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“Open source is recursive, like fractals”

An interview with **Salvatore Zingale,** semiologist

We’re engaging in our project teachers and experts in order to trigger a discussion on the issues of education, school and open source. Each interview will be a tile of the participated process in which we’ll imagine the school, all together.

Today we interviewed an exceptional guest, an extraordinary man

due to his humanity and ability to analyze the world, a scholar of signs and sense, professor of Projects Semiotic in Milan’s Polytechnic University, **Salvatore Zingale**.

How has your experience with school been?

→ I’ll answer thoroughly, thus exposing the reader to a risk: he might feel dizzy. I have changed four schools in my five years of primary school, the first three in Sicily, but in three different towns; the fourth in Germany. The three years in junior high have been an exception: all in the same place. Then back again: five years of high school in four different places, four different schools, **Lombardia, Veneto and Piemonte.** Keeping the trend going in university, **I enrolled in Milan and graduated in Bologna.**

Things do not get different while looking at my teaching experience, which started by accident. When I was in **Frankfurt** I first started making some money in a pizzeria, then teaching in 150-hour courses (which then allowed workers to get a junior high diploma) in factories like Opel and in prisons. Years later I ended up in university, going through other experiences as supply teacher in junior high and twelve wonderful years in the **State Art Institute in Monza**—more on that later.

From time to time I wonder if these migrations were either beneficial or harmful to me. I am not able to answer. For sure, I could not enjoy a linear, orderly and solid education; and this is a handicap I sometimes feel. But maybe, this erring amidst different schools and places allowed me to seize the value of the different ways of teaching and thinking of school. And understand why we use the verb *to teach*, which—in Italian, *insegnare*—literally stands for *leaving signs, marks*. It’s not that much about the signs printed on books or drawn on blackboards; it’s more about those you find in the person of the teacher. **Teaching is a dialogue. If it’s not a dialogue, those signs are not left;** they are maybe shown, offered, incepted, but with no certainty of *response.*

Maybe this is part of the reason why I prefer workshops and seminars to frontal lessons. Here, as well, ethimology tells us something: from Latin and still in Italian, a *seminar* is a place where you put *seeds*, thus

being a place that prepares for fertility.

I was earlier mentioning the **State Arte Institute in Monza**, a school settled in a quite shabby wing of the **Piermarini Royal Villa**, close to the park. Well, that really was a place for sowing. A school conceived around the idea of *experimentation* and *research,* where us teachers were capable of starting harsh discussions, sometimes even fights, around syllabi or teaching styles. Not by chance it’s been a school that was a couple decades ahead of all the Italian design schools, with resident designers and scholars who had had or were having their intellectual role recognised also by other fields: **AG Fronzoni, Ugo La Pietra, Narciso Silvestrini, Anty Pansera, Vincenzo Vitta**, and many more. Not by chance, in that school, artistic and design subjects were tightly dialoguing with the scientific and technologic ones: maths and descriptive geometrics teachers were also joining our modeling workshops; we had students reading **Goethe** and **Itten** to learn about colour; when in the photography lab, they were also carrying **Walter Benjamin**’s book in their pockets. It was there that I started thinking about semiotics as a tool to both understand arts and reflect on design methods. We could experiment, and this did not just allow a beautiful freedom of teaching; it also forced us to constantly reflect on what we were doing.

Yes, that’s really been a place and a time of sowing, also for us teachers, so that almost all students, even years later, even if they ended up working on fields which are pretty far from design, have a great *nostalgia* of that school. And they all repeat the same reason: what we’ve learned in that school was then useful for university and beyond. That’s because experimentation allowed us to keep on teaching, and in all fields; it taught us to give value to the design process. That’s what is still said today by, for example. **Sergio Menichelli**, alumnus of that school and founder of **Studio FM in Milano.**

Tell us about your dream school...

→ I can summarize my dream school in three words: *experimentation, research, dialogue.* There is no other way, in and out of any school, to make knowledge grow. It’s a mistake to think that experimentation is only in the domain of natural sciences. It’s not like that.

In human sciences and design, as well, knowledge is conquered by passing through the experience of a laboratory. Let’s speculate all the worlds and things we want, but only the hypotheses that will survive to the proof of experimentation have chances to live.

In order to experiment, though, we need to be constantly incline to research. What we have, what we know, is condemned to be incomplete, always: either it is not enough, or it constantly needs to be fed with new visions, or it requires to be challenged.

If thought is free, research can never be stopped: it’s like water in rivers, you can direct it or limit it, but you cannot stop it. And if you collect it in the right way, it transforms into energy.

After this fluvial metaphor, I am now forced to come out with a new one to continue. I want to say that dialogue is the web (of streets, rivers or channels) underlying *semiosis*. Semiosis is a technical word, it indicates our ability to interpret and thus produce meaning. **Semiosis is, then, the cognitive base of knowledge in general and signification in particular.** Well, I imagine this semiosis just like a web, a network of connections and references and recalls, exchanges. In such a network, no knot or path makes sense *per se*: sense comes out of relations, out of dialogue.

As **Michail Bachtin** said, a word in a novel does not only speak about something, it always speaks about someone at the same time: it also speaks through the words of others. We can say the same about artifacts: each artifact carries traces of the other artifacts that came before it and, why not, of the artifacts that are yet to come.

This makes even more sense when we talk of training and didactics: a teacher who teaches well is the one that learns from his students while teaching. And students learn at their best when they start being able to question the teacher.

From here comes the undeletable model of dialogicity, especially in a historical moment in which school is, still, dominated by the monologicity paradigm: transfering knowledge from an expert mind to a mind to be filled up.

What does “researching” mean to you?

→ I don’t know if I will answer this question. Let me just observe that even before understanding what research is and how to do it, we need to understand what should be the object of such research. I don’t consider myself a researcher from the moment in which I am assigned the task of researching; neither I do so when I start defining my research methods.

I am a researcher from the moment in which I have something to search. Something I need to search.

This “something”, the object of every research, has a name: *problem*. According to Greek etymology, a problem is what is put in front of me. It is generally an obstacle blocking the path. But it can also be

something that is not there and should be. Researching means being able to understand both what we need to remove and what we need to be there.

How do you envision an “open source school”?

→ Of course as an *open source,* from which we are always allowed to draw. But also a school that can constantly be re-designed. Or even like a school from which you actually never get out:

because even when the course, the workshop or any other form of training is over, the effect of didactics is not stopping but goes on, one way or another, as you managed to start an unextinguishable learning process. Like a tiny perpetual engine.

It’s true that this is, and should be, a process owned by all sorts of didactics. But I think that an “open source school” should not only implement it but also make it a model to imitate or able to spread on its own, like a virtuous contagion. All in all, if we have a look at history, that’s the good thing about good ideas: they travel on their own. You need a few, basic means. A clear example is the Enlightenment age, out of which, in my opinion, came the best things in of the past two centuries. An Enlightenment which can be summarized in **Immanuel Kant**’s verse:

“Have the courage to use your own intelligence!”.

To this motto, an *open source* vision can only add:

“And make your intelligence available to everyone”.

The literal *open source* metaphore gives me another thought: if something is “open” like a field with no fences, then it cannot but belong to everyone, to whomever chooses to pass by and do something with it. So not only the propriety principle goes missing, but also the one of authoriality, with all that comes with that.

Therefore, it doesn’t matter who invented or produced something, what matters is that that something exists and works well for those who make use of it.

I know that criticizing authorship, or trying to limit it, is an argument that can generate reactions and counter-arguments. But anyway you see it, thinking and acting “open source” has in my opinion the great merit of moving the center of attention on the value of the product rather than on the prestige of the producer.

What would it change if an “open source school” existed?

→ I don’t know. We only have to test it. What I believe to know is that if we want society to change, if we want the world to change and if we want to make it a comfortable place to live in, school is the first step. Short-sighted governments don’t see it, because they only consider education as a cost, but it’s an investment. No citizen would ever save money on the water that is needed to irrigate fields.

Even better if you give school the characters we’re talking about. Also because, in my little utopia—I repeat—a school can’t be anything but this: experimentation, research, dialogue.

In short, La Scuola Open Source is a school that should make ‘open source’ every scope in which it applies.

I envision open source, indeed, as a model of fractal geometry: an organism which recurs in its form in the same way in different

situations.

If you were able to rethink the way knowledge is transmitted into school today, how would you envision that?

→ I will give an even more synthetic answer here. I will do it by saying that when we talk about what’s between school and work-life, we shouldn’t talk about “entrance”, but of continuity. Entrance implies a threshold to surpass, a movement towards different times and ways.

The “study first, then work” must be thrown away. You are always studying, you are always working, whatever you are doing.

This works for those who program computers, for those who cook, for those who work with philosophy. Let’s work together to make sure these two worlds become one single world, in every field.

In which way do you think technologies can help us build a better world?

→ Earlier I mentioned Enlightenment. Now let me shoot a scholarly quote and mention the *Enlightenment Dialectic.* I am talking about **Max Horkheimer** and **Theodor Adorno**’s work, the two **Frankfurt School** philosophers and sociologists**.** I am mentioning it just because of it’s dominating argument, which we can also apply to technology. The book was published in 1947, after the Nazi and WWII catastrophe. Horkheimer and Adorno catch a significant contradiction on which to reflect: progress, even that grandiose Enlightenment progress, can also generate regression. Rationality and science are also able to generate their exact opposite: science can end with dominating and deleting that very mankind’s freedom she was meant to unleash.

I don’t want to sound apocalyptical, but let’s remember we always are the end goal of whatever we do. Let’s overcome the division between

natural and human sciences. All sciences are human. Each and every science is human activity for humans. Each and every technology is a human tool for humans. Well, beyond that: not only for humans but for all living creatures, animals and plants.

This means that right when we operate with technology, when we research ways to direct it to best serve our needs—our dreams, even—we also need to simultaneously activate a *technology dialectic,* a critical thought and an attention to the practical consequences brought about by technology’s own development. And I am saying this thinking exactly to an **“hacker vision”**, where the order of things is constantly challenged, where—through questioning and experimenting—we try to modify the existing systems so that they become available for new functions and—let me say—visions.

But maybe this is a too generic thought. Let me then formulate another one which can maybe better contribute to our dream of open source school:

technology makes sense if and only if it is conceived as an extension and not as a substitution of our faculties.

Extension is the end goal; substitution is the danger. Thinking about technology as an human extension means then conceiving technical inventions as part of our own evolutionary process.

The model is, in this sense, an elephant’s proboscis, as suggested by **Steven Pinker** in his studies on the relationship between language and mind: with its over sixty thousand muscles, this “extraordinary organ” allows elephants to perform a number of operations: holding a small coffee cup by its small handle, opening bottles and drawing, but also eradicating a tree trunk, serving as snorkel for kilometers of underwater walking, communicating through bellows, perceiving a python hiding under the grass more than a kilometer away. A proboscis is the archetype of the multi-tasking tool: both on a cognitive and on an instrumental perspective. It percevies, it acts, it communicates. We have language and technology for that, elephants only need a proboscis. Which, luckily, they never used to hang themselves on a tree, as we instead did.

Well, let’s try to think about technology copying from elephants.

Salvatore Zingale translated by **Giancarlo Ostuni**

This is a message in a bottle.

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Thanks.