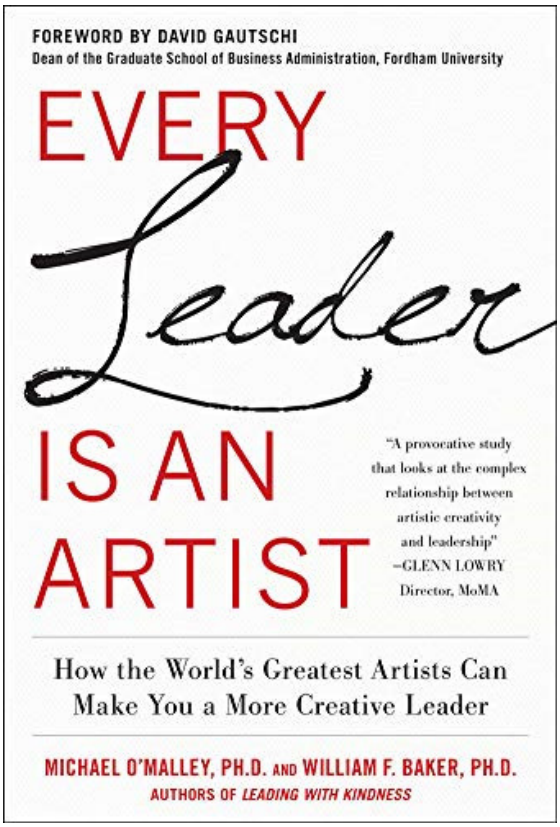

Figure 22: Every Leader is and Artist cover - image: McGraw-Hill

As opposed to art-facilitated organisational change and art-driven innovation, art-fuelled leadership usually does not presuppose an actual artistic intervention. Art-fuelled leadership invokes and deploys narratively the Romantic myth of the genius (with all of its masculine, individualistic and subversive overtones as related to the individual greatness of a divinely inspired and gifted individual). Great artists (whose traits are usually distilled from history of the arts textbooks) are used as blueprints upon which to model 'great leaders'.

In leadership discourse, leaders are thus equated to artists, that initiate innovation and change, and similar to them, they create something new and bring it into the world (Scharmer, 2016). Adler (2011, p.210), in discussing the power of artistic processes in addressing 21st-century management challenges, similarly propositions three similarities highly effective artists and leaders share, the courage to see reality as it is, the courage to envision possibility, part of which

may entail the possible creation of beauty, and the courage to inspire people to move from current reality back to possibility.

Leaders draw inspiration from the body of knowledge that art represents, to identify new business models reliant on aesthetic or emotional dynamics (e.g. Boyle & Ottensmeyer, 2005; Gallos, 2009; Nissley, 2010). Schiuma (2011 p.40) further argues the use of artistic products and processes as a management device to create aesthetic experiences within organizations, as well as to embed aesthetic properties into tangible and intangible organizational infrastructure and products so that they are able to stimulate people's aesthetic sensibilities affecting emotional and energetic dynamics. Processually, through learning from analogy, through using and interacting with artistic artefacts and processes, it helps leaders to identify organisational features and relationships that are routed in aesthetics – imitation or creative thinking (Schiuma, 2011). In particular, 'great leaders' employ the arts in such a way that it is conducive to combining rationality and technicality with intuition and emotion. Creative, artistic expression helps a leader access deep knowledge and brings conscious and unconscious thinking together, which brings about a more holistic understanding of themselves, their experiences and their lived-in world (Hoggan, Simpson, and Stuckey (2009). Schein (2013) in summation sees a number of overlap and interactions between the arts and leadership, in that the arts may help leaders achieve (1) greater sensitivity and awareness that influences perception, (2) the broadening of capacities to perceive and feel reality, (3) the expansion of skills, behavioral repertoire, and flexibility of response, (4) the stimulation and validation of their sense of beauty, (5) the generation of insights on the transferability of artistic skills in leadership and management, and finally (6) the awakening of the artistic within themselves.

4.6. Arts-informed Business Education

The connection between arts and management has been also compellingly made many times over in business education. It is the interface between arts and management that has been most prevalently investigated in the domain of management education and learning (Byrnes, 2009; Nissley, 2010; Snyder, Heckman & Scialdone, 2009). A plethora of studies has claimed that engagement with the arts (arts-based curricula) in the (business school) classroom beneficially complements the science-based management skills at analysis, rational decision-making and calculation with the skills for critical thinking, abstract reasoning, interpretation of ambiguous contexts, and observational skills. Using 'great literary art', scholars have argued students can learn empathy (Thexton et al., 2019), to cultivate 'ambiculturalism', and mediate cultural divides (Michaelson, 2015). The arts are mobilized for the development of business skills such as teambuilding, communication and planning (Taylor & Ladkin, 2009; Seifter & Buswick, 2005; Schiuma, 2011).

Adler (2006, 2015) registers an increasing trend in the use of arts-based methods in leadership and management education which is witnessed by a growing number of companies that have turned to artists for help and implemented artistic processes in their approaches to management and leadership. Often referred to as 'art thinking', the aim is to train managers to become better in thinking in new and along divergent lines, through techniques borrowed from

artistic practices or processes, with the intention to help boost organisational creativity (Robbins, 2018; Whitaker, 2016). Working together with artists, the aim of such educational programmes is to help break conventional thinking patterns, boost creativity and unlock latent creative potential in organisations (Berthoin Antal & Strauß, 2013; Eriksson, 2009; Styhre & Eriksson, 2008). In their study, An and Youn (2018) experimentally exposed participants to three stimuli, Van Gogh paintings, Bob Dylan lyrics and poetry, respectively. Participants were then asked to embark on a creative task, such as branding or developing a new product. In all three conditions, students outperformed the control group, which had not been exposed to a creative stimulus at all. As the stimuli were not directly related to the task, the authors conclude that art-induced creativity may be domain-independent, and applicable to workplace settings in the form of inspiration.

Taylor and Ladkin (2009) see four distinctive processes that are at play in managerial development with arts-based processes, which are 1) skills transfer, when people develop artistic skills that can be recontextualized and applied in ordinary work and organizational settings. 2) projection that helps people become aware of inner thoughts and feelings, that might not be as easily accessible through more ordinary leadership development methods. 3) Illustration of essence which helps managers to better understand the essence of a concept or situation, and a renewed view on leadership. In this regard, depending on the objective, various types of arts can be used – see, for example, Feltham (2012) on theatre, Spencer (2010) on music, Zeitner et al. (2015) on dance. Finally, 4) art 'making' can constitute 'a deep experience of personal presence and connection' (Taylor and Ladkin, 2009, p. 66), contributing to generic long-term objectives such as health at work.

Schein (2013) identifies six 'functions' of artists and the arts that could be beneficial to teach to managers. First, (1) art and artists stimulate us to use our senses to 'experience more of what is going within [and] around us', so as to better manage situations. (2) art 'does and should disturb, provoke […] and inspire', and should force us to look at what we normally disregard and avoid. (3) artists can stimulate the expansion of 'our skills and behavioral repertory' and our 'flexibility of response' through fostering mindfulness of feelings or habits. (4) art and artists 'stimulate and legitimize our own aesthetic sense', and, as such, can contribute to the beauty of consulting interventions. (5) analysis of artists' training and work can produce insight into 'what is needed to perform and what it means to lead and manage', in particular regarding improvisation. Finally, (6) artists 'put us in touch with our creative self' and grant us an awareness that 'reality is perpetually constructed through our own daily creative activities'.

An increasing number of business schools have therefore introduced, in one form or another, arts in the curricula. Especially, given the cumbersome access to data in organisational settings, educators have turned their attention to fictional literary works or 'great literature (De Cock & Land, 2006) as a treasure trove of ready-made empirical objects that offer a proxy, if not much layered, complex and nuanced insight into otherwise hidden organisational dynamics, including organisational empathy, coping with raptures, secrecy, grief and similar. Some arts-informed business education classics include Czarniawska-Joerges and Guillet de Monthoux's *Good Novels, Better Management* (1994) and Knights and Willmott's (1999) *Management Lives* are examples here. The arts, especially literary arts, have been most prominently studied as a convenient heuristic for the study of radical uncertainty and turbulences surrounding organisational change

and transitions (Śliwa, Spoelstra, Sørensen, & Land, 2013). The Shakespeare plays have been many times over signalled out as paradigmatic pedagogical tools providing inspirational, useful and generative 'lessons for management and leadership' (Corrigan, 1999)

4.7. Arts-led Urban Regeneration

A final area in which management and the arts expediently converge is in urban planning and real estate development. Especially following the publication of the enormously influential book by Richard Florida *The Rise of the Creative Class* (2002), artists have been championed as catalysis of urban regeneration. Through this managerial vision, artists bring about tolerance, creativity and bohemian values crucial for the economic development of cities and regions. Since, urban planners, property speculators and real estate developers have banked in on the spillover effects of the art and the presence of artists in urban milieus. They have considered the arts to represent a valuable economic and social resource in neighbourhood revitalization, gentrification and city marketing projects (Belfiore, 2015; Gibson, 2005). A slew of art-led regeneration initiatives sprouted out across the globe in the form of local arts festivals, spectacular art events, arts markets, designer-architecture as an urban policy-makers' effort at luring in profitable business such as retailers and IT companies, as well as tourists in the city.

Figure 23: *Cool Construction website screengrab - image:intl.m.dk*

Once cheaply inhabiting abandoned and desolated factory floors in industrial-era buildings, artists have 'magically' turned such sub-prime properties into extremely expensive desirable real estate—in a process known as gentrification. Zukin (2008) has showed empirically the huge importance of artistic lifestyle as ensconced in local subcultural contexts, for the re-imagination of urban planning, zoning and architectural investment in 'creative hubs'. Bain (2013: 4) has also meticulously demonstrated the beneficial role of artists and cultural workers on place-making and place-branding in the Canadian suburbia, places that more often than not have been considered backward, featureless 'cultural wastelands'.

Oher scholars have started to outline the detrimental effects of art-led urban gentrification that paradoxically has priced the artists out of the core urban milieus once the real estate prices

soured on the basis of the newly acquired arts-based 'coolness' and 'attractiveness' (Harvie, 2013; Forkert, 2013). Ferrerri, Dawson and Vasudevan (2016) have found that artists with precarious livelihoods that are otherwise displaced from urban centres apply in great numbers to become 'property guardianship'—flexible rentals in vacant buildings not always residential, in usually sky-rocketing rent urban areas in order to protect them from squatting but also to jack up their artistic appeal.

4.8. Discussion

Ever since Boltanski and Chiapello (2005) criticized managerial discourse for instrumentalising 'the artistic critique' in the attainment of business outcomes and economic results, the promises of freedom through work, the bohemianisation of workplaces and the extension of work as passion have permeated ever more intensely a range of business concepts such as: 'company leaders as artists', 'management as art', 'organizations as art works' and industrial making as 'an artful endeavor'.

The arts and management have since been hailed to be great—compatible, synergetic and productive, bedfellows especially by management, leadership and business education gurus. The marriage between the arts and management has been typically shrouded in star-stuck optimism and infused with high hopes despite a widespread lack of conclusive evidence of its mutual benefits and actual benevolence. Oddly enough, especially senior management seems to be fascinated and beguiled by the promissory potential of the arts in a business context. As Zambrell's (2015: 188) observes, there is 'a relatively high interest in arts' that could explain managers' openness to artistic interventions. Given such fascination, the arts are coming increasingly in focus in management and organization studies, with business school embracing the potential of the arts to reinvigorate innovation, facilitate organizational change, revamp organizational cultures and intellectually recharge a visionary leadership.

While 'great artists' (embodying the myth of the Romantic solitary and demiurgic genius) have been long mobilized as templets for the figuration of the ideal figure of the 'great leader', artistic interventions, in which professional artists, are brought in as innovation and organizational change and organizational learning consultants mushroomed in the last decade. Managerial discourses forcefully champion and celebrate with fanfares the role of the arts as catalyst of innovation and organizational change that provide the tool-kit and methods for challenging taken-for-granted premises and envisaging alternatives, for expanding the horizons of sensory perception and pushing people to think in unforeseeable ways, for increasing empathy and the capacity for dialogue. It still however remains to be seen how far the arts are accepted in their own rights, within organizations. By now, the literature often carries a strong notion of economic-gain framing and efficiency, pointing to the business benefits of adopting arts-based approaches, for individual or organizational learning (knowledge, personal growth, skills); health, healing and health promotion (well-being, stress reduction, emotional management); organizational processes (design and leadership of change processes, visualizations); marketing (corporate image, customer relationships). Specialists in artistic interventions started on their part to advocate for the creation of fertile conditions in which artistic interventions would flourish. Farman et al. (2015), identify predictors of success for contemporary artist residencies, note that

(a) the artists need to be immersed not only in the projects of the host but also in the organization, so that they are not treated as outsiders or spectators; and (b) the goals of the collaboration should be made explicit and, ideally, time-restricted.

Some evaluation studies question the long-term sustainability of artistic interventions. The 'ordinary' organizational environment is very different from the artistic one created for the intervention, and it might resist efforts to reproduce attitudes learnt during the intervention (Ancelin-Bourguignon, Dorsett, & Azambuja, 2019). Businesses usually approach the arts as quick fixes rather than an in-built solution. Businesses rarely rehearse. Rehearsal is the continuous, lifelong and daily habit that performers practice; it could not be transferred to non-artists easily or speedily. A paradigm change would be needed. Organizational habits should be readjusted throughout the whole organization by integrating creative practices into its everyday life. This is not possible without a partnership with artists. (Stockli)

However, much of the celebratory and optimistic discourses surrounding the rapprochement between the arts and management have concentrated on measuring the value-added quality or the effectiveness of the arts to solve organizational problems and business issues. Such a focus is unsurprising given that many such evaluative studies are typically conducted on behalf of a donor subsidizing social science efforts to support the claims of the societal, health and economic benefits of the arts (Berthoin Antal et al., 2018). Yet, besides such initial evaluation studies of the impact of the artistic interventions within organizations, we still know relatively little about work experiences, employment conditions and labour dynamics of the artist-cum-consultant. How do artists themselves perceive of the 'creative partnerships' and 'creative alliances' with businesses? What type of job prospects are those? Does the job as an art consultant attenuate or exacerbate the perennial artistic precarity? What skills do artists have to possess in order to survive within a business setting? What tensions do arise from the business encounters? How do the products of art enterprise engagements interact with existing models of ownership and intellectual property?

5. Embedding

The previous two section examined artist-enterprise relationships in which the two parties were both separate and easily distinguishable. In these cases, interaction between the spheres of art and enterprise was initiated by either the enterprise or the artist in order that some aspect of their practices could interact, collaborate with, or influence each other. In this section however, the boundaries that define artist and enterprise, or that define art practice and commerce are far more diffuse. In many cases the enterprises discussed in this section have sprung out of particular arts practices or particular projects, in others the existence of the company itself or the work it does is positioned as an art practice in and of itself. For others, its present state might not be considered an art practice but its origins in an art practice context make it worthy of study. Despite, or perhaps because of, these less diffuse boundaries and clear definitions, the examples in this section are potentially highly informative to understanding the possibilities of art and enterprise engagements as they contain some of the more experimental models, emerging forms of organisation and alternative forms of value and exchange.

Figure 24: *Landscape with fall of Icarus, Pieter Bruegel the Elder, c1560 - image: The Bridgeman Art Library*

Figure 25: *99 Cent, Andres Gursky, 1999 - image: andreasgursky.com*

As with art and technology, art and commerce too have always been linked. Commerce has often provided the financing for arts production, from the patronage of merchants throughout history to the commercial gallery and investment collection economies of contemporary art economies. In tandem, commerce has often provided art with its subject of study, from Breughel's *Landscape with the Fall of Icarus* (c.1560), through the photographic works of Andreas

Gursky such as *99 Cent* (1999) to contemporary video and installation work like *Cosmic Generator* (2017) by Mika Rottenberg. The first works in this section are those where commerce is not only the means and subject of the work but also its form. In other words, the following works are examples of enterprises started by artists, but which are explicitly considered as art practices in and of themselves.

5.1. Commerce as art

In the mid 1990s artist Ben Kinmont's work consisted of performance and social practice works through which questions of labour and value were persistent themes. Kinmont positions his work as 'third sculpture', a form that exists between the self and other (Rehberg). Kinmont's work, is largely non-monumental and therefore presents a challenge for collection and thus also as a means of providing a living for Kinmont. Kinmont's response to this non-monumentality was to produce archive boxes of documentation as monuments to the process-based actions of his work. However, as these had a relatively low desirability for collectors, they still presented a challenge for the collector and thus economically for Kinmont (Arning). It is within this context that Kinmont started the ongoing project *Sometimes a nicer sculpture is to be able to provide a living for your family* (1998-). The project consists of an antiquarian book selling business specialising in 15th to 19th century books about food, wine and the domestic and rural economy. The business is a successful enterprise in its own right, beyond thathowever, Kinmont conceptualises the money earned by the business as a form of third sculpture noting, 'The artwork is not the business itself, but the contribution to our cost of living'. He notes however, that the activities of the business also create a critical context, 'Because the business specializes in books about food and wine before 1840, it also provides a broader context in which to see domestic activity as meaningful' (Kinmont).

Kinmont's assertion that it is the financial aspect of the business that is an artwork places it in relation Yves Klein's *zone de sensibilité picturale immatérielle* (1962). Klein's "zone" involved the sale for a sum of gold of a deed to an immaterial space, eight of which were sold. In addition, Klein offered the buyer the opportunity to forego their claim to the immaterial space by burning the deed they had purchased in an elaborate ritual which involved Klein throwing half of the gold into the river Seine and which was witnessed and documented. Unlike Kinmont, whose work is concerned with the need of the artist to find a means of living within the general economy, Klein's work is concerned with value within the specific economy of art objects and art markets. Klein, for the opening of the exhibition accompanying this work, produced 3,500 invitations each of which contained a ticket without which entry to the exhibition would cost 1,500 francs. By implicating the purchaser and viewer in a system of exchange in which value was placed on immaterial goods dependent on the presence or absence of a deed or invitation, Klein implies the market as central to the construction of the art work's value.

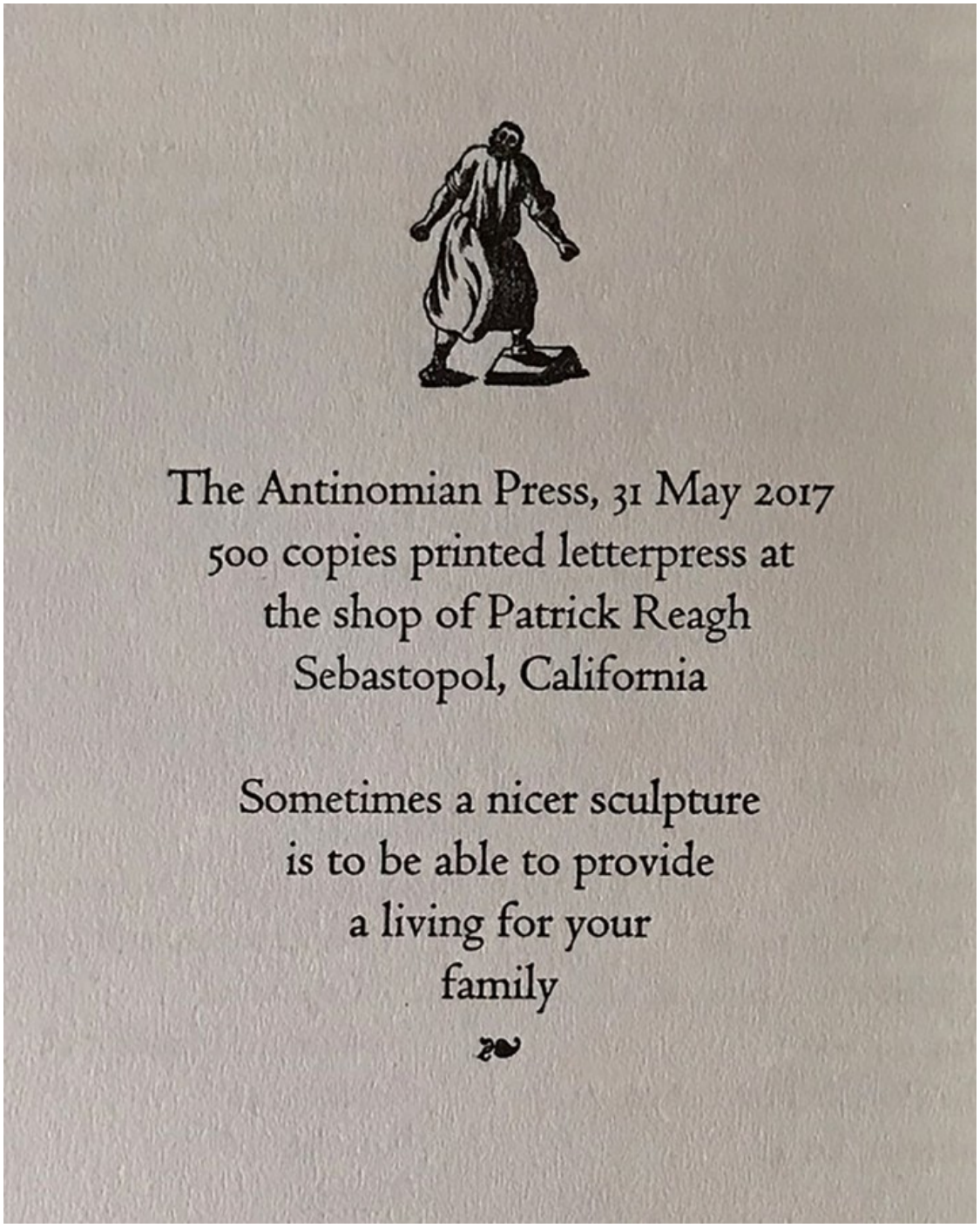

Figure 26: *Sometimes a nice sculpture is to be able to provide a living for your family (detail), Ben Kinmont, 1998 - image: benkinmont.com*

Figure 27: *Transfer of a "Zone of Immaterial Pictorial Sensibility" to Michael Blankfort, Pont au Double, Paris, 1962 - image: Giancarlo Botti, The Estate of Yves Klein c/o ADAGP, Paris*

This foregrounding of a contractual relation between artist and buyer in producing the economic value of the work, is also picked up by Carey Young in *Donorcard* (2005). Here, Young creates a series of individual cards that are signed by the artist but which state, 'In consideration of the donation of this card to me by the artist I hereby agree that this object will only become

and artwork by her upon the inclusion of my signature and that it will retain its status as an artwork solely for the duration of the artist's life, or my life, whichever is shorter'. This contractual implication sets up art practice and the value of art works as a relational labour engaged in equally by artist and participant as a joint enterprise. Unlike Klein, Young does not require the presence of witness or documentation to validate this labour. This same question of valuing an object as an art practice within the bounds of a contractually agreed framework is also picked up in the work of Jens Haaning. In both *Super Discount* (1997) and *Travel Agency* (1998) Haaning creates situations that use the different value placed by the state on art objects over "everyday" commodities as a way of interrogating economic structures. In both cases Haaning creates a business operating in an art gallery and thus the products of which are considered art. In *Travel Agency*, Haaning created a working travel agency at the Gallery Mehdi Chouakri in Berlin. The agency gave participants the opportunity to buy bus, train and flight tickets at lower than normal rates due to the fact that artworks are taxed lower than travel tickets in Germany. The tickets were sold with a certificate declaring the work as a work of art only if not used as a travel ticket. As with Young and Klein, Haaning implicates the participant in the determination of value not through a market mechanism but through contractual and relational means. Additionally, Haaning implicates the taxation regime of the state in this process too and in so doing places the participant into a tension with the taxation authorities by enabling their avoidance of tax (if the ticket is used). In a similar way *Super Discount* at Fri-Art in Fribourg operated as a supermarket selling common household goods like salami, canned food, pasta, cleaning products, etc. which were purchased in France at lower prices and taxed and imported to Switzerland as artworks. Once again, Haaning places the objects simultaneously in two systems with different value structures and value relations to the state and to the participant.

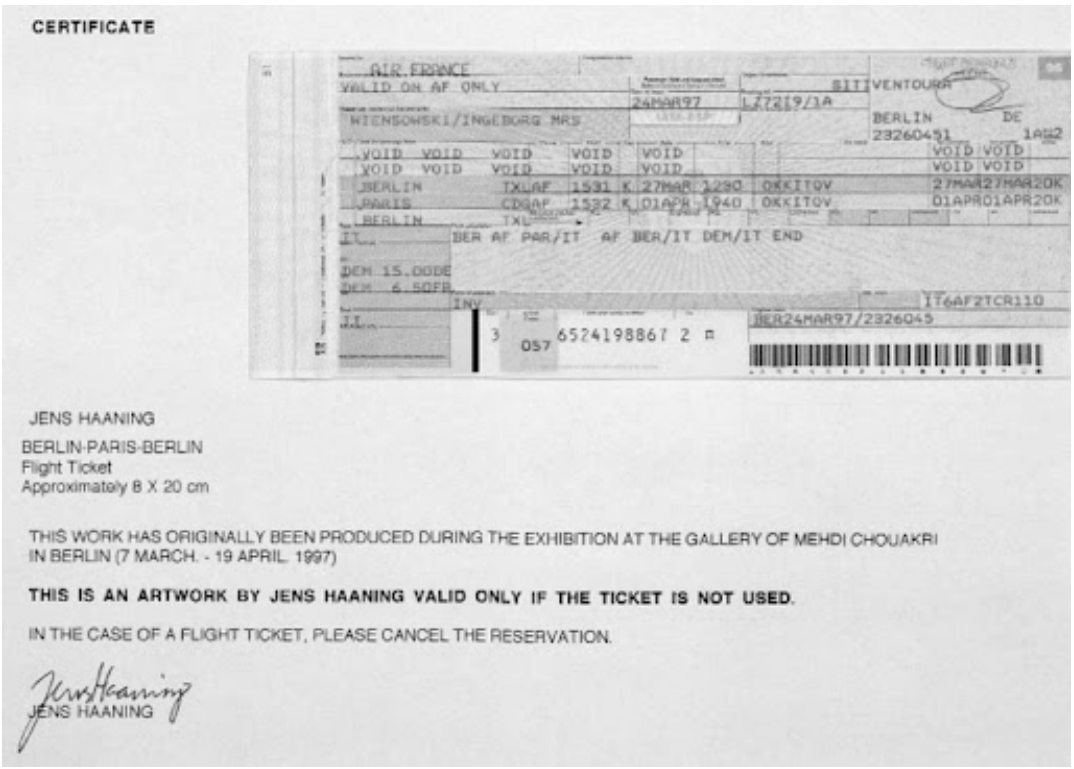

Figure 28: *Travel Agency (detail), Jens Haaning, 1997 - image: jenshaaning.com*

5.2. Exchange

The artist-enterprise formations presented above, focus on the value relations of art and enterprise activities. In doing so, they engage with financial systems that permeate the general economy in the form of money (or in Klein's' example gold which as a base commodity can be considered as equivalent in this context). Other art-enterprise engagements however have attempted to develop alternatives to this monetary approach through differing mechanisms of exchange or production. *Exchange Café* (2013) by artist Caroline Woolard was a hybrid café/educational platform created in the Museum of Modern Art in New York. The café did not accept money of any form, but instead asked customers to contribute material to the exhibition archive in exchange for tea, milk and honey. By asking participants to contribute to the material of the exhibition Woolard highlights their role in the production of the work, a role that is remunerated directly, not through art market value but in the form of a hot drink. The products offered at the exchange café further highlight economies of exchange; the tea was provided by Feral Trade Counter an organisation that moves food products by hand across borders through existing networks of individuals, milk was provided Milk not Jails a social enterprise that trades political support against mass incarceration for trading conditions with rural dairy farmers and the honey was provided by BeeSpace a research project in to human-non-human relations that sets up an habitats for bees in New York's Battery Park and which donates the honey produced (MoMA Studio). Notably, Woolard describes Exchange Café as an educational platform rooted in exchange rather than as an ongoing enterprise and the project receives external financial support from Volkswagen in order to make it viable (Woolard).

Figure 29: Exchange Cafe MoMA (publicity image), Caroline Woolard, 2013 - image: carolinewoolard.com

In a manner Similar to *Exchange Café*, *Datenmarkt* (2014), initiated by artist trio YQP offered goods in non-monetary exchange. *Datenmarkt* focussed not on the cocreation of value within the production of an artwork, but rather on the individual's production of value for technology companies through the exchange of data for use of services. Shoppers at the market in Hamburg

were able to purchase common household items such as bread, tinned fruit or milk. At the till, instead of exchanging money customers' bills were calculated in terms of access to differing amounts of personal information through the Facebook social media platform. As with *Exchange Café,* Datenmarkt also existed primarily as an artistic and critical platform rather than a functional and ongoing enterprise.

Figure 30: *Datenmarkt (installation view), YQP, 2014 - image: yqp.computer*

Company Drinks (2014-) initiated by artist Katerine Böhm however, is both an ongoing enterprise and an ongoing art project. Drawing on a historical tradition of East London communities going hop-picking in the summer months, *Company Drinks* organised foraging, picking, gleaning, growing and production workshops ("About"). The company operates across a number of economies including monetary, material, labour and knowledge exchange. *Company Drinks* sells drinks in a small number of shops local to its base in Barking and Dagenham, picking trips run by the organisation and attended by the public gather ingredients for the drinks, meanwhile a busy programme of workshops provides education and training to the public. Böhm draws on the work of Katherine Shonfield where she positions the work as "public" in a broader context that is not only spatial but as a space that marks access to action, community and others as well as space (Böhm 2). Crucially for Böhm, whilst *Company Drinks* operates as a community enterprise it is also an art practice. This she sees as critical in expanding the possibilities of both enterprise and art. She positions this practice as opposition to object-based commercial art practices that are limited by art economies. Instead, she positions her work (as Kinmont does) within everyday situations that highlight how culture is produced universally by everyone. At the same time running a business as an art practice, she proposes, allows it to be critical and radical due to her

contentions that, 'art has inherited this autonomous realm that almost every other area of society has had to give up' (ibid 3). Noting that this position for art comes from a historical position of bourgeois privilege, she proposes the need for *Company Drinks* to put the theories that radical art practices engage in into practice (ibid 5).

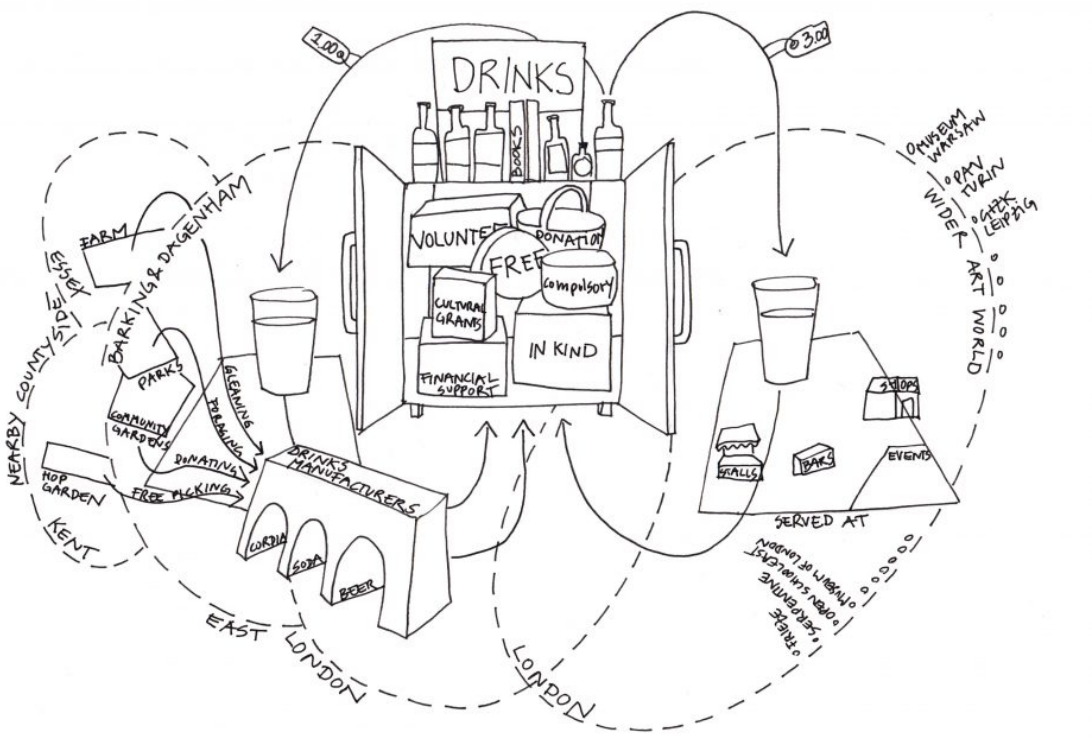

Figure 31: *Company Drinks diagram, Company Drinks, 2014 - image: companydrinks.info*

The hybrid monetary and exchange-based practice of *Company Drinks* places it at the fringe of dominant financial modes of production. This border is straddled in varying degrees by a range of practices within open-source, sharing and peer-to-peer communities. Whilst most of these are not positioned as art practices, and many, such as the development communities of free and open source software (FOSS) are highly entwined in the traditional commercial economies of major technology companies (Sundararajan), others explicitly ground this form of exchange art practice and theory. *Gynepunk* is one such example. Initiated by artist Klau Kinky, Gynepunk is an open source DIY-DIT community that seeks to decolonise the female body and provide access to gynaecological tools and tests as well as developing tools, toys and products that are based on embodied, embedded and cultural knowledge produced by women outside of capitalist and oppressive socio-medical systems. The work has been presented in galleries alongside its ongoing experimentation and online publication of tools and techniques (Chardonnet). *Gynepunk* is part of a wider group of open source and DIY technology art practices connected with the *Hacketeria* (2009-) network. Hackteria is described as a, 'webplatform and collection of Open Source Biological Art Projects instigated in February 2009 by Andy Gracie, Marc Dusseiller and Yashas Shetty', the intention of which is, 'to encourage the collaboration of scientists, hackers and artists to combine their expertise, write critical and theoretical reflections,

share simple instructions to work with life science technologies and cooperate on the organization of workshops, temporary labs, hack-sprints and meetings' (Dusseiller). *Hackteria* and *Gynepunk* are both closely connected with the "post-capitalist eco-industrial colony" located outside Barcelona which plays host to other similar open source and knowledge sharing projects. These art practices both require, and attempt to produce, alternative economies of exchange that can be sustained as transnational networks. However, in many cases funding for specific projects stems from engagement with galleries, workshops or other funding sources that force engagement with traditional monetary economies and existing institutions.

Figure 32: *Gynepunk poster, Gynepunk 2014 - image: hackteria.org*

5.3. Producing Goods

Where exchange based social art practices and projects seek to create radical new economies, there exist also many examples of artist-led enterprises that exist within mainstream economic systems. There are of course many examples of companies by artists and former artists that exist as traditional producers of (often high end) goods, however, as these tend to follow traditional business models, further description of them is not relevant at this point (although we shall return to them in the discussion later in this section). Alternatively, however, a number of artist-led enterprises have tried to focus on questions of labour, power relations, value chain and the production of what might be termed "social goods". The examples within this section can thus

be broadly termed as artist-led social enterprises. These exist with traditional models of financial exchange for services and goods but which have in tandem a goal of producing some “good” that exists beyond the production of profit.

Little Sun is a company initiated by artist Olaffur Eliasson and engineer Frederik Ottesen in 2012. Little sun produces solar powered LED lamps and chargers to provide lighting for some of the 1.1 billion people without grid connected electricity. The company sells its products in different parts of the world using a differential pricing model wherein sales of Little Sun products in wealthy nations subsides low cost selling in areas of more widespread economic deprivation. Additionally, the company initiated a foundation in 2017 that engages in development, education and awareness projects connected with the company’s key areas of concern – access to lighting and off-grid power, environmental sustainability, education (littlesun.com). The creation of the foundation and engagement with wider groups of NGOs blurs the definition of Little Sun itself as primarily a social enterprise or as a development NGO that engages also in enterprise. The lamp itself has also featured in exhibitions of design but also in art exhibitions further blurring the boundaries that define Little Sun (Ebbesen).

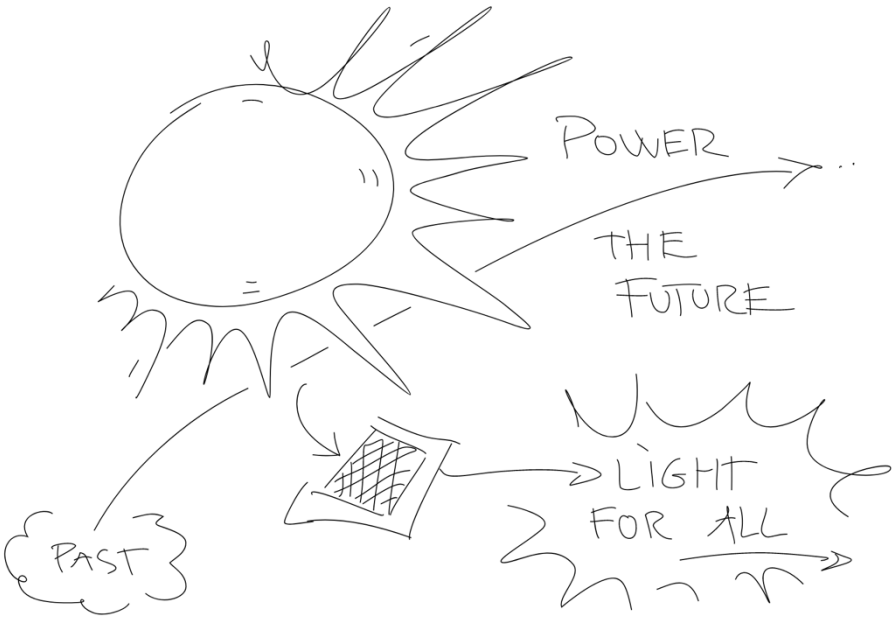

Figure 33: *Little Sun diagram, Little Sun - image: littlesun.com*

Fairphone is another example of a social enterprise that was founded in collaboration with arts practice. Initially stemming from urban mining workshop hosted by art, technology, and cultural institute De Waag in Amsterdam, Fairphone is a mobile phone manufacturer that aims to address electronic waste and environmentally and ethically destructive practices of extraction, production and disposal. Fairphone attempts to use non-conflict minerals that are extracted through fair labour practices or recycled materials mined from its electronics recycling programme. In addition, its products are built to be repairable and modular so that parts can be replaced thus reducing disposability (Fairphone). Although Fairphone exists within the commercial economy, it can be seen as proposing an alternative technological and commercial system

within this context, one that is based on circularity rather than linear, extraction-production-disposal and which posits an alteration of the dominant arrangement with resources and resource use (Hauke).

Figure 34: *Fairphone publicity image, Fairphone - image: fairphone.com*

As a social enterprise, Fairphone proposes the social benefit of its work as deriving from the means of its production rather than from its use. Similarly, Little Sun produces a social benefit as a by-product of the purchase of its products in economically advantaged locations. This model of artist-led company whose production is positioned as having "more equitable" supply chains also includes Chamar Studios. Started by artist Sudheer Rajbhar in Mumbai in 2018, Chamar Studios responded to the shortage of leather, created by 2018 Hindu nationalist laws banning the slaughter of cattle, that was driving low-paid artisan leather workers from the dalit communities in the Dhravi slum out of business. Chamar Studios developed products using recycled rubber from the slums that are produced by the former leather workers in "fair" working conditions (Sukumar). Although operating as a business Chamar Studios sits within Rajbhar's wider practice which engages with question of labour and class division. Similarly, artist-led companies such as Jeni's Splendid Ice-cream – and ice-cream chain that uses an "ethical" and "sustainable" supply chain or Dodgson Wood a farm that produces meat, wool and cosmetics in a "sustainable" manner propose alternate ways of doing business.

Figure 35: *New York - Food, Gooden, Girouard & Matta-Clark, New York, 1971 - image: Richard Landry 1971, Estate of Gordon Matta-Clark*

Other artist-led businesses see the product of the business itself as the production of a social benefit. Artist-led café *Luncheonette* (2013-), initiated by artist Jennie Moran in 2013 is a canteen in the National College of Art and Design in Dublin. It is described by Moran as, 'a prolonged exploration into the complex alchemy of placemaking, centred around the provision of shared experiences using nourishment, shelter, comfort, warmth, light, and tone to treat places so that they feel easier for people to be in and more poetic' (Moran). American sculptor and farmer Matt Moore whose work is also concerned with placemaking proposes his art and farming as two complementary ways of understanding the world and our place in it (Moore). Moore's project Greenbelt Hospitality, an urban farm and restaurant, aims to address questions of farming sustainability and its relationship to global macro-economic trends subject matter covered in Moore's installation work (Wolin). Moran and Moore's work, centring on placemaking and hospitality sit in relation to *FOOD* (1971) a restaurant created by artists Carol Goodden, Tina Girouard and Gordon Matta-Clark in New York. FOOD a, 'community-based business whose goal was to support and sustain the art community of downtown Manhattan' (Clintberg), was positioned by its creators as an intervention in the urban and commercial fabric (a theme which resonates with Matta-Clark's intersect hole sculptures) and a support structure for artistic practice in the area (Waxman). In these examples, it is not (only) the production itself that is considered as an art practice, but the use of ways in which its products place the consumer into differing relationships with space, others or wider economic and natural systems.

Figure 36: *hamar Studios publicity image - image: chamar.in*

5.4. Art objects

The projects above propose new “ways” of doing business through new means of exchange or in the relationships between the businesses and their suppliers and customers. In this section, a number of artist-led enterprises are described in which the product or company itself is considered as an art object. *Dulltech* (2014) by Berlin based Constant Dullart is a media player that wirelessly synch video across multiple platers for multi-screen gallery displays. Promising to resolve a significant technical challenge the player comes preloaded with the work of Dullart and thus on installation within the gallery immediately acquires and “screens” his work a tactic he proposes as similar to mail-art (Ordnung). The player, however, is part of what Dullart describes as a larger relational art work or, ‘participatory anthropology’ (Medium.com), examining the interaction of consumer tech products, those who purchase them and their production in the factories of Shenzen. Dulltech no longer offers its products for sale.

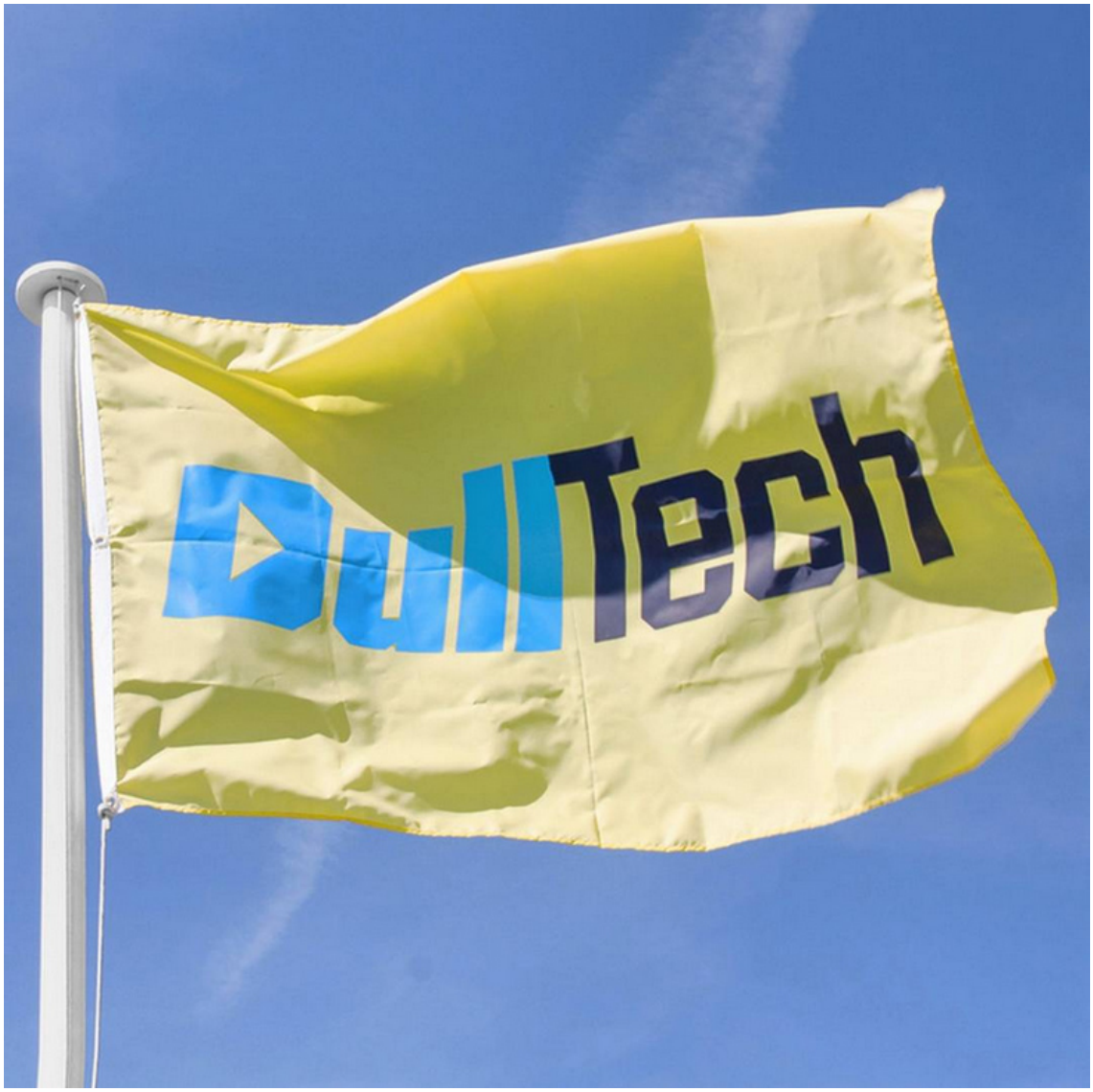

Figure 37: *Dulltech publicity image, Constant Dullart, 2017 - image: artnet.com*

Whilst Dulltech created a certain amount of debate (which is still difficult to resolve given Dullart's successful manipulation of the media for past projects) about whether a physical product was actually produced, sold and shipped. Another artist-led commercial enterprise *Blackness for Sale* (2001) by Mendi and Keith Obadike listed Keith Obadike's "blackness" on auction site Ebay.com. After a number of bids reaching a peak of $152 Ebay terminated the auction due to the "inappropriateness" of the product. Obadike's work was intended to challenge the relationship of race to e-commerce in particular noting the colonial references of popular (at the time) browsers such as Netscape Navigator, Explorer, Amazon and eBay. Additionally, Obadike attempted to address the relative commodification of blackness in different commercial contexts referencing the marketing and marketability of different black roles such as the male athlete Shaquille O'Neil or female singer Grace Jones as successfully marketable only in as much as they feed into existing white narratives of blackness in contrast to other forms of black identity in particular black female identity (Obadike).

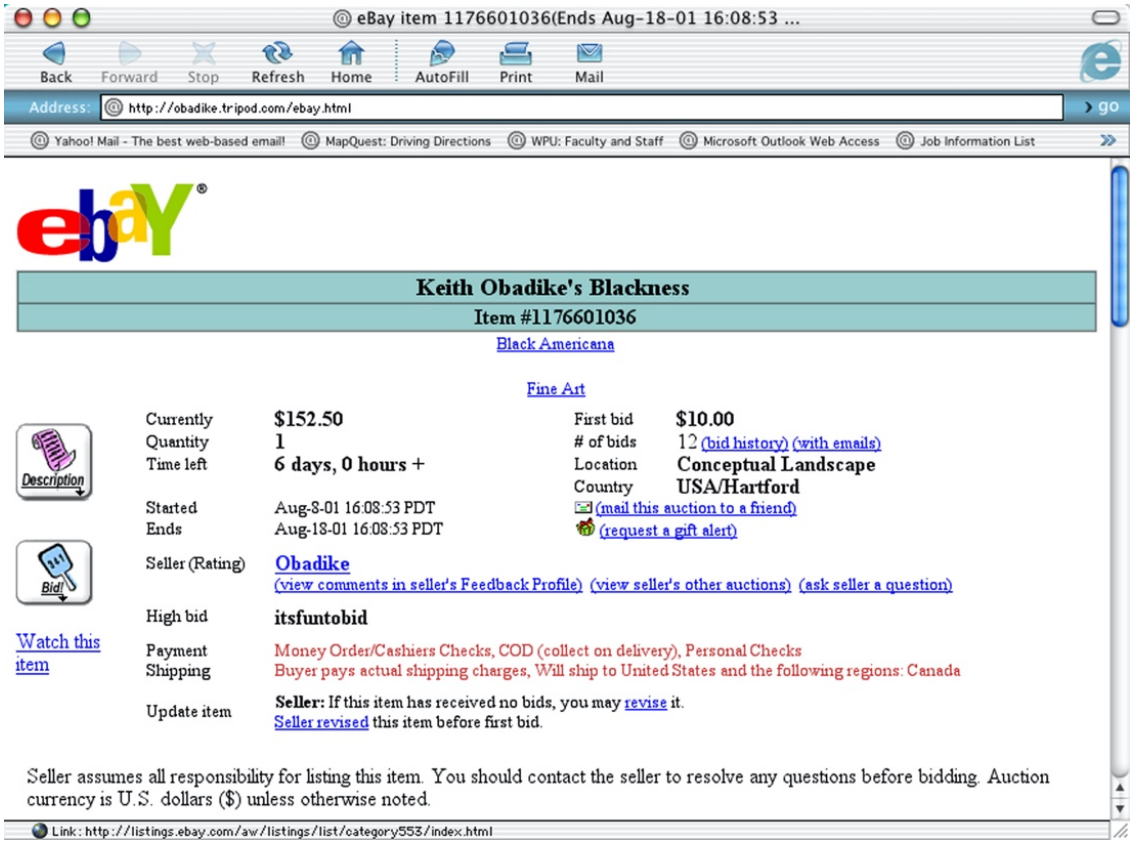

Figure 38: *Blackness for Sale screenshot, Mendi & Keith Obadike, 2001 - image: obadike.com*

Another artist-led enterprise that provides critique of commercial and art world practices is the pigment sales of artist Stuart Semple. Semple whose products include Black 3.0 and The World's Pinkest Pink produced his products in response to artist Anish Kapoor's exclusive rights deal with Surrey Nanosystems for the use of Vantablack – the worlds darkest colouring which traps almost all visible light on its surface. Semple's products, such as *Black 2.0,* which is marketed as the blackest commercially available paint, are for sale to anyone with the exception of Kapoor. Semple's company, a direct commentary response to Kapoor's licensing arrangement is however now a successful paint company having sold thousands of units of its first product (The World's Pinkest Pink) and now offers in a range of additional experimental paint products (Semple).

Figure 39: *Black 2.0 publicity image, Stuart Semple, 2018 - image: culturehustle.com*

Nonfood and Coeio are other artist-led enterprises that develop experimental products stemming from their founder's art practices. Coeio initiated by artist and scientist Jae Rhim Lee develop a burial suit that using embedded mushroom spores aids the decomposition of the body after death and which she describes as helping to transition from, 'a death-denying culture into what she calls "decompi-culture"—a radical acceptance of death, and recognition that our physical presence is intimately connected to the environment' (Upstartco-lab.org). Nonfood, a company that produces algae-based food products, was initiated by artist Sean Raspet in 2018. Alongside a sculptural practice Raspet sees Nonfood as part of a process of altering the global relationship to food production, in particular energy intensive monocultural agriculture (Keunnen). In this way the product exists as both artistic proposition and as part of the practical and tangible response to critical engagement with the work as art.

Figure 40: Nonfood publicity image, Nonfood, 2020 - image: eatnonfood.com (left) / Coeio publicity image, Coeio, 2020 - image: coeio.com

5.5. Discussion

The examples in this section propose a somewhat different relationship between art and enterprise than those seen in earlier sections, in some the act of business itself was seen as an art practice, in others the profit or mode of exchange was considered as art practice and in still more the business was initiated by an artist and some less or more distinguishable part of this practice permeates the business activities. These artistic and enterprise practices raise a number of questions about how we define what constitutes an art practice and when is an artist "doing" art and when are they doing something else? They also raise questions about enterprise and the place of individual enterprises within wider economic systems, within markets and human relationships. It is worthwhile briefly to examine a few of these issues and highlight how these artists led businesses propose new ways of thinking about and acting in the world of enterprise.

One question that repeatedly arises in the work of artist-enterprise engagements is that of value. As highlighted by the work of Kinmont, Haaning or Klein, there exist multiple registers and markets through which objects or labour are valued depending on their positioning either as artworks or not. Haaning and Kinmont both circumvent traditional economic value systems by positioning their works as artworks and thus evading common tax or labour practice regulations. By demonstrating the presence of these alternative valuing systems, these works demonstrate the operation of other types of capital, such as cultural capital, within socio-economic systems. However, as Kinmont's *Maybe a nicer sculpture...* makes starkly clear the exchange between these multiple systems is not always linear and movement between these systems not always possible. Ultimately the requirements of financial systems of value take precedence within the general system of economy. This question of value provides an opportunity for thinking about immaterial value in the context of the digital transformation. As Klein and Semple's work highlights much of contemporary value is bound up in legal instruments determining licensing, access and rights or replication rather than material considerations such as scarcity.

The question of scarcity and reproduction in the digital context is particularly highlighted in the open source work of Gynepunk, whose open-source 3D printable gynaecological tools can be multiply adapted and reproduced in an attempt to short circuit contemporary capitalist economics based on concentrated intellectual and physical property ownership in what is described as "the captured economy" (Lindsey & Teles). This critique permeates the other examples of exchange-based practices. In particular, *Datenmarkt* questions the asymmetric relationship between data producers (platform users) and data owners who profit from the concentrated ownership or and extraction from amalgamated user data. Doing so these works raise important questions generally for the digital transformation wherein large amounts of unpaid labour go into the production of data sets and data relationships through which major digital companies extract value. In this context the open source work of Gynepunk and other Hackteria projects propose an alternate and parallel economy rooted in the sharing economies of the early internet rather than the platform economies of its current incarnation. Sitting somewhere between these positions is *Company Drinks* which straddles multiple systems of exchange financial, labour, material, and knowledge exchange and which, in so doing, places it in relation to questions of labour value discussed above.

The question of labour value is reflected in the work of many artist-initiated enterprises, in particular, the artist initiated "fair" supply chain companies like Chamar Studio and Fairphone. These "fair" trade practices propose applying a critical lens to the processes that go into production of services and goods. This position is present also in *Dulltech* which poses questions about the relationship between wealthy consumers of advanced technology and its producers in the technology factories of Shenzen. Although it is possible to think of any arts-enterprise-engagement through the framework of relational aesthetics, these examples particularly highlight the social field through which the material production takes place In doing so, whilst highlighting their art practice context, they expose the consumer, the producer and the relationships between them to aesthetic judgments that define Bouriards understanding of relational art (Bourriard 7). These projects also raise important questions for understanding the value and expectation placed on arts practice and artist in relation to enterprise with regard to ethics. It is possible to suggest that an understanding of art (and thus artists) as grounded in "more" ethical practices than enterprise generally, has the potential to create a position where the artist is seen as providing the ethical lens through which enterprise must examine itself. If as *Company Drinks* artist Böhm suggests that art remains the sole inhabitant of an autonomous critical realm in society this places a huge burden of responsibility on the artist in this role but also creates a narrative in which the artist must be valorised as more ethical than others. As such, more than examples in other sections, what these hybrid practices raises is when is an artist "doing" art and when are they not?

6. Conclusions for further research.

The previous section describes a range of artist-enterprise engagements ranging from short term residencies, through enterprises whose existence is fully entwined in art practice, to speculative art and enterprise experiments. In order to best to learn from these practices in a way that can help guide the engagement of art and enterprise in the context of the digital transformation it is worthwhile to highlight a number of areas that require further examination throughout this wider research project. These key questions suggest themselves from the range of existing artist-enterprise engagements - from their successes and also from the challenges that they have presented for the artists and enterprises involved and as platforms for making art. Through an examination of these, it is not intended to create an overarching theoretical framework through which artist-enterprise engagements can be viewed, but rather to create a practical understanding of the potentials, risks and opportunities that present themselves through artist-enterprise engagements. In particular, through this review, it is hoped that a number of key features of artist-enterprise engagements can be identified that will allow for further exploration of the potential of art to impact on the digital transformation in a way that directs it to greater benefit to wider groups of people in social, cultural, environmental and political terms.

6.1. Relationships

The examples provided throughout the previous sections describe a wide range or relationships between artists and enterprise. At one end residency models create short term engagements outside of the company's main operations, following these examples of artist working in the role of consultant for short term engagements position the artist as external specialist and at the other end artist led companies place art as central to the operation of the enterprise itself. These examples thus describe a relationship between artist and enterprise that moves from one of total exteriority to one of total interiority. At the former end, the artist and enterprise remain as two separate entities and so it is perhaps easier to describe the relationships that occur in this arrangement. To do so requires examining both the different forms of exchange between the parties and also the different position from which these exchanges are made. For example; in most cases involving artist in residence programmes the artist is provided with a small financial stipend for the duration of the residency. Although it is not possible to ascertain the rates provided on each residency, it is possible to suggest that in most cases the level of remuneration (e.g. Planet Labs $1,000/pm, Autodesk $2,500/pm) is less than that of typical employees within the company. In addition, most residency programmes offer the artist studio space as part of the benefit of the project. It is possible to suggest through these examples that one factor influencing the relationship between the parties is financial asymmetry. The precarious financial nature of art work is also a determining factor in artist-led business examples such as Kinmont's *Maybe a nice sculpture is being able to provide a living for my family.* In the case of residency programmes, this asymmetry can be seen as shaping the exchange between the parties and thus having negative implications for the artist potential to critique or influence the activities of the more powerful party. Understanding the reasons for and context of the artist engagement with enterprise is thus a key element in understanding this relationship and its potential for allowing free exchange between parties.

It is also necessary to consider these relationships in terms of exchange in the opposite direction. The case studies above demonstrate that there exists a wide range of different material and immaterial expectations of artist to enterprise exchange. In examples such as Facebook and Planet Labs there is primarily a material exchange wherein the company retain ownership of the art works produced as part of the decoration of their offices. Notably, however, the first Facebook artists - David Choe and Drew Bennett (who organised the AIR programme) were paid in shares of Facebook, which at the time of flotation were worth USD$200million and are worth approximately USD$1.4Billion at a current share price of USD$260, for their long-since over-painted murals, making them perhaps the most expensive art works ever produced. In others, where artist retain ownership of the works produced, the benefit to the company must be assumed as entirely occurring in some other form be it in terms of knowledge exchange, marketing benefit or company culture. In these cases, as well as partially in the cases where there is a material exchange, the artist must be seen as providing something that is otherwise unavailable within the enterprise. Here, it is possible to suggest also that there is an asymmetric relationship but that in this case the artist is seen as have the greater resources in some less explicit categories such as creativity, ethics or criticality. Understanding the relationship between artists and enterprise requires theorising the terms of the exchange beyond those which are explicitly in the descriptions of the programmes or contracts between the parties. Thus, a key question becomes - what are the assumed values and immaterial exchanges that occur in artist enterprise engagements?

Following this approach, it should also become possible to understand the relationships between art and enterprise in the case where the artist and enterprise are less distinguishable from each other.

6.2. Intentions

It is also worthwhile to consider artist-enterprise engagements through the lens of intentions. As the examples throughout have shown, the intentions of artists and enterprise engagement have varied wildly. For artists, this particular set of engagements are grounded in the financial realities of the general economy and making a living. Against a backdrop of decreasing public funding opportunities and greater competition the privately-funded residency model perhaps represents an ever-greater proportion of an already small funding pool. However, for artist whose practice already aligns with, or interrogates, the normal actions of a particular enterprise it is possible also to suggest the intention of the engagement is also consistent with the artist's wider practice. In contrast to this – the professionalized provision of arts services and techniques to enterprises described in "Consulting" propose to offer similar services but do so in an altered financial arrangement in which the artist operates entirely in the enterprise market and no longer in the cultural market. It is possible to suggest that the intentions of enterprise also differ in these two contexts. In the case of consulting it is possible to suggest the "collaboration" with the artist as service provider is valued within the operation of the enterprise. Usually this is contextualised in terms of some form of increased creativity amongst the enterprise workforce. In the cases of residing this assertion is less clear. Whilst in some examples there seems to be clear collaboration between the work of the enterprise and the artist in many cases this seems not to

be the case and the intention of the enterprise must be thought of in other terms. In these cases, it is necessary to consider the engagement in terms of indirect or unspoken benefit to the enterprise such as public relations benefit or sharing of cultural capital associated with the artists or artist generally.

6.3. Success

It is also possible to consider artist-enterprise engagements in the context of their outputs and in terms of their measures of success. For enterprises, traditional metrics such as profit or revenue may be less useful than other metrics for understanding both internal and external relationships created through the art enterprise engagement. Measures of creativity, collaboration or employee satisfaction, for example, may be relevant in exploring the success or otherwise of artist-enterprise engagements, meanwhile measures of relationship with those outside the enterprise from supply chains to customers may also be influenced by artist-enterprise relationships. The measurement of success for enterprises is of particular interest in the case of artist-led or social enterprises that attempt to eschew profit as the primary business motive. For artists too, the measurement of success is challenging in artist enterprise engagements. Existing outside of traditional art worlds and economies the works produced often evade the currency of reviews, art-writing or peer engagement. Whilst collaboration with enterprise might provide opportunities for artist to develop their practice, in the case of large enterprises it is difficult, even in cases where clear collaboration takes place, to expect that these engagements will produce clearly identifiable effects on the enterprise. Although visibility in art worlds is generally limited, interestingly, literature from business journals and magazines (e.g. Hart, Schnugg, Thayer) generally speaks of artist enterprise engagements has having positive effects on the enterprise. However, in doing so there is rarely, if ever, any qualification as to what constitutes that success. John Latham, one of the founders of APG proposes a metric solution to the measurement of artist-enterprise engagement with his proposal for the delta unit. Described in *Artificial Hells, the, '"*Delta unit" (Δ), [was] a new way to measure human development, and moreover to determine the value of a work of art, by measuring its importance not in monetary terms but through the degree of awareness it produces (from unconsciousness to the most heightened state) over a sustained period. This idea was key to APG, since the organisation as a whole was committed to the long-term effects of artistic intervention in society, rather than seeking short-term demonstrable goals' (Bishop 171). Although Latham's delta unit gained no traction in either art or management disciplines it points towards the need to find new ways to measure the success of artist-enterprise engagements that can encompass the complex relationship and goals of such collaborations. Understanding art-enterprise engagements thus requires new ways of measuring and describing success and failure that can deal with the complexity of the differing timescales and different intentions that are bound up in artist-enterprise engagements. In doing so, these measures will need to describe a terrain for which, so far, there has been no map. It is possible that no single measure for success will be applicable to each project. The challenges created by needing to create impact in an enterprise and create visibility in an art context may exist in an inverse relationship such that achieving one may require foregoing the other. Thus, any measures of success may will need to derive from the intentions of the differing parties.

6.4. Art, Enterprise and the Digital Transformation

If these headings allow will help us to try and map and theorise artist enterprise engagements generally it is then necessary to frame this in the context of the digital transformation. How does the digital transformation impact on these engagements, and what in these engagements is of particular impact in the context of the digital transformation? Throughout the examples in the previous section art-enterprise engagements take many forms and are varied in terms of their successes, intentions or the relationship they describe. Across almost all of the examples however, (the most notable exception being Facebook,) they exist generally in a mode of experimental enquiry. From the examples of E.A.T., in which new technologies are tested outside of their intended context, through theatre and performance workshops in organisations that test new modes of organisation thinking and acting, through artist led business like Company Drinks which test new models of resource, labour and material exchange. This experimental and critical stance is perhaps the position from which art-enterprise engagement has most potential to impact on the digital transformation. As discussed at the outset, the digital transformation has the potential to overturn existing practices in many, if not all areas of life. Art enterprise engagements that push at the experimental boundaries of enterprise practice and that critique existing practices in new contexts and emerging practices as they develop have the potential to discover and inform new ways of engaging with digital technologies and their impacts. As part of the digital transformation, enterprises will need to adapt new models of doing business that account for changes in labour and task organisation – projects such as Klein's *Zone Immaterial*, *GynePunk* or Company Drinks that problematise value creation and exchange offer potential to help explore new value models in the face of AI and automation that extract value from user labour and data. Similarly, projects such as *Datenmarkt* offer potentially new ways to understand the value of data produced by individuals and the exchanges made in relationships with surveillance-based business models. Meanwhile, the "fair" and circular economic models of companies like Fairphone also help to develop new ways of understanding the relationship between the digital transformation – which often appear immaterial – and the material impact of the technologies that underpin it and the resources that maintain them. Critically, however, rather than through specific projects such as described above the greatest potential for art-enterprise engagement to impact on the digital transformation may be less related to specific technological applications and more related to the cultures of enterprise that produce them. The examples provided throughout the previous section, be they in the residing, consulting or embedding categories highlight the importance of involving wide-ranging knowledge systems in the production of technologies. In particular, they highlight the need to respond to overly segmented and siloed knowledge systems that, although producing excellent technological innovations within particular contexts, often fail to predict and respond to the implications of these innovations outside of these contexts. As such, art-enterprise engagements offer a model for bringing diverse knowledges together. Whilst the examples above demonstrate that the results of these experiments are varied, the challenges presented by them in many cases suggest their effectiveness in exposing different knowledge systems and cultures to each other. This step, it appears is essential in helping to direct the digital transformation towards wider social benefit across these different cultures.

7. ARTSFORMATIONS – five thoughts for art enterprise engagements

Art, enterprise and society – understanding intention.
Art-enterprise engagements automatically operate across multiple registers. Understanding the intentions of each party is critical to negotiating a collaboration. Recognising and allowing that these intentions will not align fully is important in setting up an engagement that can be beneficial in these differing contexts.

Understanding relationships – navigating asymmetry.
Artist-enterprise engagements are always asymmetric. Understanding and recognising these asymmetries and is key to the potential of any engagement. Differences in financial security, size or flexibility might limit the ability of either artist or enterprise to engage in a project, whilst at the same time enhance the other player's ability to do so. Recognising that these asymmetries generally favour the enterprise is necessary.

Understanding success - visibility versus impact.
The "success" of arts-enterprise engagement is highly contextual. Engagements that are focussed on the internal structures of the enterprise may not produce highly visible outputs within public or art contexts. Conversely, spectacular public facing outputs may have little critical interaction with the enterprise's functions. Success in both categories may be desirable but may not always be achievable. Existing measures of success have often focused on the impact from the enterprise perspective, there is a need for greater understanding the impact of art-enterprise engagements for artists and outside the organisational lens.

Art making with enterprise – negotiating collaboration.
For artists, working with enterprise presents distinct opportunities and challenges. Unlike much art-making in gallery, social, performance or publication contexts art-making with enterprise often requires negotiating constraints set by the enterprise that range from forms of presentation and exhibition, ownership and intellectual property, use of materials and documentation, whilst the resulting work may be "used" in promotion and marketing contexts. Despite these additional demands, artist-enterprise collaborations can create possibilities for artist by allowing access to tools, contexts and opportunities that would be otherwise inaccessible.

Supporting art-enterprise engagements – policy directions.
Recognising the potential of art as a critical practice in engaging with advanced technologies requires supporting artists in engaging with enterprises in ways that address existing asymmetries. Advanced technologies often require vast arrays of technical skills to engage with, whereas financial asymmetry and private sector support limit the independence of artists in art-enterprise engagements. Future policy designed to support artist engagement with enterprise needs to support artist and general critical education in advanced digital technologies as well as providing independent funding support to allow critical engagement with enterprises. Concurrently, by supporting critical and creative education in enterprise focussed disciplines such as technology research and business education policy can support a reduction in both perceived and actual asymmetry between enterprises and artists in these domains.

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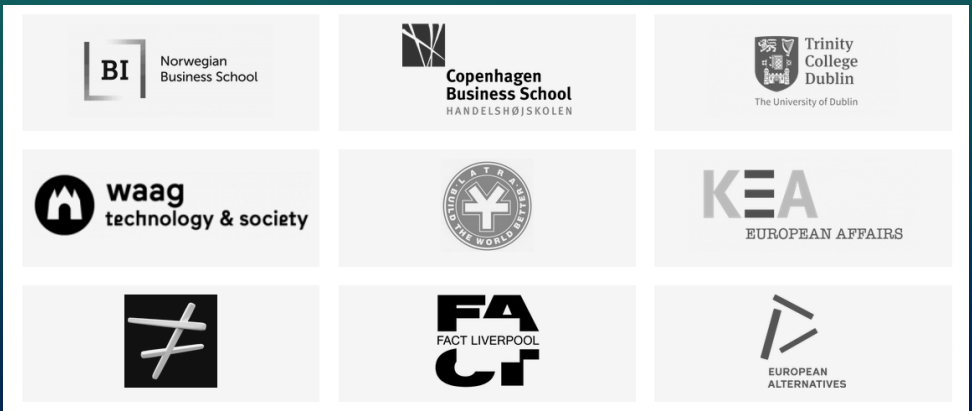
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