

DESIGNING SCHOOL TOGETHER, BETWEEN PEDAGOGY AND ARCHITECTURE

Beate Weyland

Abstract

This article presents some findings from a research project carried out together with architect Sandy Attia between 2010-2014 funded by the Department of Education of the Free University of Bolzano (Weyland, Attia, 2015). The research frames 10 case studies of schools built in the past decade (preschools, kindergartens and primary schools) in the context of the contemporary debate surrounding the relationship between architecture and pedagogy in the South Tyrol region of Italy. The focus of the research resides in the processes that lead up to the design and construction of a new or renovated school, analyzing the trajectories that each project takes in relationship to the projects' final outcomes.

The research posits a need for a shared language between the pedagogical and architectural fields to better navigate the arduous path towards the building of a new school, and underscores the benefits of involving the various stakeholders in the planning of the school to help the institution work to its fullest potential upon resuming the scholastic activities in the newly designed spaces.

www.padweyland.org; b.weyland@unibz.it

Beate Weyland is associate professor for teaching and learning at the Faculty of Education of the Free University of Bolzano (I). Her research activities of the last six years are directed towards helping schools develop flexible, sustainable and innovative approaches to the relationship between pedagogy and learning space design. This work requires working closely with schools, teachers, administrators, architects and politicians. She is executive member of the South Tyrolean inter-institutional network Space and Learning (www.lernenundraum.it) and member of the international research group **PULS** (Professionelle Unterstützung von Lernen und Schulraumentwicklung – www.pulsnetz.org), with partners the Free University of Bolzano, The University of Innsbruck, Art University of Linz, Alanus School of Education, Bonn. She organizes conferences and exhibitions on this topic, with the aim to sensitize educators, architects and citizens on the importance of the relationship between learning and space.

Her teaching focuses on using her research to help student teachers to develop innovative ways of teaching and learning using the body's five senses engaging with materials and three-dimensional objects to achieve new knowledge and collaboratively develop culture. Technology and social media are central to this enterprise, and crucial to a culture's active life, and so are fundamental to her teaching and learning activities.

One of the important findings of the research is the school body's apparent difficulty in cohesively communicating their teaching and learning needs and the subsequent missteps that can occur from an administrative and architectural standpoint in addressing the programming of the school. In many cases, the school representatives and the architects commissioned to design the new school found themselves working with little common ground and at different paces that were often difficult to reconcile under tight budgets and timeframes.

The research also traces important notable changes in the head teacher's newly invested role in being able to surmount strict school-building codes (within reason) as need be to better accommodate innovative teaching and learning methods. As a result, the face of the school, from a pedagogical and architectural standpoint, is changing in palpable and exciting ways.

Keywords: School, space, architecture, pedagogy, sheared planning, innovation.

0. Introduction

“A school building tells a story. A school is like a text that imparts a cultural legacy and is a messenger of that which society hopes to pass on to its children. Like the school, the school building itself educates, and like the teacher, the architect teaches.” (Scotto di Luzio, 2013)

It is no coincidence that for countries coming out of a conflict, one of the first acts of reconstruction is the building of a new school. In many ways schools signify reconciliation—they are where peace, well-being and optimism in the future find first footing. Moreover, the act of building is in of itself a form of collaboration; the hard work and manual labor that goes into constructing a building works off past errors and tackles obstacles in the way of planning for tomorrow. Indeed, the state of a society's public school system can be considered a barometer of a society's general well-being: if schools are up to par, and students are learning that which they need to learn, then the community is prospering.

In Italy's recent past, when the new government came into power, one of the first action points of the new administration was to address the state of affairs of the nation's educational institutions. The degraded state of the schools was a sign of a “sick” country and one of the first proposed antidotes for its ills has been to *mend*, or overhaul the entire school system—“mending the schools” meant healing the society. This *mending* of the schools has at times translated into quick fix, technical solutions that overlook the more narrative qualities that a school has to offer.

These narratives might be the subject of documentaries that recount and in turn celebrate the collaborative efforts taken on by developing countries or small, rural communities in the building of a new school and shed light on matters that extend well beyond the walls of the school itself. Generally speaking however, these stories remain more or less sequestered amongst the individuals directly involved in the process of building a new school to then slowly dissipate and fade as time passes and the school opens its doors. Yet the life of a school lived before it opens charts out complex relationships and processes to provide a veritable wealth of information for those faced with the task of designing a school. This chart, or map, is a collection of contested grounds and transient borders, and is cobbled together by many individuals, subjects and institutions that must broker an agreement on what kind of school is to come into being.

This article is dedicated to the planning process, which is the main subject of this study. It focuses on the elements of the process that lead to the birth of a school - from the moment the need for a school is identified to when it is opened. The different perspectives of pedagogy and architecture in observing the same object are highlighted, pointing to the cultural claims made by the now-famous video by the architects Ray and Charles Eames, *Powers of Ten* (1967); and by the illustrations in *Zoom* by Istvan Banyai, which describe the polarity of perspectives ranging from small to big and big to small, with their variations and infinite details, as snapshots of a single process and a single reality. In particular, the analysis focusses the traits and specific skills of the different subjects involved in a school project and single out the sites of contestation in the relationship between user (i.e., schools) and architect. Finally, a study case of best practices of shared planning is described in order to define the elements that can generate a fruitful process¹.

1. A question of perspective

“Upon reflection, it is always surprising to discover the difference between thinking about things and thinking about the relationship between things.”
(Bateson, 1995)

A school may be seen from many different perspectives. From the point of view of the architect, these include: from small scale to big, from details about furnishings to teaching spaces, from the

¹ In my article I'm presenting a research that has been displayed exactly in the following Italian book "B.Weyland & S.Attia (2015). Progettare scuole tra pedagogia e architettura, Milano: Ed. Guerini"

In the book we present a research where we examined ten new builded schools in south Tirol . So the interviews we made are related to our ten fall cases: each of them has architects that build the schools, and they have school principals and teachers involved in the constructing process.

perspective of the building, from that of the school's volume to its place in the urban environment and in the city, to its relationship with the region, and so on. Or, from the perspective of the head teachers, teachers and educators, the school can be seen from the big to the small, generally starting from the school's relationship with its neighbourhood, to the teaching environments, from the classrooms to the furnishings, to the didactics and technical objects that are used by those who work within the school. Architects and those in educational positions, then, operate from different and apparently distant starting positions: a broader relationship with the whole for the former; attention to detail from the latter. These different perspectives weigh upon communication, generating a series of tensions and misunderstandings during the planning process. We can add to these the commissioning clients, who have yet another perspective and who place the school within their portfolio of expenditures and investments. Finally, we should not forget the children themselves who see the school experience from a personal and emotional perspective. Yet, all these actors are united by the same desire: to educate.

We argue that an awareness of these different perspectives provides a lens through which to observe the process that gives birth to reciprocal understanding and acceptance, which is the fertile territory of collaboration. Hans George Gadamer (1960) sees in the capacity to question oneself from different perspectives, without the explicit desire to impose one's own point of view on others but rather to challenge oneself, the possibility to bring into better focus the object of research and to better understand what has been and is being said about it.

Drawing on Gadamer, we frame the importance of dialogue in constructing horizons of meaning, knowing that no one holds the entire truth but that everyone contributes something by seizing links between actions and assumptions, which may result in verification and agreement or, otherwise, may remain at the level of understanding. Understanding is an interesting concept for our research endeavour. Gadamer sees it as the mutual recognition of remaining differences, a conflict that does not have to reach any settlement. Real dialogue does not tolerate uncritical compliance, but rather promotes tolerance, self-reflection, the capacity for judgment, and has an interpretative flair. To enter into dialogue implies consciousness of the history and traditions from which we come; in doing so, we interpret and understand the reasons for our thoughts and our actions. Dialogue, then, allows us to understand the possibilities for finding common ground.

The constructive intersection between pedagogy and architecture occurs when the different parties "become aware" that other perspectives exist and, by extension, other worlds and frames from which to observe the same objects. This does not necessarily mean that we change our point of view on things; it means only that we become aware of and include the different "targets" in ordering our thoughts.

In the following paragraph it will be described in detail the points of view of the architect and head teacher as they emerged from interviews on site visits to the schools. They best represent the two extremes of these different perspectives, deriving from the different skills and visions of these professionals.

The Circle and the Cone: two perspectives – two worlds

The sections of a cone, with the base, the apothem and the apex are often used as a symbolic representation of the structure of a society in which the head of government stands as indisputable authority (the apex) that controls and imposes itself on the rest of the population (the base), from which it is separated by vast distances (the apothem). If, however, we change the perspective and we observe the same figure from above, a totally different point of view, the same cone is transformed into a circle with a point in the centre, what in esoteric cultures is called the solar glyph. It is a figure that no longer has an apex and even less so a base. It is the circle that is an expression of perfection, without a beginning or end. The two models – the cone as it seems from a horizontal perspective and as a solar glyph according to the vertical perspective – offer two different points of view of the same geometric figure.

It makes little sense to ask if one perspective is more “right” or “correct” than the other. Nonetheless, this example illustrates the human difficulty to arrive at a common and unitary essence of things. History is full of instances when the choice of war was made to defend a belief and crystallized views, confident that what was perceived was the only possible reality. The crystallization of perspective begins when we identify ourselves totally with what our point of view allows us to see. It is part of the most immediate way to assess phenomena according to polar binaries: right or wrong, day or night, light and darkness. But we know that these binaries are illusory, as is the notion that the sun circles the earth, which was widely held for centuries. This seems like the eternal story of humanity, the infinite battle between opposites. The solution is found in knowing how to change perspective.

Zoom: What irons will we put in the fire?

Istvan Banyai, an illustrator who has achieved success by describing through images what it means to change perspective, produced a children’s book entitled *Zoom* (1998), which tells the story of a silent journey characterized by a perspective that continually recedes, revealing different aspects of the world. The extraordinary success of *Zoom* was followed by *Ra-Zoom* (1998) and *R.E.M.* (1998). Both books play with realities that meet and touch, in a whirlwind of different planes and new perspectives. Banyai’s visual suggestions are useful for understanding how, when you focus on details, you enter into a world, but when the perspective moves away, you capture a very different and vast universe.

From Small to Big

The video, *Powers of Ten* (1968-1977), by the architects Charles and Ray Eams, is enlightening in the context of understanding the different perspectives that are part of the planning process for a school. This extraordinary audio-visual production discusses the relative measurement of distances in the universe and the effect produced by adding or removing a zero on the scale of perspective. This gives rise to a journey in pictures of the infinitely small and the infinitely large: focusing in on a couple picnicking on Lake Michigan in Chicago then out to the borders of the Universe.

The voyage develops along a series of 25 frames which, starting from the scale of our everyday experience, move in exponential steps outward to the galaxies and the clusters of galaxies, and then vice versa lead us into the microscopic world of the infinitely small. Our trip ends within a proton of a carbon atom in a molecule of DNA in a white blood cell. If we observe the video as a whole, we note that the two extreme moments of the infinitely large and the infinitely small share the same indefinite form and substance. The relative size of the universe suggests that there may be points of view and different perspectives from which to observe it: from the nucleus of the atom, to the empty infinity of the cosmos, to the clusters of galaxies 100 million light-years away where it is no longer possible to distinguish anything.

2. The Head Teacher and the Architect: A Head-to-Head Comparison

The issue of the perspective used to observe the school throughout the planning process emerges prominently in the relationship between the architect and the head teacher (or the specific educational figure who represents the latter).

As seen in the interviews of the research there are different instances when the architect and head teacher meet and often clash, with relationship dynamics emerging that are closely bound to consolidated stereotypes and reciprocal fears of being misunderstood. The aim here is to try to provide a synthesis of the two positions. The head teacher and the teaching staff are highly motivated to offer their thoughts on teaching and pedagogy while providing clear descriptions of their needs. The spectrum of their reasoning focuses primarily on the quality of the classrooms and details on furnishings, as well as the organization and relation of different spaces. The identification of the specific characteristics that go into making a school gives birth to the visualization of the school's environments. The school, then, is perceived as a setting based on willed relationships that are asymmetrical aimed at developing individual potential and favouring the sharing of knowledge.

The architect reasons on a broad scale, drawing from the most diverse sources: economic aspects, logistics, the urban environment, the quality of the spaces, design problems, dialogue with the client and user requests. The objective is to devise strategies to deal with what is at hand and to realize the full potential of the new structure. The architect is not guided solely by the client's requests, but reasons on a scale that goes from large to small (for example, from placing the building within the urban fabric to the furnishings) and sometimes, even without addressing a specific request, finds ways to transform problems and existing conditions (fire regulations, building codes, etc.) into opportunities to develop learning spaces.

Between needs and visions

The head teacher, in the dynamics of the relationship with the architect, often refers to his or her legal as well as organizational and managerial responsibilities. Having to respond to a broad range of requests that come from parents and the teaching staff, they have to juggle the wishes of the entire school community.

The issue of security seems to have primarily a technical connotation, bound by fire safety regulations and other elements of the building safety code for schools. In fact, the technical-regulatory elements mask a much deeper and articulated logic: from the “physical safety” of children we arrive at “educational certainty” that the school – through its head teacher and teachers – should guarantee to families. The “control” of their children, which parents demand from the scholastic community, is clearly tied to the architectural features of the school but it also extends to psycho-cognitive and behavioural dimensions.

It is easy to understand, then, that when it comes to safety in the design of a school, the tensions and implicit fears that are part of the daily work life of the head teacher and the teaching staff emerge. In fact, many of the sources of tension are rooted in the great expectations placed in the school's educational mission and the resulting fears in face of the difficulties of meeting them. The anxiety that stems from the impossibility of having everything under control, even when one wants to, often affects the dialogue between the architect and different parts of the school community.

For example, the architect Pichler, interviewed with respect to the construction of the pre-school in Castelrotto, states somewhat polemically: “We need to enter into the world of children so as to protect them from adults that want everything safe and precise. On the one hand, we are moving towards the Montessori model that gives children responsibility, but, on the other, they want to remove walls not just to have activities but also to have everything under control. But this is a discussion that needs to

be had with the teachers and the fears that they have...Without getting hurt, you will never learn the right way, you must fall.”

More than a few parts of the interviews reflected upon this point. Head teachers and teachers are under pressure from parents’ fears for the safety of their children. The Vice-Head teacher of the Funes school, Manuela Prader, despite having an overall favourable impression of the school, detailed the problems of a slippery and sharp-edged concrete staircase that is potentially dangerous for children. She points out the possible problems with glass walls that need to have markers to avoid having children walk into them. The Coordinator of the Kindergarten in Castelrotto, Barbara Haselreider sees the technical safety issues in a different light: “As for safety, and here I am referring to the fire-proof doors, everything must be open. We think it is more likely that a child will dash outside than a fire will break out in the school. This is where the work of building trust with the children begins. When can we leave the children on their own, when can we trust them or not trust them, these are issues that we are working on. We are noticing that if we explore the building with the children, if we let them open doors and go into spaces we do not want them to enter, then we can start building this relationship based on trust and responsibility. But we are only at the start of the journey.”

PICTURES 1. Kindergarten in Castelrotto @marco pietracupa photographer

The issue of safety, then, has two outstanding elements: the illusory need to reduce stress by controlling external conditions and the fear of change. The interviews reveal that these difficulties very much shape the positive relationship between educators and architects. Only where these two figures established a relationship based on trust and worked side-by-side is it possible to overcome the obstacles and seek out new challenges.

For their part, architects see themselves primarily as the planners, the technicians, as the problem solvers. They are responsible for the building site and are required to develop relations with the municipality over questions related to the budget, urban planning, deadlines and logistics. In relations with the client, unless it is a discussion about pedagogy with the head teacher, contact ultimately takes place when it is time to sort out the décor.

Teachers give a strong symbolic value to the surroundings of the work environment. From the worktable to the chair, from the desk to the blackboard, from teaching aids to the posters on the walls, these are the objects on which their daily activities are carried out. Their requests are aimed at facilitating their teaching experience as much as possible and refer back to specific situations that they come across daily. Their statements are heavily tinged with habits (“we want something because we

have always had it”, with the need for change justified by concrete difficulties (“we want something different because what we have is making our work complicated”). Rarely do discussions about furnishings centre on educational concepts as they, instead, remain rooted on very practical questions.

For the architect, this often seems like a short-sighted view of the school with respect to the complexity that surrounds an architectural project; this is from the vantage point of a person of a certain cultural background who sees the world and its needs in their entirety. The architect assumes the primary role is the realization of an architecture that has an aesthetic value and not just a functional utility, which speaks to society and is in dialogue with its era.

It is not surprising, then, that the architects interpret furnishings in a completely different manner than the teachers. The décor, precisely because it is the last step in the planning process, becomes a sort of “finishing touch” to the entire structure, capable of providing coherence to a project in its entirety. The architect Zanovello, interviewed about the Vipiteno primary school, states: “It is not automatic that the project will include the décor and if the contract does not include it, you lose 50% of the project. It is like having your children raised in another family, there will never be the same kind of love that is generated by your birth family.”

The head teacher and the architect, from the moment they meet, have one mission in common; it goes beyond the narrow technical and organizational issues to planning together a structure for a world that is to come, for society, for humanity. As Cesare Scurati (2003, 2005, 2008) points out, the head teacher is the figure that embodies both a “bureaucratic” and “educational” culture. The position is often characterized by an open rationality and as a driver of innovation, able to project energy and perspective, as well as reassurance and solidity. The head teacher is, therefore, a figure of objectivity (efficiency, reliability) and planning (invention, change). In order to transform the safety issues that occur in periods of innovative change, the head teacher has to make the most of his or her role as an educator who has the responsibility of guiding, listening to and loving a school community. Guiding the planning of the school means, for the head teacher, developing a process whereby the school community identifies with the building. It involves a major job of reflection on the establishment of the school as a physical body to be formed.

PICTURES 2. The primary school in Vipiteno @marco pietracupa photographer

The architect is similarly involved in this proactive effort, offering not only to the school community but also the wider social community a product that is both functional and cultural. In addition, his or her specific contribution can be truly understood if it is involved in the important process of

"appropriation" - empathy, cooperation, sharing - that make the school a set factually productive and positive human experience. The architect Zanovello, in concluding the interview on the Vipiteno school, claims:” I recognise the great possibilities that we would have had if all the things we are saying now had been put into the heart of the project; the head teacher was cooperative but the concrete phase of the exchange is only happening now.”

The hope is that these two “heads” that lead in the planning of a school discover how the constructive exchange of points of view on different matters can open up unexpected horizons, thanks, in no small part, to the gradual assimilation of reciprocal traits.

3. Planning together

Planning a space means giving an answer for specific functions but above all it is establishing relations between systems of meaning. Architectural planning began as a “relational art”, a dynamic between local cultures and instances of existence, including the identity of a society and the environment that it inhabits. This sort of approach has elements of rationality, desire, emotions, memories, creativity, and links the element of a space with our experiences in a complex web of relations between scales of intervention, actors involved in the process and issues to address (Vannetti, 2009, p. 11). Space can be seen as a sensor of new forms of territoriality and lifestyles. This could be the basis for a fruitful interdisciplinary exchange in which planning becomes the matrix for communication and cooperation between the different scales that operate on a school.

This section first discusses the different features of shared planning and then presents two interesting plans for schools that are the results of a rich and articulated dialogical experience and which highlight how shared planning is a relationship based on reciprocal trust. Planning together is much more than simply participating in the process; it means the participants take the process to heart and share in its spirit all the way through to the end.

From Participatory to Shared Planning

It is unlikely that an avant-garde building will employ traditional teaching methods when pedagogy and architecture work together. However, if they work independently of each other there is a schizophrenic lack of communication between the nature of the architecture and the specificity of teaching and learning commitments. When the planning for a school is part of a shared experience of growth, each learns the other’s language as well as how to understand and respect the commitments and features of the reciprocal areas of competency.

“Architecture is too important to be left to architects”, is the famous saying by Giancarlo De Carlo (1973) that criticises the notion of the discipline’s autonomy and the primacy given to architectural jargon that leads to changes in the urban landscape that are not widely approved. De Carlo was one of the first architects in Europe to theorise and implement the practice of participation of users in the planning phase, often through workshops in which users were immediately involved in a decision-making process that highlighted their expectations and demands. He established some very clear guidelines on his operative role in the process: as a technical expert, he limited himself to having individual wishes converge “towards a common interest for the functional, technical, economic, aesthetic and overall quality of the project.” He emphasised that only a “horizontal dialogue” between administrators, planners and citizens can reduce the chances for error, especially in urban planning. He claimed that, “The architecture of the future shall be characterised, in its formal and organizational definition, by an increasing participation by users,” creating a confluence of the aims of clients, planners and builders.

Keeping in mind that De Carlo had an important role to play in breaking through the fundamental misapprehension between planners and the community of users and residents around an architectural work, this research contends that participation is not enough. One can participate in an event without being fully involved; one can take part in an activity but this does not necessarily mean commitment. One can even take part in a meeting and express an opinion without having to deal with the consequences.

Instead, the intimate, meaningful and radical engagement by the parties that gravitate around a school is increasingly important as each carries with them a part of the “weight” of the project. It is a commitment that implies responsibility, a way to generate a sense of “we”, that sense of community that transforms a group of “I” into a collective “we” in which the members are part of tight network of significant relationships (Sergiovanni 2002). This commitment creates “cultural environments in which everybody learns, in which every individual is an integral part of the whole and in which every participant is responsible for both teaching and the well-being of others.” Shared planning assumes that the school is understood as a real project of and for the community.

If we want to use this word [shared planning] in a meaningful way, we have to restrict it to a group of people that have learned to communicate honestly amongst themselves, with relations that are much deeper than mere masks that transmit propriety and which have developed some very significant commitments that make it possible to share joy as well as tears, cheer each other on and make someone else’s situation our own... (Peck, 1987, p.59)

Understanding the community's engagement in these terms means working on the sharing of needs, of the aims of the project, of what might change behaviour, of how the work might be used and preserved.

The feeling of appropriated spaces

The psychological research on the relationship between environment and architecture (Costa 2009), which highlights in territoriality a set of behaviours and cognitions of individuals or a group based on the perception of the ownership of a physical space, demonstrates how individuals have a natural predisposition to occupy an area, establish control over it, to personalise it and to invest it with thoughts, beliefs and emotions and to have the motivation to defend it. This is based on Abraham Maslow's hierarchy of needs that are met by the needs of the body (eating, drinking, sleeping), of feeling safe (therefore a familiar setting), the need for belonging (identifying with our environment that gives us our sense of self and the people with whom we are comfortable), the need for social relations and esteem (self and of others) and finally the need for self-actualisation.

Drawing on the classification of territory by Altman and Vinsel (1977), the school can be seen as a place that is positioned amidst primary, secondary and public territory. **Primary territories** are those where we enjoy legal property rights (for example, a house) or which are occupied more or less permanently (such as a desk in a workplace office). These spaces are "demarcated" by extensive personalisation and the greater the chances to personalise a setting, the greater is the attachment to the site. Also linked to this is a high level of satisfaction and wellbeing, as these are spaces that have a strong emotional investment. **Secondary territories** are those that are not possessed but are used for a specific reason and for a specified period of time. Their personalisation takes place only in the period in which they are legitimately occupied.

The school is a public territory but it is perceived in different ways by those involved the planning process: a primary territory for head teachers and teachers, a secondary one for students and families, a public territory for the architect and the clients. In reality, the school is rarely a primary site for anyone (and no more so than for teachers and head teachers who are always in a hurry to get home) but, perhaps, the intersection is rooted in the idea of transforming a public place (for architects and clients) into not only a secondary territory (a place for work) but also into a primary territory that one loves for all its features.

The natural feeling of appropriation of a school site, then, leads not only to thinking about the usefulness of sharing in planning decisions but also a clear elaboration of what the school means for the community. It is not a personal space cut out to meet the users' tastes and immediate needs nor is it

a neutral space, what Marc Augé (2009) calls a “non place”, where hundreds of individuals cross paths in trying to “consume” a service (that is, education) without entering into any meaningful relationships. The school is a relational, anthropic place, with a history, and as such will always have a dual significance: as identity and as a public territory.

The innovative potential of shared planning

The active involvement of the potential beneficiaries in the different phases of a plan, from its inception, also known as bottom-up planning, is becoming an important factor in local democracy and, as a special way to train and educate for active citizenship in all its forms, it seems to be the issue or challenge for social innovation. For an architect, the forms of participation are important instruments to collect information and which allows a planning process to interpret the requests being placed on it; for the clients, citizens’ engagement is a way to build a consensus and sense of identification with the school building; for the users, especially teachers and head teachers, sharing can lead to real and proper innovation in thinking of the school in terms of teaching, activity and life.

The school is the most appropriate laboratory for learning about the capacity of interactive citizenship and educational cooperation. In order to respond to the changes in more recent generations of students – in their values, their relationship with knowledge and culture – the different actors in the educational process can find, in the shared planning of the teaching and learning profile of the school, an ideal way to make their work more effective and efficient. When they participate in the building of a new school or the re-structuring of an existing one, the teachers and head teachers, the families and the educational community understood more broadly, can help redefine what the school will be and what they are willing to do to reach their educational, didactic and cultural objectives. Change cannot come about through a top-down, legal and abstract model (that is, institutional innovation) or through some kind of architectural intervention (structural innovation). Rather, it must be channelled through actors’ engagement that starts with the contexts in which they live, their concrete daily habits, their values and cultural representations, and their stakes in society. The engagement and the responsibility assumed by the educational community consists precisely in using the opportunity to give the client and the architect a **pedagogic-didactic plan** around which spaces and settings are organised. In Alto Adige, this has already been made into law (Autonomous Province of Bolzano Directive on School Buildings, DPP n.10 23/2/09) so that when a solid case is made for a pedagogic concept and project, it is possible to plan a school along lines that deviate from the traditional model with classrooms and corridors. In reality, nationally and internationally we find that educational communities able to define their own identity and define their own way of doing things (that is, the teacher, student, knowledge-culture relationship) can also orient planning choices and give birth to new models, especially with regard to the organisation of internal spaces. A notable example comes from schools in Reggio Emilia, which,

based on the “Reggio approach”, always include in the building’s plan a large central space for joint activities, a large workshop for manual and artistic work and smaller workshop spaces in the different sections so as to guarantee the continuity of didactic-educational work with the child’s expressive-creative dimension (Weyland 2014). This is distinguished by its attempt at transparency and presentation of a visual space at children’s height so as to respect the pedagogical principle of a working community. The concept of "school without a backpack" in Tuscany highlights the importance of creating the classroom as a lived space, where not only the course material always remain at the students’ and teachers’ disposal, but also all the students’ equipment: carrying cases, folders, books, notebooks, brushes and compasses. These choices result in a reconfiguration of the classroom space and furnishings across two inter-connected rooms organised along thematic areas and differentiated work corners. These are just two examples, in addition to the classics of the Montessori and Steiner models, where space is defined by educational objectives and in which it becomes a real and proper device to transmit the school’s culture.

The mediator’s role

Designing a school building from the pedagogical point of view can promote shared reflections, starting from the questions and needs of the participants, their analytical skills and critical awareness, and collective problem solving, particularly when the main objective is the identification of proposals and strategies for change. The head teachers, the teaching staff council, families, students and other local educators that take part in extracurricular activities and which help give the school its identity, are often supported by experts and facilitators that are tasked with creating networks that emerge from different points of view.

The chance to draft a *pedagogical plan of the schoolspaces* based on pedagogical thinkings is very important, because it guides economical decisions of client and therefore of the planner. This pedagogical plan is focused on different issues: highlighting the attitudes, behaviours and values with which the school community identifies; from these stems an emphasis on the nature of the relations between the different subjects that contribute to making the school, with its organizational forms, a network and a community; finally, this process creates the need to promote the implementation and coordination of best practices in which the different pedagogical subjects (head teachers/educators/teachers/parents) become builders of a “learning community” (Sergiovanni 2002).

PICTURES 3. Designing Schools Together @Stefania Zanetti photographer

To start shared planning in a school context one can refer to the numerous techniques that are currently available and which have been tried elsewhere, such as in the management of firms, international

cooperation, group psychotherapy and so on. Working groups, committee meetings looking at courses on offer, “thematic forums” and meetings, and training seminars are useful channels to construct a consensus on a new project for the school that is based on a general awareness of the major elements of the transformation that is being sought. International experience (Montag Stiftung 2012, Woolner 2010- 2015, Weyland-Galletti 2018) suggests that to sustain the development of this planning process and to guarantee the most effective results, the best technical device is the presence of a mediator with clear pedagogical skills (that is, heuristic, propositional). The facilitator is delegated the tasks to plan and guide the process through its various phases, from getting the participants started to the analytical and reflective phases and all the way to the project’s proposal. The mediator is not solely responsible for the process nor do they control it: their role is to support collective learning and help the group assume co-responsibility. To this end, the facilitator’s principal role is with relationships, intensifying interactions between the different actors in the planning process, creating and maintaining a positive and collaborative environment in a heated context, so that everyone could share their own experiences in a protected and creative way (De Sario 2005).

The following project distinguishes by the development of a positive collaboration between users, clients that commissioned the schools, and architects right from the initial stages of the planning process.

4. An example: the competition for the primary school in St. Martin

The San Martino School is part of the Monguelfo School district and is in Val Casies.

“One has to travel 70 km to get to Casies from Bressanone. After Brunico, it is straight on to Monguelfo where there is a left turn and, after a brief incline of 250 metres, the solitary Val Casies opens up. It is another 10 kilometres before reaching the town of San Martino, passing through small, neat and orderly hamlets that dot the green pastures at the bottom of the valley. Upon arriving at San Martino, I was surprised to find that the small group of houses that comprise it are still essentially scattered over manicured pastures, with paved roads that have yet to settle on what were once paths that connected fields. Then I counted the buildings, mostly composite structures, and there were not more than 40 units. This leads to an important consideration; the new school building will be number 40, but it will reconfigure the built area with an explosive force. Although small in size, it will have strong intentions so that its small scale can transform the inoffensive equilibrium of the town with the power of a giant.” (Scagnol 2013)

A community project

“We are building a school. A community project of the town of San Martino.” With these words, Josef Watschinger, the Head teacher, introduced a description of the process that involved the townspeople in defining the main features for the new school. This was the first architectural competition in Alto Adige based on the new Regulation for School Buildings that came into effect in 2009. It was conceived, in fact, as a pilot project, precisely because the call for proposals had formally specified the *pedagogical plan of the schoolspaces* drafted by the school as its reference point. In the face of the aging state of the existing building, what distinguished the request for a new building was the path chosen by the community to think about what a new school could mean in a small alpine hamlet. The Head teacher recalls that after numerous meetings in 2009, a diverse group of interested citizens – including local officials, institutional figures, architects, students, parents and teachers – participated in a seminal three-day workshop to develop a vision for the new school. There were two central ideas that guided the group: the school was the heart of the community and should represent it; the school needed to find new forms in order to become an inviting place for growth and life.

The townsfolk aspired to conceive of the school as a collective project that leveraged the valley’s resources and the cooperation between actors who could offer their services and their artisanal know-how. Wood, as a local material, evoked the specificity of the place and its use became a guiding rule of the project. Thinking about how to make the school a "vital" place and "indispensably interesting", the group was clear from the start that the school and the community had to find the right answers. A concept that seemed to work for everyone was that of the "learning landscape". They focused on diffused and workshop-based learning, closely aligned with their daily experiences in their own workshops and farms. The group worked on a visualisation of the landscape, making models and objects from wood and ceramic. Participants brought their skills and materials, even from home, to transform the vision into something physical to touch, see and discuss. Combined, these elements created a landscape that still had to define its consistency and legibility. The idea of the library organized as a tree emerged, with surrounding learning environments and on the ground – at its base around the trunk - the town library as a place of encounter and exchange. Among the tree’s branches were wooden houses, amplifying the library with places for learning, reading and working. The links between the “houses in the trees”, along with the library and the other learning environments were to become, metaphorically and through the children’s gazes, the ladders and bridges that could be imagined in a Captain Hook fairy tale.

During the three days of the workshop, the search for ideas generated a positive and fertile atmosphere. The working groups, which expressed a sense of being part of something important,

surprised the Head teacher through their productivity. In the evening, there followed much eating and celebrating, a ritual that cannot be under-estimated in such processes of community building.

A vocabulary that leads to a rethinking of old functions

A farmer showed the group an image of a small village in the mountains of Casies, proposing to think of the school in these terms: the small huts had to be joined together to create a relationship between private, semi-public and public spaces. In this way, he unconsciously drew from the threefold classification of space into primary, secondary and public territories conceived by Altman and Vinsel (1977). The same could be applied to a school setting in which the ordering of spaces could follow an established educational logic. The idea was a catalyst for a consensus, consolidating around a short motto for the new school: "a village in the village". Around this concept developed some pedagogical thinking and organizational planning, enriching not only the traditional programmatic functions that a school must have, but also those spaces and (great) ideas that can transform the school into "everyone's house". In an exemplary functional diagram presented in the competition documents, a new vocabulary led to a rethinking of old functions. As the architect Scagnol (2013) claims, there are words so simple that they are embarrassing for their driving force: the "house of the book," then the "house of study 1 and 2", consisting of "two study groups" and "a study workshop with a kitchen", and even "the teachers' house", "Atelier" and "open studio". In the end, only the dining hall kept its name, but as we shall see in the projects described below, the planners seized the opportunity to transform even this "old function" into a new space full of possibilities and new variations.

The architects' questions

The competition for the design of the new school was divided into two phases. Upon completion of the first pre-selection phase, the ten architectural studios selected visited the site and had an interview with the selection committee in which they spent considerable time discussing the organisational plan for pedagogy.

First, the architects asked for greater clarity on the relationship between the different functions for the classrooms, the workshop and the library. As the minutes from the selection committee meetings reveal, the Head teacher for the school district, Josef Watschinger, as the educational voice for the school, specified that the separation between the different settings, "[m]ust be adjustable as well as transparent. There can be mobile or sliding walls, provided that they are able to ensure a certain degree of acoustic insulation and are easy to move. Walls with compactable elements are not desired." The architects also asked to what extent the Monguelfo School was to be used as a model and they were particularly interested in knowing how work was to be carried out in the workshop areas. The Head teacher explained: "The Monguelfo School is a model for, above all, how to successfully connect the

teaching areas in the workshops. The open areas work in an ideal way. Every teaching room in the school has two big doors and a window that look onto the workshops. The windows can be closed with sliding blackboards. This is a way to regulate the open spaces in the workshops. The San Martino School should develop, as much as possible, this pedagogic principle. Teachers that will be hired at the school in the future will also be chosen on the basis of this pedagogic concept.”

The last issue that was not fully clear to the architects was the question of the dining hall and its multi-functionality. The Head teacher specified that what was sought was simply a resource for the whole town to celebrate special occasions and other civic events.

Josef Watschinger, as member of the selection committee, presented also the pedagogic criteria to evaluate the projects in the competition:

- Adherence to educational concepts: the school as a “miniature town”, closed, semi-open and open spaces that interface with each other, the building relating to the town
- The building has an inviting nature, which is perceived in the entrance and the foyer
- The school is organised in clusters: the classrooms are closely linked to the workshop area either through transparent dividers or sliding doors
- The library is the heart of the school: it connects the different “houses of learning” and is open to the community. The workshop areas can lead straight to the library, which is also considered a work area
- The workshop is conceived in such a way as to also allow for noisy activities; it has the feel of a laboratory and it can be expanded into an open-air workshop and can also be used by the local community (with external access)
- The “teachers’ house” is positioned close the workshop area. The dining hall and “the house for all” are close by and can be used for a wide range of activities
- The connecting spaces are to become interesting work areas and sites for movement and encounters
- The cloakroom is at the entrance to the building and eliminates dirt
- Flexibility and internal transparency are to characterise the building

Buildings that communicate

This case is an example of the passage from participatory to shared planning, that begins from the first steps taken to draft a call for proposals. It was seen that thanks to the role of the pedagogic mediator, in this case the expert was the Head teacher, conflict became dialogue, generating positive development that was reflected in the architectural projects. The project plans reveal a rich variety in

the search to translate the complex organisational plan for pedagogy into a building. The proposals were original, even reaching the point of envisioning a hybrid between the house of the book and the workshop of taste (formerly the library and the dining hall), between classrooms and the intermediate spaces and workshops. The 10 projects that made it to the final selection show us how these buildings speak and communicate their new presence through modern structures that break with the traditional style of the valley and with their façades seek to invite the town into a new communal and cultural space.

5. A manifesto to conclude

Planning a school is an original, primary act in which the pedagogical-didactic dimension must be taken into account in order to have a more complete scholastic architecture. The following manifesto is a proposal, launching a message to the school community but above all to the broader social, political and cultural community (Weyland, Attia 2015).

Let's observe the school with inverted binoculars!

It elongates the perspective and distances the horizon. Let's strip it of that rhetoric that surrounds it and let's give it concrete directions. We will move from a prescriptive approach to a performance-based and cultural model. Let's give substance to the pedagogies of saying, for a school that is and does. For schools to be transformed, they need a new vocabulary, subjects that are aware and a shared process.

a. A new vocabulary – Make room for simplicity and clarity!

- Instead of talking about school construction, let's use architecture for learning
- Not restructuring but transformation of the school
- From sustainability to conscience and responsibility
- Not security but wellbeing
- From crisis to opportunity
- No more architectural barriers but accessibility and freedom of movement
- No longer simply according to regulation but according to quality

b. Informed subjects – let's take on commitments today!

Head teachers and teaching staff, local authorities, architects, planners, technicians and designers. are the subjects that are first engaged in the process of transforming a school. It is necessary to create

relationships between skills, know-how, experience, and different points of view to create the opportunity for high levels of planning professionalism to emerge.

- Local administrators need to assume their decisional powers and know how to navigate through the sinews of the bureaucracy so as to manage resources with competence and mastery. Their task is to: surpass the short-term reasoning in favour of quality in the planning process; manage the process and become the guarantor for the school as the community's cultural project.
- The teaching staff, under the leadership of the Head teacher, must be called into play when talking about the physicality of school: settings, stairs, furniture, order, cleaning is also within its competence. Through what kind of pedagogical approach do you want to experience the school? A new responsibility on the school's teaching body generates a virtuous connection between the universe of planners and educators.
- Planners need to insert themselves into the network of relationships that make up a school, interpret needs and guide demands with the resources available to formulate architectural solutions and outputs of indisputable quality.
- Scientific experts, especially pedagogical, need to be invested in a clearly defined role in the planning process, to provide a necessary mediating and cultural contribution to the transformation of the school.

c. A shared process – Methods, not rules!

There must be a common thread to guide the design process: from the needs of a new school, to the drafting of an organizational plan for pedagogy, to the feasibility study, through the design competition, to the phases of the project and its implementation, to appropriation of the building by its users.

All these are processes through which we read the school as a whole: made up of people and actions; made of material and technology; inseparable elements of a single body and a continuous return between ways of doing and ways of being educated.

Restarting from the school means so: acquiring the organizational and management instruments to govern the transformation of a school building; beginning with an educational concept and finishing with an architectural project, not vice versa; using the planning competition as quality control, ensuring rigor and dialogue amongst all the parties; moving from participatory to shared planning with clear responsibilities and diversified skills; comparing projections with completed projects and experiences in order to face concrete problems.

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