The Materiality of Knowledge in Architecture Education

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Imprint

Imagination means how we see
and how we learn to see,
how we suppose the world works,
how we suppose that it matters,
and what we feel we have at stake in it.
It is an implicit, everyday metaphysics,
the bold speculations
buried in our ordinary lives.

Jedediah Purdy, After Nature (2015)

1. THE BOX: THE STATIC MATERIALITY OF THE EDUCATIONAL GAME

Exhausted from the overabundance and complexity of information about epistemological theory, I slowly close my laptop. I gently rub my tired eyes as I gaze at the folding ladder on the ceiling that leads to the attic. I remember storing most of my old learning materials in a box up there. I pull down the ladder and climb up to the creaking wooden planks. I discover the box in a dark back corner. A material testimony containing a cross-section of the 'knowledge' I have 'accumulated' during my school years. The box is too heavy for me to carry. I push it loudly over the floor to the only small light source up here. I open it. Old textbooks, handwritten notes, school reports, squashed and glued-together 'art' projects. A touch of nostalgia takes hold of me.

My eyes fall on an old dusty game box. I wipe the dust aside and read the promising name: „Das Bildungs 1x1". I am imbued with a sense of curiosity. How can a simple game represent and map the complexity of educational structures? I open the box and realize that the game is incomplete.

The fragments of a barely recognizable game board vaguely reveal a watery landscape with blocked paths running aside it, all framed by antique-looking buildings.

The box contains a few building bricks and „learning" components in different colours and shapes. For each colour, the box contains two meeples – one large and one small one. Some playing cards lie scattered around them. Their content is faded, indicating that they must have contained information, tasks, questions and answers. I rummage further and find a piece of folded paper that looks like a game manual. A reassuring feeling of control rises in my body - driven by the hope of being able to simply read up the rules of the game to identify the missing components and hidden structure. I soon realize that the instructions are also illegible. Only a small part of the manual is still visible, indicating some sort of notation system that eludes my understanding and translation.

Intuitively, I begin to reframe the various fragments in my mind into a plausible, familiar framework. Reimagining the missing parts. Reconstructing the systems I know from similar games. A starting point from where the participants begin with seemingly equal starting conditions. A linear sequence of the game in which the participants master different tasks to progress, removing barriers of the blocked paths with the help of the given components and playing cards. Collecting points to get to the next level. From kindergarten to grade school to high school to higher education. Level by level towards the goal that can only be reached by following a certain set of rules. Following a certain time frame. Where is the goal? What is the goal? Who defines the illegible set of rules that eludes my understanding? Who decides what components are necessary to get to the next level? What do we need to win the game?

Looking closely at the incomplete game in front of me, I notice that for some of the colours there are more „learning" components and playing cards than for others. Some meeples are missing their larger or smaller counterpart. The connection to real life is so obvious that it is almost ironic. It illustrates systematic, structural advantages and disadvantages of different meeples at play. Chances of „winning the game" are attached to different identity factors, such as race, gender, sex, religion, nationality, ability, class, level of education, and other factors of social capital. Theoretically, the education sector provides everyone with the same access to information and thus generalizes the position of the "learner". Therefore, it ignores the constructed structural differences between those with more privileged access to space, time, learning resources, and those with less.

I realize that I was reconstructing a manual of the game that is overburdened by power-knowledge relations. I was simply reproducing an entrenched, seemingly normative, education system based on capitalistic, performance-oriented rules within a hegemonic institutionalized gameboard and generic, pre-defined "learning" components that represent the unequal endowment of meeples at play while claiming universality and objectivity.

Rules that mimic an economic performance paradigm. A quest for standardized, comparable and solution-oriented 'outcomes' that are focussed on market growth rather than personal growth. These capitalistic rules and corporatization of higher education became particularly apparent within the Bologna Process. A Europe-wide degree standardization process that reshapes study programs with a restricted focus on the labour market and defines quantifiable metrics to compare universities on an international level. Generating a rhetoric of 'Excel-

lence' (Reading, 1997: 20-43) under the guise of objective meritocracy that conditioned us to believe that everyone can achieve an „earned" position through the proof of „prowess" and "expertise". But who decides what we consider as "Excellence" and "Expertise"?

A rhetoric that has been propagated by a board game that is based on an institutionalized hegemony of knowledge transfer, legitimized by pre-defined academic titles, standardized systems of qualification and reputation. This epistemological hegemony is mainly upheld by Western universities ,as the privileged site of knowledge production' (Bhambra, Gebrial, Nişancioğlu, 2018: 3). According to decolonial theorists, hegemonic and colonial knowledge 'is produced, consecrated, institutionalised and naturalised' by these key sites. They continue to provide intellectual grounds and contents that 'remain principally governed by the West for the West' (Bhambra, Gebrial, Nişancioğlu, 2018: 5).

In the Western context, this intellectual grounding is mainly biased towards technoscience, logocentrism, and Eurocentrism. It relies on stable categories, rationalized learning methods and biased histories, which subordinate difference to universality.

The static hegemonic structure of the „game" is informing us how we see, think and confront our world by constructing contents and learning components that deem other, unknown forms of knowledge (outside an epistemological norm) as insignificant (Bhambra, Gebrial, Nişancioğlu, 2018: 234). The components constitute knowledge in form of information that can be universally constructed, measured and extracted. It is dependent on the data the inventor of the game is giving us to see and learn and therefore shape our imagination of knowledge as materiality that is static, and coming from the outside – as something that we can put in pre-defined boxes and store outside our bodies.

2. THE FABRIC OF ARCHITECTURE EDUCATION

Interior architecture education often seems like a static game box to me. A static game that promotes hegemonic knowledge systems that contributed to the construction of social differences, like gendered identity divisions (Betsky, 2017, Clegg, Mayfield, 1999, Havenhand, 2004).

The knowledge of architecture education and architecture practice can be broadly summarized as the knowledge about the construction of materiality. This does not only refer to the construction and transformation of physical materiality of geographic landscapes and geological resources. It also encompasses the construction of representational materiality that generates internalized value systems relying on stable categories that are transforming the imaginations of our historical, cultural, psychological, phenomenological, political landscapes.

In The Production of Space, Henri Lefebvre describes these constructed landscapes as 'social space(s)' being 'social product(s)' which are 'mental' as well as 'physical spaces' that produce a 'tool of thought and action' but also 'means of control', 'domination' and 'power' (Lefebvre, 1991: 26-27). He critiques the profession of architecture for emulating these discourses of power that translate the subjective social space with 'all-too-objective meanings' into a merely visual space of 'blueprints', 'mere images', 'parcels', and 'facades'. The reduction of social-spatial relations into logocentric products of rationalized programs, pragmatic functions and standardized data serves according to him as a degradation and 'enemy' of spatial imagination (ibid.: 361).

Various Postcolonial and feminist theories on Situated Knowledges (Haraway, 1988) and the Politics of Location (Kirby, 1993) have identified how these reductionist representational materialities translate bodies, territories, disciplines, histories and theories into static 'parcels' and 'unitary categories' (Braidotti, 2019: 109). They analyse how it has contributed to hegemonic forms of knowledge and how it continues to 'provide intellectual materials that reproduce and justify colonial hierarchies' (Bhambra, Gebrial, Nişancioğlu, 2018: 5). Hierarchies that in the field of architecture reproduce architecture as a 'normative Eurocentric' (Tan, 2017: 77) and male-dominated design practice.

Sherry Ahrentzen and Linda Groat identify in their survey about women faculty in North American architectural departments, three characteristics of how patriarchal value systems perpetuate our educational landscapes and create a marginalized climate for women. First, the characteristics of a static educational game with competitive game rules shaped by a 'hidden curriculum of educational rituals, which support power, competition and hierarchy'; second, a dominance of meeples at play that construct the content of biased learning components based on 'the star system and the gendering of genius'; and third, a divisive gameboard of architectural disciplines and classifications with an 'isolating atmosphere of architectural departments' (Ahrentzen, Groats, 1992: 96).

The performance-oriented game rules are simulating a market-driven work sphere with deadlines, submissions, pitches, self-sustaining award competitions that are geared towards creating unique and „owned" ideas that stand out from the crowd. This tends to generate a toxic working ethos, where students' endurance is validated as a 'measure of accomplishment.' This mindset in combination with the competitive nature of comparative systems such as grades, work hours, design competitions seems to complicate the commitment to collaboration and collective knowledge sharing (Ahrentzen, Groats, 1992: 101-106).

Several feminists found that such collective interconnected knowledge is a tendency of a „women's ways of knowing,"(Ahrentzen, Groats, 1992: 106)(Franck, 1989: 204)(Havenhand, 2004: 39) - that relies on a related and 'connected' rather than a 'separate' way of understanding. Their argumentation grounds on the social production of gendered identities that are constructed on stereotypical dualisms. The female self-identity seems fabricated by 'soft' qualities of affection, emotionality, intimacy, sensitivity and subjectivity. Characteristics of attachment that are essential to make connections. In contrast, the masculine self-identity seems to be shaped by 'solid' aspects of reason, rationality and objectivity that are characteristics of differentiation, opposition and domination (Havenhand, 2004: 38). In terms of education, these materialities of differentiation seem to be stronger reflected in the educational game than methods of connection.

Many learning components in architecture education have not only been constructed by and with a male normative standard but also promote the notion of 'gendered genius', putting men into a superior position of power, and devaluating women's interventions and professional contribution (Buckley, 1986: 3). The materiality of 'gendered genius', nowadays described as 'starchitect' or 'star system', shapes the professions and public imagination in form of iconic architecture symbols and overarching narratives about that one genius master who creates progressive concepts and buildings. These narratives of masters who shape our 'manmade' environment neglect the hidden figures indispensable for their emergence.

The gendered narratives are increasingly entering the public consciousness thanks to the sharp analyses of architects like Denise Scott Brown. Throughout her career, she was submerged in her husband's reputation and suffered from the inferior acknowledgement of her contribution to their joint projects. Scott Brown addresses the power of the 'guru-maker', seldomly women, and the maintenance of hegemonic structures through overlooking the collective effort of every architecture. As a consequence, a white male homogeneity in the architecture profession and academia is upheld (Scott Brown, 1989).

Scott demands that 'schools can and should reduce the importance of the star system by broadening the student's view (…), show value in other aspects' necessary to grasp the complexity of the architecture profession and to change the prevalent need for gurus or introduce more diverse and responsible 'role models' and sources of knowledge beyond pre-defined boxes (Scott Brown, 1989).
These pre-defined boxes and ideas of 'gendering gurus' resides 'in the teaching of the history of architecture, in curriculum choices, in the evaluation of projects, and in the language and vocabulary of architectural instructors (Ahrentzen, Groat,1992: 100)'. They select, classify and prioritize 'solid' qualities associated with masculinity and devalue characteristics

with a feminine reading. This reflects a complex stereotypical construction whereby men are associated with the 'hard' materiality of technology and the shaping, mastering, and managing of nature, and women with the 'soft' materiality associated with the body, the representational, the decorative, and the reproduction of 'home' and 'family' (Clegg, Mayfield, 1999: 3).

These stereotypes and embedded hegemonic value systems in architecture education become particularly apparent in the disciplinary division between male-dominated architecture and female-dominated interior architecture. The shaping of the exterior of urban space is conceived to be 'made by male architects working in a heroic tradition', while the shaping of the interior is associated with decoration made by non-professionals, or by predominantly female or gay male interior designers (Betsky, 2017). Interior Architecture has been historically constructed 'as the hierarchically less important counterpart of architecture'(Belis, Pombo, Heynen, 2014: 16) and continues to perpetuate the public imagination as a profession that takes a supplemental and inferior position that according to Havenhand is rooted in its perceived femininity (Havenhand, 2004: 38).
The perception of architecture as masculine and the interior as feminine is reflected in the broader construction of the public and private sphere: Traditionally, women were relegated to the world of the private domestic space, which was set against the political public space attributed to the masculine (Clegg, Mayfield, 1999: 11). The exterior political dimension of urban spatial planning seems far more obvious than the politics of the interior – an aspect on which the architecture profession tends to ground its disciplinary hegemony, reflecting gender hierarchies in this conception.

A striking example of gender hierarchies within design and architecture education is the conflicting position of men and women in the progressive Bauhaus. Bauhaus was founded in 1919 with the aim to contribute to equality by admitting 'any person of good repute, without regard to age or sex,' (Wortmann Weltge, 2005: 147). This attempt led to an unexpected influx of women enrolling in the Bauhaus, initially even exceeding the number of men. However, to regulate the large number of enrolled women who competed with men for the limited workshop spaces, the school adjusted the male-female ratio to one-third women and implemented a disciplinary division where women (with a few exceptions) were only allowed to work in the weaving workshop, the so-called "Frauenklasse".
According to researchers like Anja Baumhoff, who identified sexist practices within Bauhaus, this disciplinary division was heavily based on gender stereotypes that historically assigned different categories of craftsmanship to gender-specific skills (Buckley, 1986: 5). Fine art (Kunst) and handicraft (Handwerk) were expressed as male domains, while arts-and-crafts, like pottery, weaving, embroidery, knitting, quilting, and tailoring and the general material culture of fabrics and soft objects like carpets, cushions, curtains, blankets, or clothing were seen as the female sphere. These highly feminised categories of craftsmanship and labour have been systematically used to construct gender (Auslander, 2014: 157). Moreover, the categories inhabited a different value status both in the Bauhaus and in the public imagination: The male domains enjoyed an elite genius status as 'artists' and 'constructivists' while the female sphere was tagged as 'decorative arts' (Remington, 2006).

The extent of my internalization of this patriarchal value system became particularly clear in the material studies course I taught based on the lectures of a professor previously teaching this course. Every week was contributed to a different material: wood, concrete, metal, plastics, glass, mineral composite – no fabric. I still remember a conversation with this professor about why he did not deal with fabrics throughout his lecture series. A conversation which was precisely about this public perception of the interior architect as a decorator of domestic living, which he identified within textile materiality, thus illustrating the status of a material culture that has a feminized identity reading. He let me chose whether I wanted to give a lecture on fabrics or not. Until today, I regret that I decided against it as textile materiality has a highly intimate relation to the body, physically and psychologically, as we touch and interact with it in the most personal ways on a daily basis (Auslander, 2014). This physiological and psychological impact on our bodies and their political implications should be studied and not abandoned. It demonstrates the political and cultural meanings attached to materials, and how these implemented value systems are perpetuating our educational curricula in subtle and often unrecognized ways.

I argue that we need to turn away from the implemented hegemonic value system that traverses the materiality of architecture knowledge, to eventually live in softer, flowing and more humane and fluid learning environments. It needs a conscious step towards non-hegemonic material cultures within architectural practices, questioning the normative ideal and finding new and diverse means to understand the complexity of its knowledge materiality.

As a possible step, Havenhand points to the standpoint theory where 'the gendered nature of the construction of knowledge is recognized, (...) and reversed. Feminine knowledge and characteristics are valorized, not as a mere inversion of the binary opposition, but as a starting point for a new understanding of knowledge' (Havenhand, 2004: 36).

What Havenhand describes as feminine knowledge refers to the aforementioned 'woman's way of knowing' that Franck suggests within seven qualities. These involve '(1) an underlying connectedness to others; (2) a desire for inclusiveness, and (3) responsibility to the needs of others, represented by an 'ethics of care'; (4) the acknowledgement of the value of everyday life experience, (particularly that of marginalized bodies 'whose needs have long been ignored or misunderstood by planners and architects.'); (5) the acceptance of subjectivity and feeling as a strategy for knowing'; knowledge that accepts and desires '(6) complexity' (to undermine hierarchical control) as well as '(7) change and flexibility'; (Franck, 1989: 203).

In my opinion, these qualities should not be described as purely feminine. They are better understood as a tacit way of knowing (beyond the construction of identity stigmata). A knowing that inhabits subjective nuances; that depends on an interconnected relatedness between all human and non-human; and that embodies expertise influenced by the situated everyday life experiences. It is the liquid that matter to break free from pre-defined static boxes.

3. THE LIQUID MATTER: THE TACIT DIMENSION OF KNOWLEDGE

To imagine a knowledge materiality apart from a static hegemonic knowledge structure, I remove all the fragments of the game board. I envision a learning environment that is not limited by any boundaries. A fluid mass that floods and flows around every aspect of our ever-changing reality.

The attic, the small source of light, the box, the game fragments, everything drifts and floats past my inner eye. I step off the pre-set, seemingly secure path into the unknown and unstable liquidity, trying to grasp the morbid pillars that keep the path just above the precarious waters.

The boundless liquidity takes up my entire experiential space in which everything floats. Every space, every object, every subject, every human and non-human encounter, every experience and every thought transforms into algae-like formations moving in the rhythm of the liquid matter.
I cannot hold on to any of these algae-like bodies of knowledge. They sink with me. No information on the transformed playing cards, no game component can explain how to move in this fluidity. The currents carry me along the tangle of algae threads. Feeling the touch of the strands through the inability to escape their grip and letting them take hold of me. Determining where to move. Pulling me further. Pulling me down.

3a. DROWNING

To understand the systematic entanglement explicitly visible on the surface, I need to learn to see what is implicitly laying below. To stay on the surface, I need to understand what it means to drown. With my head under water, I realize that the tangible algae parts visible above are only a small part of the larger structure that lies subconsciously beneath the surface. The vision is blurred. I cannot see the ground. I cannot see their roots. The interwoven algaes merge with the opaque liquidity. I can hardly distinguish whether the liquid or the strands wrapped around my limbs are dragging my body downwards.

While drowning, the flesh of my body is positioned on the thin surface between the above and the below – between the conscious and unconscious influences. Maurice Merleau-Ponty (Merleau-Ponty, 1968: xli-liv) together with other phenomenology philosophers identified the entangled, lived body as an in-between state that consistently bridges the boundaries, separating inside from outside, bridging the overlapping states of both the subjective and the objective world. Two states of embodied experiencing that cannot be understood separate from each other. I understand this fluid boundary state - between what I experience extrinsically and what I perceive intrinsically - as the

materiality where knowledge occurs. It is the area where meaning and sense is generated. In this state, the body does not serve as a container of the explicit parts of the algae threads but as a mediator between the explicit and implicit dimension. This fluid understanding of knowledge generates sense-giving knowledge out of the embodied, situated and related everyday life experiences where the body is 'the only aggregate of things' (Polanyi, 1969: 214). Through the body, we can relate to our environment and others. It is our body, which we confront our world with and with which we make sense of it spatially, temporally, environmentally and socially. The more we can relate external information to our own body, the better we can understand, internalize and generate meaning within ourselves.

While drowning, I sense the position of my body situated within the geographical, historical, cultural, psychological, phenomenological, political entanglements that define the embodied boundaries of my ever intertwined conscious and subconscious understanding of knowledge. I realize how the threads of knowledge are determining and limiting the movement of my body. Drowning is a state of crisis that enables a vision of one's position from an inward perspective that recognizes the power relations at play in the processes of knowledge production.

Recognizing the limiting ties of the subconscious entanglement beneath the surface – the value systems that keep us in place - is a transformative process of unlearning through self-realisation. It is a liberation of thought that is sensitive to the tacit dimension coexisting in all the objects, encounters, places influencing the embodied subjectivity, situated conditionality and related interdependency of every body of knowledge.

I understand that the algae threads are not only wrapped around my own body but also intertwined with other bodies. I do not only begin to understand the position of my vulnerable self, but also begin to grasp the relationality to the vulnerable others. A relationality to one another that is grounded more on the notion of care, mutual understanding, and subjective multiplicity that goes beyond educational certificates, identity readings, borders and species. Uzma Z. Rizvi describes this recognition of our entangled position not only as a process of self-care and self-realisation but also a 'recognition of how our positions may be at the expense of others, be those others human and non-human' (Uzma Z. Rizvi, 2016: 94).
This realization of relationality and interdependency demands a more expanded, interconnected (intra- and inter-personal) vocabulary than our common vocabulary of knowledge tends to offer, as it is traversed by competitive, allegedly solution-oriented, excluding and hegemonic languages.

Drowning generates an urge to transform the breath-taking feeling of being pulled by the strands within the liquid currents into a weightless state of consciously diving and influencing the movement of the entangled body. To relearn, I must dive into the embodied, situated and related materiality of the tacit dimension to get closer to an inter-and intra-personal vocabulary of mutual understanding that is based on the intersectional experiences of each 'collective subject' in mediation with its environment.

3b. DIVING

I dive into the algae threads and uncertain liquidity, reflecting tacit knowledge as a thought model to contextualize our static, seemingly normative, but hegemonic materiality of knowledge. Tacit knowledge resists any form of standardisation and universality as its embodied subjectivity, situated conditionality and related inter-dependency is intangible, subconscious and different in each subject.

According to Michael Polanyi, tacit knowledge describes the fact that 'we know more than we can tell (Polanyi, 1966:4)'. We embody a huge amount of knowledge that we are neither aware of nor consider it as such because it is not aligned with our conventional understandings of knowledge. However, we intuitively and consistently make use of it. It has meaning beyond educational certificates and the ambitions of reductionist data. Tacit knowledge merges learning and living and is a way of understanding through our corporeal sensibilities. This means making sense of our environment by understanding how the spatial surroundings and social encounters are mirrored through the senses and emotional responses, and what cognitive processes they subconsciously stimulate. Tacit knowledge is so deeply internalized that it is no longer conscious to us but habitually implemented in our daily lives:

Be it the taste of curdled milk, the nuances of salt in the tomato soup, the creaking sound of wooden planks, the touch of fallen leaves, the smell of concrete after rain. Be it the movements of the hands while knitting, the balance on slippery ice, the stinging feel of sunburnt skin. Be it the non-verbal smile of a neighbour, the habits and gestures of fellows that indicate how they are feeling. Be it a spontaneous reaction while driving, a quick navigational choice or a long-lasting existential decision.

These external stimuli or tacit experience, as Michael Polanyi calls it (1969), on which our tacit knowledge builds on, can be universally experienced. Yet, they are unique in the way we experience or respond to them individually. 'In our incapacity to experience the same neural processes of another person we achieve gradual variations of indwelling. This means the experiences we attain through the body, our physiological knowledge of things, is at once unique and universal based on the independent nuances of each person' (Lawton, 2009: 13).

Grasping tacit knowledge entails not ignoring or generalizing phenomenological, subjective, situated, structural differences of every meeple; not falling into the trap of an alluded objectivity of reductionist data. It acknowledges that the external information might be 'proximal sense-giving' to some bodies and 'distal sense-deprived' to others (Polanyi, 1969: 181-206). It recognizes that some bodies can relate more to the product of the social space than others as they can better identify the external stimuli within their subjective bodies.

In terms of architectural knowledge it is necessary to understand that even if space theoretically enables access to everyone, the mental accessibility and relatedness to spaces lies within phenomenological and embodied differences. And I argue that these fluid differences of organisms occupying space are mostly ignored within the static unitarian materiality of architecture knowledge. To reflect a multitude of diverse bodies in the produced social space, I argue that it needs a multitude of bodies that construct its materiality.

While diving, I try to find a new rhetoric of 'tacit expertise' that understands the highly specific nuances of the differential expertise everyone embodies, regardless of the degree of education. We all have an expert understanding of the context we are living in and engaging with which needs to be validated by society at large. Validating an imagination of knowledge that empowers ways of how we can learn from each other's subjective and structural differences to create an embodied language that understands the corporeal nuances as a strategy for knowing and relating to one another. An imagination that enables ways of how we can share this tacit specification in processes of collective learning to untighten our intersectionalities.

Diving in the tacit dimension makes me understand the fluid materiality of knowledge that is always embodied, situated and related. It is translated through our embodied nuances, situated within the specific context of intersectional everyday life experiences, and related to the multiple spaces and multiple bodies, human and non-human, we encounter daily. It is an intangible and highly individual form of knowledge. Therefore, it contests predefined, universal approaches in education by acknowledging the situated tacit expertise of each meeple that cannot be measured, standardized and extracted.
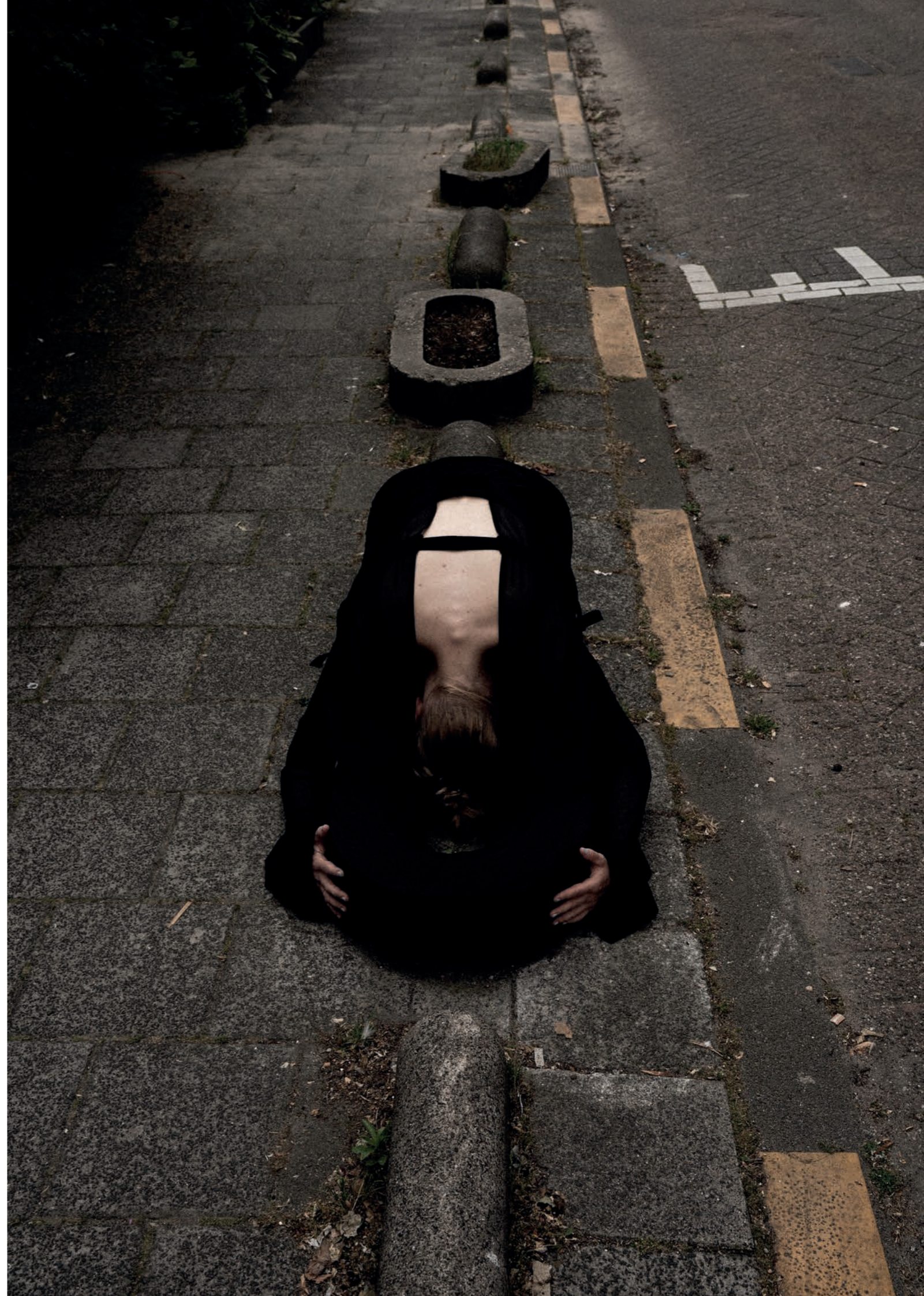
3c. KNOTTING

With all my strength, I surface and inhale deeply. In distance, I recognize other meeples who have made use of the algae drifting around them, figuring out which algae will carry them a little further. They follow the strands to untie and re-tie the knots. Knots, resisting and adjusting this ambiguous fluidity with its constantly shifting liquid substance, that appears in various shades of opaqueness but never transparent. These divers of endurance seem familiar with the unstable fluidity, flowing through currents, swirls, and sometimes stagnant water.

I still need to understand how to configure and knot the intertwined knowledge threads into my own nodes of fluid knowledge, which keeps me on the surface. I need to reimagine my ties into knots that, according to Donna Haraway, 'are not representations or didactic illustrations, but rather material-semiotic nodes or knots in which diverse bodies and meanings co-shape one another.' (Haraway, 2008: 4)

Knotting is a process of trial and error, untieing and tieing. Collaborative experimentation and collective reimagining, where the body is positioned in the fluid boundary condition of semiotics (the subjective, sense-giving tacit dimension) and the materiality of the physical world. Knotting can be understood as acting self-knowledge; a method to bring the re-learned into practice and learn from others who knotted their own learning environments into formats of change – formats of transforming the static educational game within their fluid, limited, but accessible means.

The process of knotting is a form of taking action to create. It Involves changing, testing, experimenting, proposing and rethinking nodes into new figurations. Figurations, which should be embodied, situated, related, non-hegemonic, collectively and subjectively sense-giving and grounded in our material reality of everyday life. Knots that help to grasp the complexities and interdependence of humans and non-humans within knowledge mediation and its interplay of power, politics, and capitalism.

The process of drowning, diving and knotting is an imagination of a fluid 'methodology'. A methodology of unlearning pre-occupied thought structures through re-learning one's embodied, situated and related tacit expertise to find new ways of co-learning from and with each other. It is an educational imagination that produces 'non-hegemonic knowledge' through collaborative processes where knowledge is 'produced and shared collectively' to disrupts 'hierarchies of dualist structures' and hierarchies of complex stereotypical constructions. An education that reshapes the educational game into an 'instituting practice' on a 'non-institutional' gameboard (Tan, 2017: 78) with a plurality of meeples at play that construct the fluid learning components that are multidimensional, diverse, non-hegemonic and are questioning the 'normative' ideal to find new materialities of knowledge.

4. CASE STUDIES OF FLUID EDUCATIONAL KNOTS

How can we reimagine a powerful normative education system that overcomes the hegemonic knowledge structures by drowning, diving and knotting? In this section, I look at examples that transformed a state of drowning into a possibility of reimagined learning environments. They are based on embodied, situated, related and sense-giving knowledge figurations and merge learning and living within collective and shared landscapes. The case studies demonstrate transformative processes of recognizing limiting ties of static systematic entanglement. They loose their grip by incorporating fluid knowledge that has its value in the meaning for their lives, and not for a general game-like consensus of static knowledge structures.

The following examples enact embodiment by empowering the self-knowledge of each intersectional subject in relation to other subjects in a proximal and accessible manner. They enact situatedness by creating knowledge out of everyday life and understanding life as the materiality of knowledge. They enact relationality by creating collaborative knowledge that is produced and shared collectively.

4a. CAMPUS IN CAMPS

The Campus in Camps initiative focuses their study practice within the fluid instability of one of the strongest and violating geopolitical currents – the reality of forced exile in occupied territories in the West Bank, Palestine. The spatial and social projects by Decolonizing Architecture (DAAR) locate the imagination of the university as a utopian 'island of knowledge' within the dystopian 'island of marginalization' of Palestinian refugee camps (Petti, 2014).

Since 2012, the initiative establishes mental and physical social spaces to rethink this state of drowning 'and produce new forms of representation of camps and refugees beyond the static and traditional symbols of passivity and poverty'(Petti). These spaces aim to rethink the materiality of the camp condition as a 'counter-site for emerging political practices and a new form of urbanism'(Petti) that call into question the established political and cultural understandings of education, citizenship, nation and territory. They focus their practice on a redefinition that doesn't normalize the political condition of being exiled but transforms the dominant narrative of marginalization into possibilities of strength.

Campus in camps understands the possibilities of diving in the sources of knowledge that are built on collective engagement and exchange within their everyday reality of life in exile and 'on what people can do by themselves, with their sources of strength, with what is abundant in people, community, culture, and nature, and in harmony with well-being and pluralism'(Petti).

'As Palestinians, we experienced various kinds of occupation: military, political, economic, financial, cultural, and knowledge. We are aware of all except for the occupation of knowledge; in fact, we embraced it and still embrace it. One way to heal from (unlearn) this occupation is to live by the conviction that every person is a source of meaning and knowledge; every person is a co-author of meaning. Co-authoring meaning is a right, duty, and natural ability' (Munir Jamil Fasheh, Home of Wisdom in Campus in Camps).

Campus in Camp's methods of drowning in the threads of occupied thinking is encouraged by a process of unlearning to 'heal from pre-packaged alienating knowledge, pretending to be universal and applicable in different cultural condition without taking into consideration the receiver'(Petti, 2014). According to Alessandro Petti (2014), the universal representation of knowledge is and was often informed by a static vocabulary of internationally funded NGO systems that 'often pursue the cultural and political agendas of the donor states'.

To formulate their own materiality of knowledge, they incorporate processes of diving by establishing a common vocabulary of a non-hegemonic understanding of knowledge through collective efforts that generate co-authoring values. This collective vocabulary (based on personal experiences, interviews, investigations, and education cycles) was compiled into The Collective Dictionary, 'a series of publications containing definitions of concepts considered fundamental for the understanding (and challenges) of the contemporary condition of Palestinian refugee camps' (Petti, 2014).

To bring the redefined theoretical vocabulary into action, they focus on the kind of knowledge that emerges from daily actions like gatherings, walks, events and urban actions to knot concrete initiatives that influence, intervene and improve the daily life in exile 'without normalizing their exceptional conditions'(Petti). They call these knots The Initiatives that propose future common spaces in the site that suggest new spatial and social formations beyond the idea of the camp as a site of marginalization.

This case study demonstrates how processes of transforming a state of crisis - drowning - into a possibility of change can be understood. The described materiality of empowering self-knowledge, collective redefinition, communal engagement and exchange based on everyday life experiences can create forms of action and resistance against the currents and streams of occupying static systems. Rosi Braidotti describes such processes as 'binding force (that) is not reactive, but active and affirmative- it starts with a shared understanding (cartographies) of the embodied and embedded conditions of oppression and subjection. This is expressed in collective imaginings (figurations) that deploy the shared desire to enact affirmative and empowering alternatives (Braidotti, 2019: 107).

4b. COPENHAGEN FREE UNIVERSITY

The self-organized Copenhagen Free University initiated by Jakob Jakobsen and Henriette Heise in their private flat from 2001 to 2007 is another case study that defined their own materiality of knowledge.

The self-instituted university was founded to confront the state of drowning within the machinery of universities that are driven by an expanding knowledge economy, capitalistic valorisation and institutional power relations claiming to be society's central spaces of knowledge production.

Their act of diving lays in declaring their private home as a public institution. They re-appropriate the vocabulary and definitions of official universities to demonstrate the fragilities of the ruling institutional powers. They aim to bridge practices between art, activism, and everyday life to value other kinds of knowledge. Knowledge, closer to their social relations and everyday life, that is 'fleeting, fluid, schizophrenic, subjective, uneconomic, acapitalist, produced in the kitchen, produced when asleep or arisen on a social excursion – collectively' (Jakobsen, Thorne, 2017). They transformed their private flat into material-semiotic knots of 'social research and exploration within a context

shaped by the hard material facts, fluctuating passions and affective instabilities that characterized [their] daily life. (...) [They] took power by using the available means: a mattress became a residency, the bedroom a cinema, the living room a meeting space, the workroom an archive, [their] flat became a university' (Jakobsen, Thorne, 2017).

This case study again shows the transformation of tacit knowledge of daily encounters and the accessible means available into a tool of empowerment. The self-initiated university does not rely on alienated and pre-defined contents but draws on the complex materiality of daily lives, social relationships and personal abilities. By actively focusing on the tacit knowledge that we subconsciously learn and intuitively execute every day, the Copenhagen Free University aims to break through the passivity of their habitual interactions and to relocate the idea of the public university into a private laboratory as a political act.

4c. THE SILENT UNIVERSITY

An example case study of decolonizing educational knots is The Silent University. It was initiated by Ahmet Öğüt and is run by asylum seekers and refugees who have completed academic and professional training in their home countries but are unable to practice their knowledge due to their residence status.
Since 2012, the Silent University creates nomadic learning spaces for asylum seekers that operate within existing education institutions like the Tate Modern, the Delfina Foundation and Tensta Konsthall. Nonetheless, it remains a decentralized, participatory and autonomous educational initiative. The self-institutionalizing and representational mimicry of labelling itself a University (including official emblems and student cards) is a way of claiming legitimacy. It also challenges the legitimacy of existing institutional systems by demanding the right to educate and to be educated beyond the limitation of border politics, language, and legal accreditation of qualification.
This case again rethinks how to turn a seemingly disadvantaged condition – a state of drowning into a possibility of strength – a way of diving through a transversal pedagogy of collective redefinition of educational systems by re-activating and validating self-knowledge that has been silenced. Their way of knotting lies within the creation of an online education platform and physical spaces of exchange that formulate a resistance; a resistance against being systematically silenced by restrictions of migration laws, language limitations and other bureaucratic barriers.

All presented case studies focus on reframing educative structures through processes of instituting practices of self-organisation, methods of unlearning and collective relearning. Such processes are bound to connect thinking allies that are caught in the same state of drowning, share similar mindsets, and form a community that collectively contests the educational system in which they found themselves incompatibly trapped. These communities of think-a-likes re-define the limits of their own educative gameboard and create spaces that are situated within the social spaces of their everyday context. They reformulate learning components that allow the emergence of non-hegemonic knowledge through the empowerment of embodied self-knowledge and related co-knowledge.

6. CONCLUSION

Our social and architectural materiality of knowledge is based on static and pre-defined structures that contribute to a hegemonic knowledge system. A system that has historically been shaped by a homogeneity of predominantly white and male bodies. In many occasions, the encoded patriarchal value system still occupies our way of thinking and 'privileges the historical superiority of the characteristics of male and the rational' (Havenhand, 2004: 40). It claims universality and objectivity but, simultaneously, construct social difference by formulating static categories that translate social space into reductionist data, quantified metrics of legitimisation, and identity divisions.

To overcome stereotypes and pre-occupied thinking of alleged universality in a constantly changing world, we need to acknowledge the difference and instability of our social material contexts as well as the implemented value systems that are attached to them. The materiality of knowledge is the imagination of our embedded value systems, conditioned by our educational structures. To find new

imaginations, it is crucial to understand what and how these static systems teach us to see, and learn to see for ourselves; imaginations of knowledge 'where partiality and not universality is the condition of being heard to make rational knowledge claims' (Haraway, 1988: 589).

Our social world is in constant change and flux and therefore cannot depend on generic categories of static boxes. Our reality is unstable and uncertain and so is our limited knowledge. Our imaginations of knowledge have to become fluid to understand the instability and intersectional differences of our social and architectural materiality of knowledge. A way to do so is to redefine our inhabited knowledge and value systems of the educational game. It is a demand for a fluidity that validates each subject's tacit expertise that is informed by the embodied, situated and related everyday life experiences. Experiences that mediate sense-giving knowledge and legitimatize it by shared collective processes of recombining multidimensional tacit expertise in the construction of a diverse and fluid knowledge materiality.

A materiality that formulates a mutual vocabulary of affective embodiment, transversal positionality and interconnected relatability.

To liquify our implemented static knowledge structures, I introduced the imagination of a fluid 'methodology' of drowning, diving and knotting as a thinking model of changing perspectives within the power structures of our everyday entanglements.

I regard the imagination of drowning as a change of perspective, stemming from a state of crisis that requires action to transform its condition. It is a state of facing uncertainty and struggles apart from pre-defined paths. A state that enables acts of unlearning constricting knowledge systems, conditioning and keeping us in place, from an inward dimension. Drowning generates an urge to transform the breath-taking feeling into a weightless state of diving. Diving can be understood as consciously redefining new paths and questioning the morbid pillars of alluded stabilities, exploitive practices, privileging convenience, and hegemonic legitimisation through embodied self-knowledge, positionality within the everyday social space, and relatability towards others human and non-human.

In sum, drowning describes the state of self-realisation through unlearning the systematic entanglements, while diving examines these entanglements through re-learning and empowering the tacit expertise of a subject's self-knowledge. Based on that, knotting can be understood as an act of co-knowledge: a collective reimagining of knowledge by bringing the re-learned tacit expertise into practice, and learn from and with each other. Knotting is a process of collective transformation of shared learning landscapes into change and knots that reshapes the educational game within the limited but accessible everyday materiality of knowledge.

Aiming to change, I drown again, and again. I dive again, and again. I knot again, and again. Absorbed and immersed beneath the surface.

I startle.

The attic, the box, the small source of light gradually reappear in my field of vision. I close the box and push it loudly back into its dark corner.

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LIST OF FURTHER CASE STUDIES OF FLUID EDUCATIONAL KNOTS

Around 1900:
John Dewey - Laboratory School

1920-1960:
Bauhaus (1919-1933)
UNOVIS Group
VkhUTEMAS
Black Mountain College (1933-57) - John Andrew Rice
The Taliesin Fellowship (1937) - Frank Lloyd and Olgivanna Wright

1960-2000:
Ciudad Abierta
Kunstakademie Düsseldorf - Joseph Beuys
Deschooling Movement - Ivan Illich
Hornsey College of Art sit-in
Anti-University London
Situationists international
https://radical-pedagogies.com

CalArts
UCLA
Goldsmith London
Cooper Union (New York)
USC Roski (L.A)

2000-today:

ACADEMY (2006)
Deschool Society London (2010)
Manifesta 6 (2006-7)
The Flying University
The Floating University
The Silent University
Copenhagen Free Univeristy
MYOM
http://www.campusincamps.ps/
Institut für Raumexperimente (Olafur Eliasson)
www.teachablefile.org

ESSENCES AND FACTS ARE INCOMMENSURABLE, AND ONE WHO BEGINS INQUIRY WITH FACTS WILL NEVER ARRIVE AT ESSENCES ... UNDERSTANDING IS NOT A QUALITY COMING TO HUMAN FROM THE OUTSIDE, IT IS ITS CHARACTERISTIC WAY OF EXISTING

Jean-Paul Satre