Somehow, somewhere along the short course of this 21st century, we lost education. In its place, we found human resources–style programs of accreditation and credentialization, added value through ubiquitous and continuous learning, letters and numbers attached to students, educational markets and a consequent mortgaging and marketing of our selves: we have become our own financial instruments, capital on legs.

In many countries, shifts in school architecture reflect this integration into a dynamic economy of learning with attempted verbal and spatial realizations of flow, openness, flexibility, learning space and environments, playfulness, transparency. Ostensibly innovative, this is often a rehashing of concepts once pegged to the democratic values and child-centered pedagogies of the open-plan schools of the 1950s and 1960s. Now repurposed and hollowed out, the glammed-up dross of this vocabulary gives rise to a form of verbal inflation with the word “learning” prefacing an increasing number of architectural features within schools, from stairs to cafés to streets. These can be understood as attempts to assert architecture’s continuing value in the 21st century when faced with increasing competition from online education. However, these new terms and spaces are also indicative of how we “lost sight of questions about values, purpose and the goodness of education,” as the educational theorist Gert Biesta argues. He calls this process “learnification”—a “deliberately ugly phrase” to describe the “translation of everything there is to say about education in terms of learning and learners.”

Biesta’s argument is not anti-learning, rather he is cautious of the reductive way education has come to be redefined in many schools today. A limited, squeezed sense of education is corralled in the direction of learning as the acquisition of standardizable packets of knowledge with the further effect of obscuring the social relationships involved. As pedagogical theorist Henry Giroux argues, these are part of attempts, often from online companies, “to corporatize classroom teaching by draining pedagogy of any of its critical functions while emphasizing ‘teaching to the test.’” What counts as learning, therefore, is that which can be readily quantifiable and thus easily rendered visible and mappable. As Andreas Schleicher, the head of the Organisation

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for Economic Co-operation and Development’s Programme for International Student Assessment (OECD-PISA), argues, “if we want to bring it on the radar screen, we need to measure it.” The emphasis is on individualistic, cognitive attainment detached from purpose and values and often, with the rise in online learning, detached from physical space too. We can read flexibility, for example, not just as how we make ourselves always available to the labor market in profitable ways but, in spatial terms, as a "denial of the material significance of place in people’s lives.”

Contemporary school design often drives processes of learnification, eclipsing the more socially oriented perspectives of earlier generations of architects. In the United Kingdom, the Royal Institute of British Architects (RIBA) published a 2016 report on how design can contribute to effective new schools. As its title, Better Spaces for Learning: #TopMarkSchools, suggests, it provided insight into how learning gains are being reframed as architecture’s added value. A 2015 editorial on schools and design in Architects’ Journal went further, bringing marketized design and learning into the core of architects’ work: “As schools behave more like private businesses they will be in competition with one another to attract the best teachers and students. Architects can draw on their experience in the private sector to help them achieve this.”

Thankfully, such explicit moves to drive the logic of competition and monetize architectural experience by providing design as a commercial service to feed off the remains of the public education sector are rare. Yet these cases provide some evidence of the commercialization of architectural practice and values. In the field of education, where the economy is so tied to an accounting view of learning, reifying and visualizing that learning has become part of architecture’s job. Take, for example, Avanti Architects’ Trumpington Community College (2016), a high school in Cambridge, United Kingdom: “The spatial organisation allows a variety of learning activities to take place concurrently within acoustically defined spaces but which are transparent and showcase learning.” The designed space—that is, the added value that architecture provides beyond the building per se—is tied, causally, to “learning activities” rather than education more broadly, and the transparency of these spaces serves to pedestal learning conceived as a valuable and visible thing as much as a process.

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This focus on schools as stimulation for and display cases of learning is new. Consider how, as a historical counterpoint, a group of architects associated with Team 10 (Aldo van Eyck, Giancarlo De Carlo, Herman Hertzberger, and others) understood the role of architecture for education in a special edition of *Harvard Educational Review*, in 1969. Although they wrote individual essays, the collection was prefaced by a joint statement: “Our intent is to explore the relationship of architectural values to significant human experience and in particular to basic educational goals—to question if and how the physical environment informs and shapes and liberates the human spirit.”

Where, in education or architecture, has that “human spirit” gone? The phrase seems quaint now. In the same edition, Hertzberger wrote an article explaining one of his recent school designs where classrooms were conceived as houses that opened onto a “street,” allowing for different relationships to form between children of different ages and between children and adults too. Yes, the design was oriented to learning, but it was a sense of learning based on a conceptual understanding of education as a social activity and of school as a primarily social institution. In the 21st century, Hertzberger’s street has been revisited by Prakash Nair, among others. Nair, an architect and CEO of Fielding Nair International, introduced what he calls a “learning street,” suggesting it as a useful way to accommodate “the multiple modalities of learning that today’s schools must nurture”, of which he counts 18 that are claimed to go “to the heart of learning.” Hence the “human spirit” that an earlier generation of designers sought to support architecturally is translated into a vocabulary of learning that reflects our positions in a so-called knowledge economy and our abilities to be productive within it.

It is here that learnification can also be seen as a financialization of education, making for a reductive approach to school buildings as well as architects’ contributions. This is a process that builds on a general pattern in architecture. As Reinier de Graaf argues in an article for *Architectural Review*, we have reached the point where “architecture and marketing become indistinguishable. . . . Architecture is now a tool of capital, complicit in a purpose antithetical to its erstwhile ideological endeavour.” This too can be seen in the architecture of schools. For example, in the United Kingdom, the “baseline designs” for the building of new, publicly funded schools advocate the use of low-cost envelope materials such as render or metal panel while advising against the use of curves. Building contractors and construction-services companies, such as the multinational Carillion, which operates across the military, oil, and education sectors, bid for contract “batches” of schools that are financed through public-private partnerships, with schools

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tied to long-term servicing agreements and architects brought in under design-build arrangements.

The Ark Kings Academy (2017) in Birmingham is an example of this turn toward financialization. As the designers, Ryder Architecture, note in the design statement for the school, “We have been driven to develop a consistent approach to design appearance and material palette across the batch to maximise economies of scale and the purchasing power of the PFI [Private Finance Initiative] consortium which is of benefit to the quality of the end product but reduces the scope for a local response.” The multiple layers of financial considerations, from initial funding to design and onward to the lifetime operation of the school, provide ample opportunity for large corporations to do well out of the public purse but little in the way of meaningful, responsive design. The end result is hardly inspiring.

Hence, while the architecture profession often regards itself as visionary, it is increasingly marginalized in design processes by structural changes to the industry. This is compounded by a trend in educational architecture toward design gimmicks. As one expert in the Post-Occupancy Evaluation of educational facilities notes, “The discourse about architecture and schools is very superficial.”

One way of avoiding such shallow engagement is to prioritize participation during the design process, soliciting input from the students themselves. Since its emergence from an experimental project at the Technical University of Berlin, the design team at Die Baupiloten has sought to develop specific research tools, grounded in a broader participatory methodology, in order to learn about what young people (as well as their teachers and other stakeholders) want from their future school buildings. Understandings of participation, however, vary. Kirk Weisgerber, an architect at Die Baupiloten, explained to us how these differences in definition need to be resolved: “We had one recent project where we met the head of the school who had a very different understanding of what participation is. She understood it as a very democratic process where we, as architects, present something and they are then to decide their favorite. But for us participation isn’t really a majority wins situation—we’re about helping to produce a dialogue, working cooperatively.”

Participation for Die Baupiloten is therefore about communication. Their designs for the Heinrich Nordhoff High School (2014) in Wolfsburg, Germany,

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12 Ryder Architecture, Ark Kings Academy Design and Access Statement, 2015, http://eplanning.idox.birmingham.gov.uk/publisher/docs/98A44D0375C1CC1A69BA20AD1C0B32CC/Document-98A44D0375C1CC1A69BA20AD1C0B32CC.pdf


15 Kirk Weisgerber, all quotes come from a phone conversation with the authors, May 29, 2017.
featuring a cafeteria and atrium that serve as the central lounge and study area, came about through workshops with a “project family” of students, teachers, parents, and city representatives.\textsuperscript{16} Such an approach requires power-sharing, however, and the respect of different constituencies of knowledge. As Weisgerber remarks: “The first thing you have to do if you want to be an architecture firm designing space with users is to say, okay, in which fields am I the boss and which am I not? and make these boundaries quite clear from the beginning.”

Recognizing the value of young people in contributing to the design of their institutions is important—in principal but also in practical terms. As Weisgerber points out, participation can “lead to better quality design—quality in a broad sense—that’s the goal of it and we believe it works.”

Of course, a supportive political environment can help design quality too. Burntwood School (2014), by Allford Hall Monaghan Morris (AHMM), is a girls’ high school in the southwest of London and one of the last schools to be designed according to more generous criteria (design-wise and financial) before austerity came to be cited as a reason for limiting school construction. In 2015, Burntwood won the RIBA Stirling Prize, with the judges praising it for demonstrating “the full range of the skills that architects can offer to society.”\textsuperscript{17}

However, the school also raises questions about where design efforts are focused. Is the aim to help teaching, learning, or the building of an educational community—or is this more of an attempt to signify design as a way to add value to a school? These are not mutually exclusive aims since it may well be that young people care more for an environment that appears to have been thoughtfully and beautifully designed. But the most interesting aspect of Burntwood (and certainly that which is most photographed) is its exterior—a signifier of capital “A” Architecture and Aesthetics: this school is \textit{designed}. As such, it is a form of architecture that emphasizes users’ relationships to \textit{things} and perhaps draws attention away from both the social role of designed space and individuals’ and groups’ ability to use internal space as a means to support desired ends. To some extent, Burntwood therefore tells a story about itself rather than inviting others to create their own narratives.

There are some colorful additional touches to the interior, such as the peppy murals and tiling by the graphic artist Morag Myerscough; and on the outside, a neat, extended walkway, constructed from repurposed bus shelters, reinvents something as simple but important as sheltering students from the rain as they walk between classroom blocks. Nonetheless, taken as a whole, this is a reproduction of school as we know it rather than an attempt to reestablish through social and spatial means what education could be.

Presenting an alternative, after almost 60 years in practice of which a good deal designing schools, Herman Hertzberger continues to present ideas that


challenge how we create spaces for young people and how we relate to each other. For example, where architects, traditionally, “were mainly concerned with formal aspects of the exterior without busying themselves with spatial opportunities that might lead to better education,”18 Hertzberger focused on—and continues to do so—space-making. He emphasizes the creative roles of both designers and users, the former inciting the latter to imagine and enact new ways of being in space. The importance of being together, above all, is affirmed: “More than being a means of separation, [architecture] should emphasize those situations that hold out mutual prospects.”19 The sociality of schooling and schools as communities can be encouraged through the use of space connecting people in terms of their physical positions both real and possible, and can serve as a visual reminder that we are part of something bigger than our immediate, personal space. The Montessori College Oost (1999), for example, in Amsterdam, plays with the alignment of floors, stairs, and open spaces to create both more secluded and more public areas. This also helps to increase the legibility of the building, where legibility for Hertzberger is as much the ability to read the potential of social space as it is a navigational aid.

More generally, however, Hertzberger’s vision of space-making is important because it runs counter to deterministic architectural, cultural, or school-management intentions, emphasizing the role of the user in making spaces meaningful for themselves. It exemplifies a philosophy that rejects a normative approach to school design along the lines of, “In this school you should . . .,” and replaces it with a more open, “In this school you could . . .” Hertzberger’s way of seeing space therefore promotes agency and is perhaps particularly relevant to young people, for whom school (both institutionally and architecturally) can be seen as a threshold, in-between spaces and times where the outside and adulthood come to meet the more controlled and secure interior of youth: “It is not just buildings that need structure; people too need a structured environment, in which each person can feel at home. You need a home base to which you can always return, and from which you can venture out to explore the world.”20 Space and sociality are therefore entwined in Hertzberger’s architecture and so present a powerful counter to the view of school design as an efficacious tool of learning maximization.

In many ways, 2017 is an ugly year that has already provided an important lesson: it is precisely when we take democracy for granted that it is most at risk. Moves to broaden architecture’s aims have happened before, as shown by the Team 10 contributions in 1969 and by the many engaged architects working today. There are no silver bullets and no easy answers. A first step would be to set out and ask young people how they conceive of building a better world, one that begins in the places where they become adult. A renewed intent for school design might also center on remembering and making explicit the hard work that living together requires. As Gert Biesta

18 Herman Hertzberger, Space and Learning (Rotterdam: 010 Publishers, 2008), 11.
19 Herman Hertzberger, Architecture and Structuralism: The Ordering of Space (Rotterdam: nai010 publishers, 2015), 94.
20 Herman Hertzberger, “Fifty Years of Schools / Vijftig jaar scholen,” in The Schools of Herman Hertzberger / Alle scholen (Rotterdam: 010 Publishers, 2009), 8–19, 15.
says, “If you think that a democratic school is precisely a neo-liberal space where everyone can do their own thing then you have not understood what the real challenge of democracy is.”  