Finding A Place for Democracy in Educational Facilities

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Over the last 15 years, the architecture of educational facilities has experienced a paradigm shift. At least in post-industrial societies, clusters of learning spaces grouped around a common area between them have replaced the traditional corridor-and-classroom model. Combinations of cluster- and open-plan solutions are becoming the new standard, providing flexible learning environments for varying teams of learners and teachers (Kühn 2011).

It is important to note that this concept is no recent invention: Similar spatial arrangements were characteristic for the years between 1965 and 1975. In spite of some initial positive results, they were no success. In the mid-1970s, when the last exemplars were still under construction, partition walls were being reinstalled in the open-plan prototypes. By the early 1980ies, both architecture and teaching had returned to traditional models (Kühn 2009).

It is too early to judge the success of today’s new standard, but there are some reasons for optimism. One reason is the improvement in building technology, i.e. better acoustics, ventilation and lighting. Another reason is better management: Due to an advanced culture of participation, teachers are being involved in the design process and are better trained to use the new spaces appropriately. Thirdly, the “knowledge society”, which was in its infancy in the 1960ies, has since matured. Students today are expected to develop “21st-century-skills”, i.e. to be creative, set their own goals and assume responsibility for the results. They should be able to interact in heterogeneous groups and use digital tools interactively (Rychen & Salganik 2003). It is widely believed that flexible learning environments can promote the development of these skills. Even if the new paradigm would experience problems, simply returning to the corridor-and-classroom model would not be considered an option today.

As far as the layout of the building is concerned, the differences between today’s new educational facilities and those of the radical models of the 1960ies are remarkably few, with one significant exception, which I will refer to in this paper as “sitting-stair-hall”: the combination of stair, grandstand and central, mostly top-lit hall that serves as a common heart of many recently built educational facilities. At first glance, these spaces may be regarded as venues for music or theatre. Actually, they do not serve these functions really well for reasons of acoustics, lighting conditions and disturbance due to circulation.

So what is the purpose of these spaces? They obviously are meeting places at the crossroads of traffic within the institution, thus similar in function to the “agora” of ancient Greek cities, the central public meeting place where the Greeks cultivated democracy. My proposition is to regard the “sitting-stair-hall” as a similar place for democracy in today’s educational facilities. My argument will start with the history of this element in the context of education, claiming that it originates in school projects by Herman Hertzberger from the early 1980s. It must not be confused with similar gallery elements used in Britain in the first half of the 19th century, which were instruments of mass education for the industrial age. Understanding this difference is crucial to evaluate the quality of the “sitting-stair-halls” built today, and I will propose some criteria for this evaluation. Finally, I will reflect on the question how the current crisis of democracy bears on this spatial idea.

Living Stairs

Herman Hertzberger (* 1932) is one of the most influential architects of his generation. His office has designed more than 40 educational facilities built between 1980 and 2010, with one early example, the Montessori school in Delft, dating back to the 1960ies. At that time, Hertzberger was one of the proponents of “structuralist” architecture: His Delft Montessori school is an addition of similar basic
elements resembling individual cells in an organism that is open for change and growth. The school was extended three times between 1966 and 1970, maintaining its generative idea in spite of the changes in shape. Hertzberger was especially proud of an element in the corridor space of the school, a small quadratic pit (Fig. 1), two meters wide and 40 centimetres deep, filled with small stools. When the stools are removed, the pit offers a meeting place for the children, creating a kind of indoor campfire situation. Also in the 1960ies, Hertzberger designed an experimental housing project in Delft with a characteristic “split-level” section that created vertical connections by shifting two levels against each other by half a storey (Fig. 2).

It was not until the early 1980ies that Hertzberger won a commission for another school building. The Apollolaan schools, built 1980 – 83 as a pair of “urban villas” in Amsterdam, one of them a conventional school and the other a Montessori school, feature a “split-level” section similar to the Delft experimental housing. The “sitting-stair-hall” offers a space for gathering outside the classrooms, much like the sitting pit in the Delft Montessori School from the 1960ies.

In terms of function, there is a pragmatic side to this feature: As there was no extra budget for creating an auditorium for the school, Hertzberger’s solution offered this functionality with little extra cost as part of the circulation system. However, Hertzberger names two less pragmatic inspirations (Hertzberger 2008 p 235). Firstly, he mentions an image of the monumental stairs leading up to the entrance of the library of Columbia University in New York with students appropriating these stairs for discussions in small groups. Secondly, he refers to an image of a stair connecting two streets on different levels in a city in northern France, creating an urban playground with handrails doubling as playground equipment.
In both cases, the users do not follow the conventional rules. From a functionalist perspective, stairs are not created to sit on and handrails are no playthings. In his projects, Hertzberger aims at creating ambiguous spaces that frustrate simple functionalistic semantics and stimulate experiment and appropriation by the users. Stairs are the element in his architecture where this attitude can be observed in abundance. Starting with the Apollolaan Schools, Hertzberger has created a variety of solutions, uniting central hall, stairs and pits into ever more delightful combinations.

It would go beyond the scope of this paper to discuss these solutions in detail, but some observations have to suffice to point out the special qualities of Hertzberger’s stairs that are rarely accomplished by other architects, especially since this element has become a fashion. In spite of the linear and straightforward design of the seminal Apollolaan-School, most of Hertzberger’s “sitting-stair-halls” go beyond this model. He often encourages diagonal crossings of linear stairs, but in other cases, the walking lines of the stairs themselves are changing. In the Presikhaven School in Arnhem, this results in a combination of a U-shaped sitting stair with a linear one, the latter being diagonally crossed by the walking steps (Fig. 6). In the Stedelijk Gymnasium in Leiden, a steel stair arrives on a podium at one side of the hall that responds to a sitting pit at the other (Fig. 7). In neither case the functions of these elements are precisely prescribed, leaving space for experiment and appropriation.

**Stair as machine**

Although Hertzberger may justly claim being the inventor of the “sitting-stair-hall” in the context of educational facilities, there is a precedent that deserves our attention. It dates back to early 19th century and was developed in the context of the industrial revolution, when education for a mass society – and particularly the poor masses – was becoming an urgent issue. As the British Empire was leading the industrial revolution by half a century, it is not surprising that Britain was at the forefront
of this development. Until the 17th century, schools in Britain were buildings that offered a large hall for teaching and included the accommodation for the head teacher (Lange 1967 p 32). Scaling this system up can be achieved in at least two ways: Firstly by the addition of more similar units of teacher and students, i.e. classrooms connected by corridors. This was the path the “Prussian” system of education followed. The second answer is scaling up the hall and finding a spatial and pedagogical arrangement that allows one teacher teaching a great number, potentially several hundreds of students, thus solving a problem created by the industrial revolution by “industrializing” education itself. The basic idea, which was highly successful, with thousands of schools following this model spread around the British Empire from England to India in the first half of the 19th century, was quite simple: Create a large hall with rows of benches in the middle and semi-circular collecting points at the side-lines, where so called “monitors” – older children that had performed well in a subject – are teaching the younger ones (Lange 1967, p 42, Göhlich 1993, p 127; Lawson & Silver 241-46).

Fig. 8: Floor plan of a Lancaster-type teaching hall (Lange p 166)
Fig. 9: Monitors teaching in semi-circles (Newman 1998, p 166)

The system is usually referred to as “Bell & Lancaster”, after Andrew Bell (1753 – 1832) and Joseph Lancaster (1778 – 1838). While living in Madras, India, Bell was appointed superintendent of an orphan asylum, where he established a system of “mutual teaching”. In this “monitorial system”, as it later was known, older and brighter children were teaching the younger ones, after they themselves had been taught by the teacher. Bell returned to Britain in 1796 and devoted himself to spread and develop the system. By the time of his death, twelve thousand schools had been established following his model in Britain and the colonies (Blackie 1995).

Fig. 10: British and Foreign Society School, London, 1818

Bell’s system was similar to the one developed by Joseph Lancaster, with whom Bell engaged in a major and continuing dispute, in which the Church of England took sides with Bell, while Lancaster was supported by Nonconformists and utilitarian liberals like Jeremy Bentham. Robert Owen’s school
in New Lanark, opened in 1809, was among the schools that followed Lancaster’s principles, as was the school of the British and Foreign Society built 1817 for 400 boys and 300 girls. It offered rows of benches without back-rests and 31 semi-circular meeting-points for monitorial teaching.

In 1818, Lancaster was forced to leave Britain for the Americas and died in New York in 1838. His spatial arrangement with benches in the middle and monitorial stations on the side-lines was further developed by Samuel Wilderspin, who ran an infant school in Spitalfields, London, from 1820. Wilderspin replaced the benches in the middle of the hall by a grandstand referred to as “gallery” on the shorter side that allowed for a more concentrated atmosphere when addressing all the children in the school. The rest of the hall was reserved for monitorial teaching, either on the walls as in Lancaster’s model, or in the middle of the space using “lesson posts” with instructional material.

![Fig. 11: Infant school for 200 children following the Wilderspin model, 1840 (Lange p. 530)](image1)

While this concept maintained the idea of integrating all teaching and learning activities in one space\(^1\), other proposals of the time led to a differentiation that is very close to today’s cluster type solutions. Early schemes added additional smaller lecture galleries to a main hall (Fig 12), while later developments created new typologies with a central hall with a gallery and surrounding classrooms with benches (fig. 13). Recently, similar elements have been introduced again into advanced open plan solutions (fig. 14).

![Fig. 12: Infant and Juvenile School, Plan, 1840, (Lange p. 537)](image2)

\(^1\) It is important to note in this context, though, that Wilderspin strongly promoted outdoor activities. Children should spend half of the time at the infant-school with open-air activities.
The main difference between the sitting-stairs in these examples and the ones following Hertzberger’s model is obvious: they do not lead anywhere. In terms of circulation, they are dead ends. Moreover, the galleries of the 19th century were designed to immobilize children, packing them into the rows of the gallery, with good sight at the teacher, but at the same time little chance to duck out of sight. These stairs create a homogenous mass, oriented at the speaker in front. In contrast, sitting-stair-halls as conceived by Hertzberger are part of the circulation system. Their main purpose is to mobilize students and connect them with each other, not to immobilize and focus them on a speaker in front. This does not exclude their usage for assembly, but as an exception, not as a rule, and – as anybody who has ever experienced a performance under these conditions can confirm – with considerable compromises concerning acoustics, light and concentration.

### A Place for Democracy in Educational Facilities

How does this connect to the question of post-democracy and education? Schools may not be genuinely democratic institutions, but they usually consider themselves as breeding grounds preparing students for democracy. The sitting-stair-hall offers an easy opportunity to express this democratic attitude in a simple and impressive spatial gesture. Competition renderings and staged photographs of this fashionable element usually show the archetypical scene of relaxed groups of students...

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2 Similar solutions have been re-introduced recently as furniture elements, which act as mini-galleries allowing concentrated presentations (Fig 14).

3 In today’s architectural competitions for educational facilities the sitting-stair-hall has become a standard feature of most entries, regardless of the clients asking for it or not.
young people scattered over the stairs, engaged in communication. Alternatively, we can imagine the scene turning into an assembly, gathering the collective of the school in one space.

Yet, as important free and informal discourse on one side and plebiscites on the other may be, democracy cannot survive without representation and personal responsibility. Post-democracy is characterized by the lack of both. The dark side of the two images described above – informal communication in peer-groups and the feeling of empowerment in the collective – are the echo chambers of social media and populist resentment. As David van Reybrouck outlined in his book from 2016, “Against Elections”, today’s crisis of democracy is the crisis of a specific form of democracy, i.e. the electoral-representational one (Van Reybrouck 2016). Obviously, more and more people do not feel represented by their elected representatives. Reybrouck proposes to revive practices used in ancient democracies like Athens, where many positions where not elected but decided by lot.

Thus, to find the place for democracy in educational facilities, the Greek agora might deserve a second look. The agora was not only an open space, but it was defined by buildings that were part of it, i.e. one or more stoas and the bouleuterion. Stoas were very long rectangular structures, closed by walls on three sides and a colonnade on the fourth. They served as ambulatories and covered markets. The bouleuterion, in contrast, was usually a square building with grandstands on three sides, conceived for concentrated debate and political decision-making. The bouleuterion in Athens housed the “boulé of the 500”, a council with 500 members, typically chosen by lot, running the daily affairs of the city (Johnstone & Graff 2018).

If we take the idea of the school as a breeding ground for democracy seriously, we must extend the program of our schools by an additional element, similar to the ancient bouleuterion, as an addition to the sitting-stair-hall. This space should have excellent acoustics and lighting, and it should be shielded against the circulation system, making it also a venue for music and performance – a place both for the arts and for democracy. It can be of moderate size, as there is no need to offer seats for the totality of the school, but for its representatives only, either elected or chosen by lot.

I want to conclude with an example designed by the architect Hans Scharoun in 1956, the Geschwister-Scholl-College in Lünen, Germany, which opened in 1960. Education for democracy was a core issue for the project, as the totalitarian NS-regime had only been overcome a few years earlier. Scharoun designed a main corridor with all the qualities of an ancient agora, with niches and informal meeting points. At one end of this agora, close to the entrance, he positioned a pentagonal auditorium, with sliding doors that allowed it to connect to the corridor. Attached to the side of the
auditorium Scharoun positioned a large office space that was reserved for the self-organized student representatives’ body. Scharoun’s plan is diagram of a strong belief in education for democracy, as expressed in the headmaster’s inauguration address for the college: “Today’s school can no longer limit itself to teaching knowledge. Education has to be based on a true intention for serious work and active cooperation of the students. School today is no longer just an institution ‘organised by adults’, but to a large extent a habitat shaped by the students themselves.” (Wieloch 1960)
References


Figures

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