Work, labour and action: the role of participatory design in (re)activating
the political dimension of work
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Work, Labour and Action. The role of participatory design in (re)activating the political dimension of work.

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Abstract

This article[1] discusses the difficult task of Participatory Design (PD) to design for/with the political dimension of work, such as the work environments' care for inclusion of different groups. It first describes PD's role through time in giving form to this political dimension after the crisis of Fordism and detects some challenges PD is confronted with in addressing this task today. It then explores how Hannah Arendt's reflections on the political dimension of work can contribute to addressing these challenges, researching how her definitions of 'work', 'labour', 'action', 'agorà', 'heroes' and 'interests' can be used as steering concepts that support the (re)activation of this political dimension. We describe how we used Arendt's concepts to steer a PD case in urban design with a group of architects, companies and citizens on how to reintegrate work into the city space of Antwerp. This paper ends with a discussion on the implications of using Arendt's concepts in PD for work.

KEYWORDS

Participatory Design, Politics, Work, Philosophy, Public Space, City, Architecture

1 INTRODUCTION

Terms like co-working spaces, creative industry or sharing economy make design research into the future of work in our cities sound easy going. However, designing for issues of public concern, like work, is a challenging process which requires close attention to these issues' political dimension [1]. Many scholars, like Jane Jacobs [2], have noticed that this dimension is easily neglected by spatial planners, designers, managers or policy makers because of the complexity of questions in relation to globalisation of work, material opportunities and boundaries of work in the city space or the involvement of people from a diversity of backgrounds, with different concerns on different scales. This article uses the philosophy of the German philosopher Hannah Arendt to investigate the role that Participatory Design (PD) research can play in (re)activating this political dimension of work. Throughout this paper, we research how Arendt's theoretical framing of 'work' in her book The Human Condition [3] can support PD research in its contemporary attempts to (re)activate the political dimension of work in urban contexts. This research question will be addressed in this paper in a literature, case study, and discussion section.

First, the literature section (2) frames some challenges work is facing in Fordism because of the separation between work and politics and the possibilities opened by its crisis to re-frame this idea of work in connection to politics. It continues (3) by discussing the rationale of how the political dimension of work has been addressed in the history of PD and the challenges this approach is currently facing. We address these challenges by focusing on Arendt's book The Human Condition (4), in which she discusses how, since modernity, the idea of work has become disconnected from politics. In this book [3], she discusses the contemporary discrepancy between the private areas of 'work' (i.e. the creation of the useful, the production of goods in workshops) and 'labour' (i.e. the creation of the necessary for people's subsistence, to be pursued in the private sphere), and the public/political concept of 'action' (i.e. the undertaking of the role of active citizen in the public realm) ([3], p. 9). She describes how these concepts were connected in ancient Greece

where each citizen could experience the completeness of the public and private human condition. This harmonious relation between 'work', 'labour' and 'action' became separated by the rise of representative democracy in ancient Rome, where citizens could concentrate mainly on their private issues and delegate the public ones to other citizens representing them in the parliament. Arendt [3] discusses the possibility for the private ('work' and 'labour') and public ('action' in the political life of the city) to be reconnected again. Work can thus regain attention for its political dimension, when it is reconnected to labour and action. We conclude this literature section with a discussion on the value of these concepts for steering PD's continuous efforts to (re)activate the political dimension for work in urban contexts (5).

In the second part of this paper, we explore the value of these steering concepts in a case study. It (6) discusses a PD case in urban design in which we reflected with the city of Antwerp, a group of architects, companies and citizens on how to reintegrate work in the city space to enhance its public and political value, for instance to support the inclusion of workers from a rich diversity of educational, cultural and social backgrounds. This exploration informs a final discussion (7) on how the findings of the case study gave us indications on how Arendt's concepts might be helpful for PD's continuous efforts in framing, supporting and reactivating the political dimension of work within local and global contexts.

2 WORK AFTER THE CRISIS OF FORDISM

This part further unfolds the formulated problem statement that questions what work means in an era of transition towards a new paradigm of work, as an alternative to the Fordist idea that was disconnected from politics. The concept 'Fordism' was named after Henri Ford's approach to work, coined by Frederick Taylor and gained resonance via Antonio Gramsci's 1934 philosophical essay "Americanism and Fordism", where he says:

> Taylor expresses the real purpose of American society - replacing in the worker the old psycho-physical nexus of qualified professional work, which demanded active participation, intelligence, fantasy, and initiative, with automatic and mechanical attitudes. This is not a new thing, it is rather the most recent, the most intense, the most brutal phase of a long process that began with industrialism itself. This phase will itself be superseded by the creation of a new psycho-physical nexus, both different from its predecessors and superior. As a consequence, a part of the old working class will be eliminated from the world of work, and perhaps from the world. [4]

Gramsci states that Fordism brings an idea of deskilled labour in which workers and work environments lose touch with their political role in society. He could foresee the disappearance of this paradigm and the return to the debate on work's political role. With Gramsci we thus ask ourselves what comes after the crisis of Fordism that has been felt since the '60s. This question has been well-debated in political philosophy, sociology and economics. In the essays collected by Ash Amin [5] this new paradigm of work is defined in different ways; such as post-Fordism that stresses the willingness to find a new path for work after the crisis of Fordism, neo-Fordism that stresses the continuity with Fordism and after-Fordism which designates "a period after Fordism rather than a new phase of capitalist development" [5]. These discussions on what comes after the crisis of Fordism go beyond the intention of this paper, but demonstrate the importance of addressing the political dimension [6] [7] [8].

Within the field of PD there is a rich discourse dealing with this issue of politics in work, often by building on Science and Technology Studies (STS). Binder, Brandt, Ehn and Halse [9] say that STS and particular Actor Network Theory (ANT) have shown that representation in politics is a precise work of mediating, which is at play when making democratic decisions, such as in the domain of work. These authors state that PD extends these forms of mediation by 'making' new forms of public engagement and representation. This paper complements the existing PD literature by means of a philosophical discussion on politics that offers additional vocabulary to debate the advancement of public representation and engagement. We were inspired by Arendt's philosophical idea of work, that has recently resonated within design research, such as in the book The Craftsman [10] by Richard Sennett.

In The Human Condition [3], Arendt describes what work could look like if it had a stronger political character. She describes work in Fordism as depersonalised and the labourers as 'homo laborans' who lost the meaning of their work and their own space in society.

> The ideals of homo faber, the fabricator of the world, which are permanence, stability, and durability, have been sacrificed to abundance, the ideal of the animal laborans. We live in a labourers' society because only labouring, with its inherent fertility, is likely to bring about abundance; and we have changed work into labouring, broken it up into its minute particles until it has lent itself to division where the common denominator of the simplest performance is reached in order to eliminate from the path of human labour power —which is part of nature and perhaps even the most powerful of all natural forces—the obstacle of the "unnatural" and purely worldly stability of the human artifice. - [3] p126

Her philosophy supports us to see this was and can be different and to better frame how the crisis of Fordism can open up ways for PD to reconnect work and politics when addressing design challenges. The design challenge we deal with in the case study, is that in many European cities the traditional industries have closed down. This has confronted cities

with a challenge to create alternative work environments in a Fordist infrastructure, where a post-, neo- or after-Fordist environment has started to grow. In Belgium this is characterised by a growth of smaller-scale work environments that are often both locally and internationally oriented and by a decreasing power of unions in the debate on work. In this context, the public stakes in designing future work environments are blurred: what needs to be discussed, by whom, and when [11]? This has complicated and intensified the debate in PD on how to integrate work in cities and international contexts, while taking into account the public dimension; such as how to provide work for everybody in a context of a decreasing amount of large businesses or how to address ecological challenges through technological innovation in energy cycles [12].

3   PD OF WORK OVER TIME

In the history (of PD) there has been a particular focus on designing for the political dimension of work. Many democratic design experiments [9] have taken place in advancing the modes of representation of voices in designing work (environments).

PD of work in the 1900s and the seventies

Discussing public interests in relation to work was explicitly on the agenda at the end of the 19th century, with the struggles for voting rights and better labour conditions. In the 1900s, the debate on these public concerns was closely related to the logic of the Ford manufacturing process, defined by fixed workstations and the assembly line. Since the seventies and with the crisis of Fordism, designers started to contribute to the discussion of the political dimension of work. The conflicts that occur when trying to deal with designing in this complex work landscape has triggered designers to address the topic in participatory ways with people from different communities and disciplines. This political shift in designing for work (the introduction of technology, the spatial organisation etc.) with actors like workers, management and designers has been addressed by Radical Architecture [13] and the Scandinavian Participatory Design (PD) tradition [14].

The Radical Architecture movement Global Tools in the 1960s and 70s was informed by Italian Post-Fordist politics and wanted to redefine design labour. They worked across disciplines and immersed themselves in communities to gather anthropological understandings of work, instead of following the Fordist labour division into disciplines, time and space. The goal was not to create buildings, but films, installations, architectural plans, interventions and design tools that foregrounded the direct experience of everyday work techniques; construction processes, and workplaces [13]. In that period, Papanek's Design for the Real World [15] was key in popularising the political role of design, focusing especially on outsider and indigenous design that responded to inauthentic capitalist industrial design.

Also, the PD tradition has placed the political role of designing work on the agenda beyond only designing for work environments on the level of the private dimension, such as the design of interior offices. Throughout the history of PD, significant contributions were made on the level of the democratic involvement of workers in workplaces where new technologies were introduced. The PD project Utopia [14] is a known example, where via hands-on experience-based design methods technical and organisational alternatives for work were designed. The project initiators state:

> One strong goal was to 'give the end users a voice' in the design and development of computer support in work places, thus enhancing the quality of the resulting system. The 'secondary result' of Utopia, the methodology, with ingredients such as low-tech prototyping, early design sessions with users etc., has had great impact on IT design in general. [14]

PD of work in the 1990's and 2000

These collective approaches that were typical to PD of work, became more institutionalised in the 1999s and 2000s, under the influence of internet and software technologies and the breakdown of connectivity barriers. The principles of lean enterprises were materialised in the lean startups that offered goods and services with less time, labour and capital. The required skills of people working in these contexts favored collective activity, because learning increasingly took place between co-workers. Paradoxically, in Western countries these work environments also started to focus more on individual achievements, because of their constant downsizing and outsourcing to reduce fixed labour costs. Employees no longer expected lifelong employment from and identification with a single firm [16].

Fueled by these developments and the global economic crisis, design for work addressed more cognitively complex and collaborative work that is more dependent on technological abilities and that is less reliant on geography. Co-working spaces were a response to this, bringing together all kinds of knowledge workers and owners as partners, with various skills in distributed, networked and collaborative systems of work [17]. The co-working phenomenon - first reported on in 1995 in Berlin - was defined by open source and socially organised work, new media technologies, political activism and a bohemian culture, rather than a business approach to work [18]. Cities all over the world started co-working spaces that became related to other post-crisis economy notions, such as 'startups', 'social innovation' or 'sharing economy' [19].

Yet, in our study of the above literature on the work in these spaces we detect that even collective conceptions of work, such as co-working, do not necessarily touch upon the public sphere, and are often limited to a preservation of private

interests. While the manifold examples of co-working sound as an almost utopian answer to the challenges of our changing work environments, co-working involves a rather homogeneous group: a male workforce of self-employed professionals, aged 24 to 44 with multi-functional sets of expertise [20]. Co-working thus often lacks a political relevance for the particular challenges our cities and global contexts are confronted with.

Challenges today

In the years that the work landscape was defined by rather large and easy to locate institutions and factories and clear organisational structures, PD focused mainly on the development of confined workspaces [14]. Today, PD for work is intensely intertwined with communities in diverse settings beyond the organisational structures common to traditional workplace studies [21]. It deals with working arrangements that are more flexible [22], with more ill-defined problem settings, and organisational contexts that are more dispersed over time and space. When PD for work steps outside the boundaries of the large institutes, it becomes entangled with a complexity of scales and arenas to support better life conditions: urban and supra-local scales of regional policies, global socio-economic trends and an increasing variety of societal areas [1]. We therefore think that if PD wants to address the political dimensions of work outside the private confined workspace, design researchers need to actively connect the micro-political scale of work environments with these other scales and arenas via involving people in collective processes of dissensual reframings and sense-making of the public ('common sense', [6]; [7]; [8]). The design object of PD then extends beyond IT artefacts to services, systems and communities [23], [24], [25].

The approaches in PD for work since the 70s still inspire the political dimension of work. However, their ways of working, such as the multidisciplinary approach, lose their political strength when they are appropriated by the status-quo approaches in work contexts that are only concerned with the private. Arendt's vocabulary supports the advancement of PD's experiments in public representation and engagement, beyond oversimplified approaches to "act against" Fordist work models or to "act together" in co-working spaces. It strengthens current work in PD that explore work models that do not only represent the private interests of people who already master the capabilities to take part in more collaborative work models, such as the co-working model has tried to achieve. They match them with public concerns such as social inclusion, involving multiple stakeholders, different from the ones traditionally involved in co-working spaces [26]. This is the case in the project that won the Artful Integration Award at the Participatory Design Conference in 2016, the Malmö Living Labs (MLL). Here, design researchers from Malmö University have been working since 2007 with the city of Malmö in a long-term trajectory to create the possibility for citizens to co-design initiatives for their own city [27]. More recently Commonfare.net experiments through PD with a type of social welfare that can respond to the challenges that arise from the increasing precariousness of labor, the dismantling of some basic social services and income insecurity. They explore forms of financing: alternative monetary circuits, forms of self-organisation and bottom-up welfare experiments [28].

Many of these contemporary PD initiatives are inspirational, but also fragile, as is pointed out by the Malmö Living Labs. In working with public organisations around sustainability challenges, they experienced that in their joint democratic design experiments, people needed to be involved carefully across organisational levels in order to "minimise possible contextual and worldview breakdowns within public organisations" [29]. Our exploration of Arendt's vocabulary is precisely focused on supporting these careful experiments, to be able to frame and advance them with a larger group within and outside the PD community. While this in many ways similar to the attempts of PD throughout history, we feel the current complex and neoliberal context requires a more precise vocabulary on what defines the political dimension of work.

4   ARENDT ON WORK

To understand how Arendt can support PD research to (re)activate the political dimension of work, we need to introduce some key concepts: besides the aforementioned ones of 'labour', 'work', 'action', also the ideas of 'interests', 'agorà' and 'hero'.

In The Human Condition [3], Arendt wrote extensively on the relationship between private and common 'interests'. To her, the roots of private interests are in the common ones, as also the Latin etymology of the word interests refers to, which literally means 'being amongst others': "*These interests constitute, in the word's most literal sense, of something that inter-est, that lies between people, and therefore can bind them together.*" ([3], p. 182). 'Inter homini esse' (in Latin, literally being among men) and 'to live' were synonymous ([3], p. 7). Back then, the life of the single individual (the private) was still deeply connected to the political, being the life of the community or the common.

Arendt says that in ancient Greece these common 'interests' gathered people in the 'agorà' ([3], p.160). In the agora, citizens made time to be politically involved by debating common issues and translating these discussions into action. Their private sphere was defined by the dimension of 'labour' and of 'work'. To the public sphere - part of the political sphere of 'action' - they dedicated the time that was left over from the private ([3], p. 9). To her, these two spheres cannot be caught in a dichotomy, but are complementary: 'work' and 'labour' are informed by the purposes, meanings, and values expressed by the sphere of 'action'. 'Work' and 'labour' can thus not be separated from politics. They are a different part of the same body, the 'human condition' in its integrity: [3] a dynamic, pluralistic and yet well-defined

dimension. Arendt calls the Greek citizen who exploits both a private as well as a public dimension a 'hero' ([3], p. 186; [30], [31]). She imagines that 'heroes' worked together to identify the common 'interests' and act accordingly in order to transform society. They had the 'power' ([3], p. 199) to transform conversations on common 'interests' into 'actions'.

At the birth of the Western civilisation, the completeness of the human condition was to her an exercise of balance between the private and the public; 'work' and/or 'labour' and 'action'. If this balance is no longer in place, the human condition is mutilated. Arendt discusses that this disconnection started to occur when the Romans introduced the idea of representative democracy. Citizens slowly ceased to be 'heroes' and became "animal laborans" ([3], p. 136) who focused on the private dimension. This means that the 'animal laborans' lost the public meaning of her/his work, being the 'eu-zen', the good life of the community ([3], p. 36). This is for Arendt the problem of neo-liberal societies: citizens withdraw from public life and concentrate only on the private dimension.

Additionally, in modernity, 'work' and 'labour' did not only exclude 'action', but became merged in a hybrid dimension. Labour was characterised by people who followed the enduring and cyclical metabolism of nature. Its aim was the preservation of the life of the households and supported the common 'interests' of the community. It was thus focused on private interests, but operated in close relation to the common ones. Work followed an idea of linear time: a given amount of work had a beginning and end and could be clearly evaluated. With the exclusion of the sphere of action from the private sphere, the private interests (such as one's own survival in the case of 'labour' or the creation of goods in the case of 'work') became disconnected from the common ones. Also, the two different ideas of temporality (cyclical and linear) from which labour and work stemmed, merged in a hybrid dimension of labour/work, which never stops and is obsessed by the idea of being evaluated, a linear idea of time and an ideology of progress.

According to Arendt, the lack of a shared perception of our common 'interests' has serious implications on our contemporary lives, such as the hybridisation and privatisation of work. This is to her a mutilation of the integrity of the human condition, that is to her one of the main preconditions for the rise of totalitarian ideologies [32]. By using the words of the French philosopher Jacques Rancière, the exclusion of the 'animal laborans' from politics is that which creates the possibility for 'politics' to disappear and and be substituted by 'police' ([33], p. 85).

5   ARENDT'S CONCEPTS AND PD

Arendt's pre-modern idea of work seems to us interesting for reframing the discussion on PD of the political dimension of work after the Fordist crisis. The idea of 'work' that PD tries to convey is characterised by acknowledging a connection between private and common 'interests', for instance via exploring the act of working together. PD looks for new ways to navigate between many and often invisible local and supra-local agendas that are associated with giving form to work in local and global contexts. In our opinion, PD projects like Malmö Living Labs and Commonfare.net reconnect work to the public sphere. We can understand the relation between Arendt's ideas and these PD practices better via two different levels that are described by Ezio Manzini [34], on which PD researchers can work in order to promote social innovation. On the one hand, he speaks about a horizontal level of infrastructuring or the co-creation of *'favourable enabling ecosystems'* ([34], p. 199-200). On the other hand, he discusses a vertical level of co-creation of different initiatives which can take place in these ecosystems ([34]). In PD research, these two levels of work are not seen as a dichotomy, but as organically connected. The first level is often a precondition to the second, and the second can strengthen and work as a precondition for the first. Yet it is relevant to distinguish them in order to provide clarity in the difficult task of critically addressing a PD case through the lens of Arendt. In our opinion, the PD researchers in the Malmö project [35] have been working on these two dimensions. We propose to read this case and its two levels of horizontal and vertical innovation by using Arendt's concepts, in order to more critically understand the ways in which this project dealt with introducing action in work. The work PD researchers did in Malmö to enable and support horizontal innovation can be considered a co-creation of 'agoras'. Here, they organised conversations in order to identify possible future collaborative actions to reconnect the sphere of work and public interests. One of these agoras was created via their Neighbourhood Living Lab that connected immigrant women (with which they enter the domain of labour) to more established actors in the work area via prototyping services that questioned these groups' mutual relations.

The other dimension in which PD researchers have been working in Malmö is, again by using Arendt's concepts, the co-creation of instruments for envisioned 'actions'. These instruments enable participants to experience what it means to be a 'hero' and share together with other citizens the power to translate conversations on common 'interests' into concrete 'actions'. One of such instruments was a prototype of an immigrant NGO that organised cooking classes for newly arrived refugee orphans that aimed to change the perception of immigrants. The PD researchers involved in the project discussed the difficulty of making the step from representing the different voices in the prototypes to the action of developing a service as an instrument, since the established actors were difficult to involve through the more 'agonistic' approach the designers were using.

> Maybe the most agonistic aspect of this prototype was that it challenged the notion of what could constitute a "job". Is it only production that is required by the market or could this notion be contested through adversarial means? ([34] p. 93)

The co-working spaces that Malmö Living Labs prototyped were not just places where private citizens could go and work together. They were rather 'agoras', designed in a way to allow the participants to have conversations on common

'interests' concerning the public and to decide on actions that they can undertake together to reimagine a more inclusive and rightful form of public realm. These 'agoras' used the private dimension of work (i.e. cooking classes) as a common activity between the participants and can thus be labelled as co-working spaces. At the same time, citizens could experience there what Arendt describes as 'heroes' having 'power', since they have the possibility to translate discussions on common 'interests' into 'actions'. The immigrant women concretely could support orphans via the classes, and the established actors could support immigrant women via collaborating in setting up a new organisation. However, the step towards 'action' was the most difficult to make, because it lacked support from the established actors – a group of business women - to turn it into a full-blown service provided by an immigrant NGO as a collective.

To use Arendt's lenses to analyse *a posteriori* these two different dimensions in the Malmö case, helped us to better identify some challenges for PD research into the political dimension of 'work', such as the question of power and the delicate passage to action. This first experimentation encouraged us to use these concepts *a priori*, to steer a PD research case that aims to (re)activate the political dimension of work. In other words: can the criticality of Arendt's philosophy be brought into a design process, not as a commentary, but as a driving force? Concretely, can her ideas be considered as steering concepts supporting PD researchers – when working to enable horizontal innovation – to question and re-connect 'work', 'labour' and 'action' in concrete debates on particular PD cases? And when dealing instead with vertical innovation, can these steering concepts support PD researchers in the delicate passage from theoretical debate to action?

5 CASE STUDY CO-WORKING 2.0.

In this section, we will describe how two PD researchers (two authors of this paper) experimented with Arendt's ideas by considering them as steering concepts of their PD research in a concrete case developed in 2016. Our case study, called Co-working 2.0, started with a bid our research group and the architectural firm Plusoffice Architects won for a design assignment for the city of Antwerp. Through design research we explored, designed and inspired spatial futures in the form of scenarios, maps and policy instruments, for the integration of work in its 20th Century belt outside the ring road. Since the population is growing fast, there is a need to increase potential for housing and work in this belt. Antwerp is the second economic pole in Belgium and the first one in Flanders. Since 2000, economic activity has been shifting from the city to sub- and peri-urban areas [36]. Like in most European countries, the number of salaried jobs stagnated, especially for the group of workers who were employed in the manufacturing industries and second and third generation of immigrants.

To get a better grip on the ways companies interact with evolutions on a micro and macro scale and play (or not) a public role, we chose to support this PD research by a design anthropological approach [37]. This approach has historically been used by researchers and practitioners in PD to explore the political dimension of work, by representing the diversity of voices in daily life through design. The rationale of design anthropology in the seventies roughly entailed a desire to advocate for a phenomenological model in which design is perceived from people's everyday involvement with the world rather than a utilitarian spatial order from above. It contributed to design's search for new power relations between designer and user. In this search, it foregrounded the reflection on the practice of design as equal to its objects and products and setting in motion ways of imagining a transitional future by negotiating the relationship between the past, the present and the future [38]. We adopted an approach to design anthropology to – in line with Arendt - build bridges between the private and the public. We embraced design anthropology's quality of using a projective design language that unveils (spatial) potential and quality of a specific situation in a tangible way for people from many disciplines and backgrounds in order to reflect on it, without necessarily the intention to be built as such [39]. In this design anthropological study, we used in-depth interviews and photo-ethnographic observations in combination with design-based methods and more specifically cartographic visualisation [40]. The design-based methods supported us to enhance participation of the different actors in collaboratively visualising, reflecting and taking action on the different design steps in the process.

In our study, we wanted to research a diversity of types of interactions between companies and their environment and between the private and public. We decided to design with six different - in size, international orientation, location and domain – work environments in the 20th century belt that are confronted with a challenge of integration in the city space. Respectively, we researched a small local SME that operates as a heating expert in the construction business; a small SME that works internationally in car repair, shipping and selling; a medium organisation involved in the distribution of plastic building materials; a publisher of scientific books; and an international Do It Yourself shop with local activities. In these different work-organisations, we decided to first focus on the micro-level of the organisation in its specific location and then slowly zoom out to the macro–level of the region and the global context, which is a reverse procedure than usual spatial planning processes going from macro- to micro-scale. Design anthropology provided us with the lens to reveal this detailed and complex micro-landscape, which had two advantages. First, if explicit attention is paid to it, looking at the micro-scale of actors can reveal the macro-political and visualise all players involved, next to the local companies and city policy makers. Zooming in on this micro-level is thus not equal to zooming into the micropolitical: a player in a small organisation can operate on a macro-level, such as a EU fund or a production unit in a low wage-country. Second, this micro-perspective enabled us to discover how the revealed capabilities of the people and materials could be further developed, allowing them to continue their participation in spatial change beyond this

particular project and scale in the future. In Co-working2.0, the design research team worked on the two levels described by Manzini by using Arendt's categories.

Horizontal: the creation of agoras

On the first, horizontal level described by Manzini [34], PD researchers collaboratively created agoras where they could debate the value of the political dimension of work with three groups of participants. First of all, with the latest trends of big businesses closing and moving to countries where work is less expensive, we decided to focus on the local richness of small businesses, since they are often too small to settle into an SME zone and simultaneously too big or disruptive to remain active in residential areas. Like all economic activity, these SMEs move outside urban and suburban areas because of experienced tensions (e.g. about noise) between work and life. Second, we focused on workers who were employed in the manufacturing industries and on second and third generation of immigrants. These are generally groups who are less mobile and require workspaces close to home. Third, we involved policy and public actors who search to reintegrate work into the city space. Because of societal and ecological reasons they wanted to organise and locate workplaces near residential areas.

The agoras were mediated by collaborative visualisation processes, to reveal and debate the idea of work with these three groups. We identified what could be considered within the workscape of these companies as 'work', 'labour', and 'action' and how they could possibly interact together. With the six different profiles of micro-entrepreneurs, we co-created in one-on-one sessions with the managers of the organisations a visual 'organisational portrait' on paper. This visualised the main person we interviewed (usually the manager), the infrastructure they need to do their work, their socio-economic network, including human and non-human actors, such as places, people, materials ('work'), the surrounding community ('labour') and what they could offer the neighbourhood and society at large ('action'). We thus made visible the link between the participants' private and common 'interests' and how 'action' was already present in their everyday ways of sharing a space with the neighbourhood and other local and global actors. This contributed to a different way of conceiving 'work', sharing spaces of work and co-working, beyond the confined workspace with likeminded people.

We will illustrate how the creation of this agorà worked in the case with a plastics company. The horizontal process of making an agorà was initiated by a series of visualisations (Figure 1) of how the concepts of 'work', 'labour' and 'action' took form in their daily practice. On the level of 'work', this company gathers and distributes different types of plastic materials for the building industry. Its model is profit-based, with a regional focus and global production networks and a close attention to local embedding of its activities. The urge for participating in this research was their friction with the neighbourhood, since they are a growing company. "*We are here in a building that we cannot expand. We are also limited in height and are highly compartmentalised. For the distribution and displacement of our goods we are very limited" (HR manager).* For them, the easiest answer to this problem was to expand and to move. *"One of the options of expanding may be to take over a smaller existing player. (...) Just because it is suitable for location and staff (Ibid.)".* But the company thought about other models: *"It was once thought of whether we should create a collaborative purchase group with two or three smaller colleagues to be able to compete against major competitors (Ibid.)."*

The visualisations showed how the organisation depends on global production, but it still has close affinity to the concept of local labour. The employees are mostly technically skilled workers who live in the neighbourhood. Their home life and the work environment are closely connected, because both contexts are at walking distance. This proximity allows them to keep a healthy balance between 'work' and 'labour' taking place at home. The employees use their lunch-breaks to go home to cook, eat, work in their gardens. Their work-related vans are parked in front of their house. This close relation of the employees to the neighbourhood also has implications on how the company is over-occupied in some places (storage) and underused in other spaces (lunch space and parking space).

After having visualised their human and non-human networks, the company owner started to see how the balanced relation between regional and global 'work' processes in the company and 'labour' at home, had been contributing to the domain of 'action' (the public good, the community) over the years. It made him reflect on how he cared for his political role in keeping this balance, but that it was endangered by the company's growing infrastructural needs. They needed additional storage space and space for trucks to enter this space. This conflicted with the neighbourhood, which felt the noise and occupied parking spaces were a burden. While the company's initial idea was to move the company, he started to - partly motivated by the research process - explore infrastructural investments in negotiation with the neighbourhood to restore the balance between 'work' and 'labour' and the domain of 'action'. However, he saw regional and international policy levels as players, but also obstructers of this process. *"If we invest little in our infrastructure, this is not because we cannot or do not want it, but because the requirements and licensing processes are so complex and long-lasting." (the manager, 30th of October 2015)*

This and the five other resulting portraits provided insight into the diversity of how SMEs share space with their environment by organising material and human actors differently. These were the first steps in the direction of co-designing what we called the next generation of workspaces, 'Co-Working 2.0.', in the suburban context of Antwerp. The aim was to extend beyond models of co-working that mainly target middle class entrepreneurs and flexible workers. These alternative models were visualised in 6 projections of ways in which these private actors could contribute to public action. The visualisations build on our gathered knowledge about how these organisations already

shared or 'clustered' activities, spaces, content and tools with private and public actors. The organisations were not always aware of the potential of these clustering activities and how they could build on their strengths in the future. This is why we underlined this potential in a newly designed set of visualisations on paper of six future 'portraits of cluster models': sectoral clustering (spaces encouraging collaboration between actors within the professional sector, e.g. construction), domain-specific clustering (spaces encouraging collaboration between actors within a domain, e.g. culture), infrastructure-specific clustering (spaces encouraging exchange between infrastructures, eg. the company's roof as a public space for the neighbourhood), action-specific clustering (spaces encouraging exchange between actors who share an action, e.g. stocking goods) and chain-specific clustering (spaces stimulating exchange between actors within a chain, eg. production, marketing, recycling of cars). With the plastic company we visualised infrastructure-specific clustering (Figure 2).
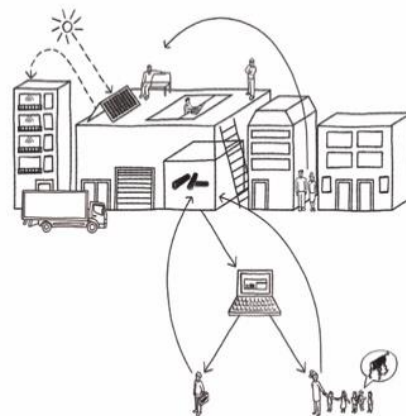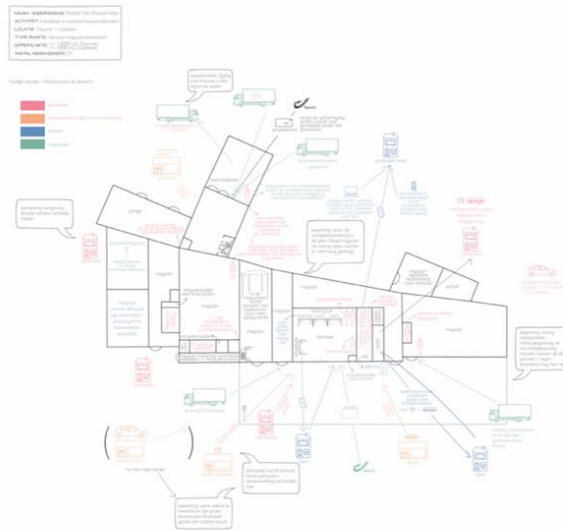
Vertical: instruments for action

On the vertical level described by Manzini [34], the challenge of this research was to co-produce instruments for 'action'. The PD researchers did this by undertaking concrete democratic design experiments by making design maps, design scenarios and design tools. These experiments 'probe' how the design of work infrastructures can support the organisation of smaller businesses in the city and enhance their relations with public life, such as the concern of involvement of certain groups of workers. As this participatory process was set up as a participatory 'design' process, it generated a series of designs in the form of maps, spatial scenarios, policy instruments and collaboration tools. We mentioned earlier that these kinds of design outcomes extend beyond the IT related products that are most typical to PD. This relates to the fact that they are generated in PD research outside the borders of the interior workplace, and thus inevitably also involve spatial designs (maps, scenarios or spatial artefacts), services, tools or policy instruments [24].

To co-design these instruments for action, the visualised models generated on the first level were used as input for a series of participatory workshops with the managers, policy makers and citizen representatives belonging to the local organisations and relevant to a particular cluster. During these workshops possible future actions were envisioned by the participants, by imagining some instruments that could allow them to acknowledge their potential power for public life. The workshops were designed to allow participants to recognise the possibility for them to be 'heroes', and actively address the political dimension of work via the cluster models. They explored the power to translate their conversations on the possibilities and weaknesses of the cluster models into concrete actions, in the form of action plans.

For instance, the first speculative design of the infrastructure-specific clustering model, was further explored in two collaborative visualisation sessions on paper in the cafeteria space of the company with a group of 2 architects, 1 graphic designer, 1 PD researcher, the manager and the HR manager of the company, 2 policy makers on a city and regional level with a spatial and economic focus and the community manager, who liaises directly with the local citizens. They discussed possible models for public action. The model of infrastructural exchange was visible in the background. Participants could change the visualisation via a card-game that motivated them to trade elements, such as parking space for green (Figure 2). The workshop resulted in a more elaborated model for infrastructural exchange that could enhance the potential for public action for the company and the other participants. This cluster model made explicit how the neighbourhood, the company, and policy could share their infrastructures among each other, such as the roof and the cafeteria (Figure 3).

The workshop explicitly demanded from the participants to visualise their role as 'heroes' in this infrastructural exchange by making a trading agreement: what they wanted to get out of the exchange and what they wanted to offer. The company engaged itself to invest in the roof and turn it into a green space for the neighbourhood and also supported the use of the cafeteria by the neighbourhood for gatherings. In return, the policy makers promised to look into the regulation for cooperative infrastructural investments. The neighbourhood agreed to be tolerant towards the needs of the company to have trucks coming in and out and parking them and to maintain the green space. To support this exchange and transform theory into action, the participants designed policy and spatial instruments. One instrument they gave form to, is the community work trust, that, similarly to the community land trust, is an agreement to support the accessibility of work for everybody by sharing investments in and making agreements on the use of company grounds by the neighbourhood, city and company (Figure 4).
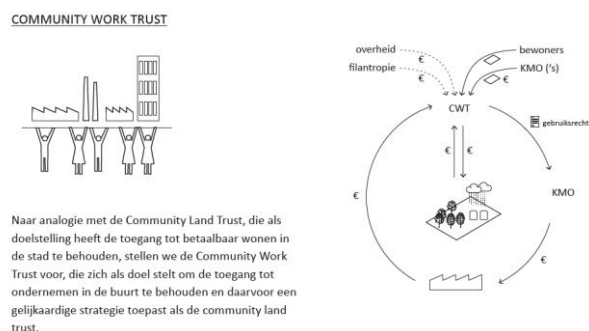
Arendt's steering concepts in practice

In this concrete case we experimented with Arendt's vocabulary by using them as steering concepts in two ways. We co-created agoras where the participants could debate - and continue the conversations afterwards - the private and common 'interests' in new actions for the public good. The visual portrait on paper (Figure 1) mediated an agorà where the participants could collaboratively visualise their private interests as part of a common one. The potential of these agoras to translate 'work' and 'labour' into 'action', was defined by the recruitment strategy of participants: the concrete companies, the neighbourhood and policy levels. The quality of the conversation in the case of the plastics company was defined by the fact that it took place across borders: citizens, policy and designers. Another aspect that contributed to this quality was the transparency of the PD researchers' intention to not only inform the debate on 'work', but also to engage the participants to take part in an 'action'. Our deliberate design of PD process as an agorà to collaboratively debate the balance between 'work', 'labour' and 'action' in the city context, supported the participants in acknowledging the political dimension of their work and to envision actions that could enforce it. The creation of an agorà also supported the designers to reflect on the political role of their design process, a role that easily becomes diffuse in the light of the overwhelming complexity of design processes in urban and global work contexts.

We also co-created instruments for 'action'. In the literature section, we discussed how the design solutions that are produced in the context of PD for work, differ from the known IT outputs. This study underlined this. There was more need for designing enabling models and instruments to support the delicate passage of 'power' to the participants, to transform public discussion into actions, rather than IT or spatial solutions. The design process was not a quest for a next solution for the controversy of work, to fix societal issues. It intended to critically reframe the relationship between private and public and to build the participants' confidence in their ability to act together and to care together for their common 'interests'. In order to translate the theoretical models balancing between 'work', 'labour' and 'action' into concrete actions in the field, we designed together with private and public actors instruments for actions, such as the community work trust.

Design played a crucial role in visualising what it would mean for the participants to be 'heroes' and co-create the instruments to introduce 'action' in their working context. The card game that was played on the background of the speculative cluster model resulted in a trading agreement. The game and agreement provided the participants with insights into human and material opportunities for public 'action', in relation to 'labour' and 'work'; and where this 'action' could be developed in time and space: on a local, regional and international level. It revealed the role of policy makers and policy instruments as obstacles, but also as opportunities for collaboration. It shows how a simple investment in a company roof can give form to a different dynamic between a company and a neighbourhood. Via the game and the agreement, the manager of the plastics company, the policy maker, the neighbourhood manager and the designers experimented with what it concretely means for them to be 'heroes' in their own organisations. They collaboratively identified societal issues and possibilities they could tackle, making use of the common resources that emerged from a horizon of private interests. The designed instruments, such as the community work trust, allowed the participants to continue their collaboratively evaluation of private versus common 'interests' and to use and adapt the instruments that allow them to act accordingly, after the design researchers had left. The instruments also were inspiring examples for other companies and contexts. Making tangible Arendt's idea of 'heroes' and 'power' in the design of these instruments helped us to make the step between theory and practice, and to envision future actions that could support real change in the company and in the broader debate on work in society.

In the project, this way of working was continued by the company, the policy makers, and the community managers in a range of meetings amongst themselves to further negotiate the necessary changes on the level of spatial infrastructure and regulation. Partly thanks to the conscious trajectory with attention for the political dimension of work, the group of partners saw the benefit of collectively profiling the company as an organisation with a public interest. They worked together on a mobility plan that was publicly communicated via the local press for distributing goods in several collection points to reduce the traffic in the city. We are aware of the fact that more time is needed to be able to evaluate our work in this case study on the long run. Yet, a first conclusion can be made: the operationalisation of Arendt's ideas of 'work', 'labour' and 'action' have been useful to collaboratively question the idea of work and the meaning of action conveyed by the companies, to visualise work's present and future value and to create its necessary material preconditions. It allowed the researchers and the participants to envision how work could acquire a stronger political value, what this might mean for the companies, and which concrete steps they could undertake in this direction.

7 PD OF THE POLITICAL ROLE OF WORK

In this article, we described a shift in how PD has addressed the political dimension of work in cities and the challenges related to how to approach this today. In our historical overview, it became clear that the contemporary practice of co-designing (digital) spaces where people can work together, such as co-working spaces, is insufficient to address this political dimension. We discussed contemporary PD practices, like the Malmö case, that consciously address 'labour' and 'work' in today's society, where they intersect and how their political relevance can be increased. They describe the difficulties of making the step from 'labour' and 'work' to 'action'. We thus felt the need to further investigate ways in which the political dimension of work in the local and global contexts can be introduced and to rethink co-working in a more political sense. Mouffe [35] argues that in many societal domains in the Post-Fordist era, there has been a significant withdrawal from the public life influenced by commodification and instrumentalisation under neoliberalism.

This withdrawal has serious consequences, as Arendt shows: above all, the risk to fall into the trap of totalitarianisms [41]. In *The Human Condition* she argues that for the neo-liberal, individualistic *homo laborans* to be able to reconnect 'work' and 'labour' to 'action', and to address the political, means access to the human condition in its integrity: the public and the private human life.

We explored how Arendt's definition of this political dimension as 'action' that is re-introduced in 'labour' and 'work', can inspire PD in their continuous efforts in giving form to this re-politicisation of work. The task of PD to reintroduce a political dimension to 'work' and 'labour', means to prototype new ways for imagining society besides neo-liberalism [35] and contemporary forms of totalitarianisms [41]. PD researchers' designs for work can support designers, companies, citizens and policy to critically question their understanding of work in a globalised world after the crisis of Fordism and to act in the public realm, for their working environments to acquire a more defined political dimension. The ambition is not only to enrich these working environments, but also, as illustrated, society at large. We researched how Arendt's ideas could be used as lenses to analyse *a posteriori* on how PD research is currently reintroducing the political dimension in work contexts such as Malmö Living Labs; but also *a priori,* as generative concepts that can support PD research to re-activate this political dimension. To make the translation from Arendt's concepts in steering concepts for PD, we introduced – based on Manzini's framing of social innovation [34] - a horizontal level (i.e. the co-creation of agoras) and a vertical level (i.e. the design of instruments for action). This allowed us to reflect on these two levels about the implications of making Arendt's ideas operational in PD research through a concrete case study.

First, the creation of agoras in Arendt's sense as a conscious PD activity, implies that PD contexts are more deliberately assessed on their relation with the domain of 'action' or politics. In our case, the creation of agoras revealed the lack of political meaning that often characterises the highly hybridised domain of labour/work. This remains unnoticed when action is not explicitly addressed in these contexts. By conceptualising the PD activities as agoras, PD for work can in our opinion question its role and anticipate on the risk to be instrumentalised as a new, sophisticated form of post-Fordist work. To create agoras that reintroduce the debate on 'action' in 'work', also means to debate the finality of work and co-working spaces that goes beyond the private interests: the good life of the community. It enabled the participants and the designers to envision together what could be the value of action for their particular working context. The idea of work that emerges by reintroducing 'action' in 'work' and 'labour' (e.g. creating a green roof for the neighbourhood) made the different values of 'action' (e.g. the community work trust), 'labour' (e.g. cooking, gardening of employees at home) and 'work' (e.g. the moment to step into the company van and transport goods) transparent and open for debate.

Furthermore, the creation of instruments that introduce debate about politics as an alternative and equal design outcome to design 'solutions' underlines what design means in PD. When design for work/labour is reconnected to 'action', it can be liberated from its obsession with evaluation of solutions. This allows evaluation to take place on the level of the process, the creation of social cohesion, resilience, awareness and capability to develop 'power'. One can therefore imagine the evaluation of the design of work as an open-ended process (e.g. via the introduction of the community work trust).

The case study has provided us with some evidence on the value of Arendt's ideas as steering concepts in PD research to (re)activate the political dimension (i.e. action) in the post-Fordist blur of 'work/labour' and its implications for work environments and PD as a field. We conclude that her theoretical concepts and their use on an operational level are worth further investigating, possibly in other contexts, with other groups and with other ways of translating them in steering concepts for PD. This paper offered one possible way to use the concepts in PD research of/with the political dimension of work, in order to inspire other democratic experiments in the future.

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