

The Production of Project. A Subversive Guide to the Subject of Innovation

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# The Production of Project

## A Subversive Guide to the Subject of Innovation

**Camilo Vladimir de Lima Amaral**

### *Abstract*

This paper analyses how the myth of the individual architect as a subject of innovation is an abstract machinery for capturing the work of other architects. To do that, it develops a historical regressive analysis on how innovation is actually produced, and the limits in which it is bounded. Furthermore, it analyses the role of narratives in the interpellation of architectural subjects, and how it defines a position from which subjects can act politically in the field. By doing so, it unveils the mechanisms behind the architectural black boxes (the office and the prince chronicles). In order to provide a new political role for architecture, it builds a different conception of the subject that produces these projects, exploiting the idea of trans-subjectivity in architecture.

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### *Dead subjects of innovation*

In 2012, when Oscar Niemeyer died at the age of 105, he was still ‘designing’ a vast number of buildings around the world. A few days after his funeral, his grandson, the architectural director at Niemeyer’s office, declared that the firm would finish the projects already started, setting an end to 78 years of architectural practice, even if one could not measure the size of Niemeyer’s contribution towards the end of his life. Nevertheless, Niemeyer remained very talkative and engaging in his lectures, always surrounded by admirers astonished by his unceasing commitment to designing. As expected, Niemeyer left a foundation to protect the image of his architectural legacy, even if his grandchildren were left in a fierce legal battle over his heritage.

The death of Zaha Hadid, in early 2016, led to a very different turn of events. At the time, Zaha Hadid Architects (ZHA) had offices in London, Beijing and Hong Kong. These offices had already developed more than 950 projects, and the firm was about to open a new office in New York, with additional plans for offices in Dubai and Mexico. Some weeks after Hadid’s death, finding the world of architecture in mourning, Patrik Schumacher, who had become a partner at ZHA in 2002, declared to the NY Times that ZHA would continue designing (Erlanger, 2016). According to Schumacher, Hadid had set a precedent; she had imbued the practice of architecture with a ‘new repertoire’ and a new ‘spirit’. On this basis, he could ensure that the firm’s 400 staff members could confidently continue her vision and research (Erlanger, 2016). In Schumacher’s words, thus lives Zaha Hadid:

any star in architecture has been born in the discipline itself, and emerges through schools, competitions and colleagues. (...) We want to tell the world that we’re still a viable, vibrant address for major work of cultural importance. (...) My ambition is to become more visible as a leader of the field to clients (...) This star signature is a relatively new phenomenon (...) We feel very confident that we will carry on and go forward with her vision and her legacy and the experimental research she established in the office (Patrik Schumacher in Erlanger, 2016).

The magic produced by these architects seems now not to even require them to be alive. This remarkable phenomenon may be pointing, on the one hand, to the fact that the concrete individual is not the actual innovative force behind architecture and, on the other hand, to the emergence of a phantasmagorical era in architecture (an era of dead architects). Thus, some new issues inevitably arise: would it be possible for a well-trained and highly tuned team to continue not only the legacy but also the innovation associated with a dead architect? And more radically, could we, for instance, resuscitate Le Corbusier?

Obviously dead people cannot design, those paradoxical questions have the purpose to reveal that these individuals – entrepreneurs, star architects, and alike – were never the creative force behind architecture. Instead, they are operative images capturing collective work as if it was done by a single person. These images are built by the discipline's ideology – narratives, historiographies, biographies, myths, and so on. The critical point is that these images become instruments of power – distinctions in the words of Bourdieu 1996 – setting some architects in the control of the work of others.

In other words, the argument of this paper could be synthesized as follows: the myth of the architect as an enlightened genius is a form of abstract machinery for harvesting symbolic distinction in the field, which in turn is used for capturing the work of other architects. This leads us to some further questions: who is the subject of architectural production and which is the limits of his innovation? And are individuals required to envision social agency?

Mariana Mazzucato (2011) has recently attacked the myths of individual ingenuity as the motor behind innovation. Most notably, she debunked the myth that the iPhone was the product of the 'vision' of Steve Jobs, exposing how iPhone's major innovations have come from state-funded research, i.e., they have been collectively produced. Then, such innovations have simply been appropriated by companies and produced by thousands of workers overseas. In this sense, Mazzucato's argument reinforces the idea that production is the result of a social and collective process – a 'general social knowledge' in the words of Karl Marx (no date [1857]).

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Production is the result of a social and collective process – a 'general social knowledge' in the words of Karl Marx.

## The idea of innovation has a history of its own, which can give us some clues.

Arguably, recognizing and exposing the collective nature of architectural production is a way of subverting the relations of power operating behind design production. This is the case because the field of architectural labour is today structured by these individualistic myths. All over the world, young architect, students and interns, are enchanted, seduced and attracted by these mythological images, and they are working virtually free for them. Arguably, to understand architectural innovation as collective rather than individual includes changes in the very meaning and purpose of architectural work.

Rather than working for mythological figures, the meaning of architectural practice becomes the structuring of collective subjects able to transform social space – it is worth mentioning that these collective subjects might include more than just architects. In this sense, to think on collective subjects does not eliminate the agency of single subjects, as they have a role in articulating social knowledge and structuring collectivities. What vanishes is the phantasmagorical genius.

And rather than reproducing narratives, biographies and the mythological power of entrepreneurs, the purpose of architectural theory becomes a social critique able to unveil the forces and power relations operating behind the production of space. It goes without saying, that is not the expected social role of design – it is a subversion of it – and that opens exciting fields of research.

If we can understand the mechanisms behind the collective production of innovation, we might be able to envision collective subjects producing any architectural innovation – be it technical, formal, aesthetical, methodological or applied creativity. The first step, in order to do that, is to notice that the idea of innovation has a history of its own, which can give us some clues.

Benoît Godin (2015; 2017) has a long research on the intellectual history of the concept. Although his research concerns mainly the different uses, context and meaning of the word, without trying to find a definition of its own, it provides important insights in the matter. He demonstrates how the idea changed between negative and positive connotations. Godin (2010; 2014: 7) asserts that the word *innovation* (*in* +

*novare*) became widely used in the 16<sup>th</sup> and 17<sup>th</sup> century context of Reformation. In that context innovation had a pejorative connotation and it was used to accuse others of attacking the church doctrine. Later, he argues, the connection between socialism and innovation was first done by its critics, rather than by its followers, whereas “Social innovation is not foreign to the idea of social reform, under a new name.” (Godin, 2017: 8). In this sense, he argues that just recently ‘technological innovation’ came to refer positively to capitalism, while ‘social innovation’ became positively related to a socialist point of view (Godin, 2017: 4). Godin (2015: 58) also notice how the idea of innovation was also used in Machiavelli’s seminal work *The Prince* as a tool to ‘stabilize a changing world’ (we shall return to the idea of the *prince* later).

If we take this broader history in mind, and the idea that in legal terms the word *novation* means the substitution of a new contract in place of an old one, we can make sense of the role that innovation has in contemporary context. The prefix *in* has a double use: it can mean a negation (as in inorganic) or it can mean an intensification (as in inland or incarnation). Arguably this sets a realm of operation to the idea of innovation, which could be both understood as not creating a new contract, and at the same time as intensifying and reshuffling the arrangements inside an old contract – especially if we focus on the realm of ‘social contracts’. The history, that Godin presents us, shows how the controversies around the term innovation in the 17<sup>th</sup> Century were disputes inside the realm of Christianity, not representing threats of elimination to the Church. Similarly, the use by Machiavelli was not contesting the institution of the ‘principality’; rather, it aimed to ensure those systems could endure. Among the many meaning of the word innovation, Godin (2008) studied from simplifications that equates newness with innovation to ‘linear models’ that places innovation in between pure science and the market. Subliminal to these discussions is rather individuals are imperious to envision or act upon the future. The standpoint of this paper is radically different. It does not conceive the subject as equal to the individual. Subjects are both under certain social rules (subjected to it) and operating in a certain way on it (within and/or against it). Individuals is a peculiar conception of

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subjects, conceiving it as autonomous atoms. ‘In-dividuals’ presupposes a subject at the same time not further divisible (essential) and divided/separated from larger assemblies (such as society and communities). Alternatively, this paper investigates subjectivities operating inside what would be perceived as individual subjects.

In this sense, these “individual” subjects are seen as a structured amalgam of contradictory pre-individualities (we shall discuss this further below). In this sense, individuals have neither the monopoly of agency – the ability to produce social change – neither the control of it – as long as they are not even aware of the forces operating behind their subjectivities. In this sense, this paper argues that in order to provide a practical and theoretical gateway towards an intensified social *novation* (in-novation as intensification) we need to confront the idea of individual subjects producing innovation. Thus, this paper is thought as a guide for that: a deconstruction of individual architects’ phantasmagorias.

#### *Regressions in the assembly line of invention*

Jobs did not invent the abstract machinery for expropriating inventions as described by Mazzucato. Thomas Edison is perhaps the most iconic modern ‘inventor’ and has been systematically depicted in schools and by the media as the genius behind the invention of such things as the ‘light bulb’. Nevertheless, a series of studies of the actual means by which the inventions (commonly attributed to Edison) were produced shows a different picture. In the early days of the Thomas Edison laboratory in West Orange, he was employing more than 200 scientists, craftsmen, labourers and machinists. When the laboratory expanded and became associated with a factory complex, the number of employees jumped to 5000, and today General Electric employs more than 300,000 people (Padgett, 2016). At the beginning, these men were paid only ‘working man’s wage’; however, the famous inventor reportedly said that – in exchange for their ambition – his employees were given the opportunity to work side-by-side with a genius (Bellis, 2016). However, how much of the lab’s creative labour came from Edison and how much came from his workers? Carlson (1988) has studied the process by which the



alkaline storage battery was invented. He argues that during the course of this invention, Thomas Edison developed a new way to produce inventions. Previously, Edison would work with mechanics and craftsmen in a relatively loose way, wherein those workers would investigate diverse aspects of an invention, and eventually Edison would step in ‘only at the appropriate moment’ to ‘pull together the various discoveries and improvements into a successful invention’. Later, in Edison’s laboratory, large groups of chemists, engineers and college-educated scientists would work on experiments focused on very specific goals, in a systematic, step-by-step arrangement of assignments. In shifting from a ‘divergent’ to a ‘convergent’ style, Edison became a manager who oversaw the project, a role that left him time to focus on strategies of productivity and commercialisation (for instance, he participated in the association that developed ‘programmed obsolescence’). However, the ‘most important’ role now played by Edison was to ‘motivate his research team’, using ‘decidedly informal’ techniques of ‘motivating and directing’ through his ‘use of a personal, folksy style [that] may well have been deliberate’ (Carlson, 1988: 10-11).

Although this convergent approach produced highly reliable results, it came at the cost of requiring over 50,000 individual experiments. Furthermore, Edison had thoroughly routinized the innovation process. By breaking down the research into a sequence of small, standardized experiments, Edison had altered the creative process from hands-on ingenuity and skilled observation to persistence and careful record-keeping. Gone were the last vestiges of the ‘heroic’ myth of invention in which insight came in a blinding flash; results now came by plodding through innumerable experiments (Carlson, 1988: 6).

Invention became an ‘orderly’, ‘predictable’ process, making Edison’s ‘large staff and substantial facilities’ an advantage to beat competitors, which in turn made ‘the innovation process a reliable component of business strategy’ (Carlson, 1988: 11). For these reasons, his friend Henry Ford reportedly said, ‘Mr. Edison gave America just what was needed at that moment in history. They say that when people think of me, they think of my assembly line. Mr. Edison, you built an

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assembly line which brought together the genius of invention, science, and industry' (quoted in Newton, 1987: 31).

In addition to developing this abstract assembly line to expropriate the work of others, Thomas Edison cultivated his fame through vast investments in marketing and especially through the legal mechanism of patents. Edison alone is credited with the invention of 1,093 patents (Simonton et al., 2015). Lemley (2011) investigated how the conception of a sole inventor – which is implied in patent law – is a myth, as inventions come from progressive collective work and are therefore frequently produced simultaneously by independent groups, as “Inventors build on the work of those who came before, and new ideas are often ‘in the air’”. Thus, a patent is also a means of privatising the work of others.

In these terms, the same critique Marx applied to the fetish of the commodity (used by capitalists to alienate products from workers in industrial assembly lines) can be applied to the fetish of the invention (used by the ‘genius’ to alienate the creative work of a collective).

There are some remarkable examples in architecture. For instance, although Tafuri and Dal Co (Tafuri, Dal Co, 1976: 140) noted that Frank Lloyd Wright made the decisive shift towards what would become his famous style by using all his wife’s fortune in The Broadacre City project, he fails to address how this project was produced. With that capital, Wright created the ‘Taliesin Fellowship’ (a messianic school in the middle of the desert). With this means he appropriated the work of a series of collaborators and apprentices as his own (for a vast number of previously unpublished interviews, documents and evidence of that, see Friedland, Zellman, 2007). Wright’s style is the product of a collective that was appropriated by him. Better said, appropriated by his myth of genius. If Broadacre City brought him close to bankruptcy, it also made him a ‘symbol’ of US architecture. This was not unintentional. In his lectures, he was very clear in the aim to become the icon for the style of a US civilisation to be spread around the world. Architecture was a means to capture and to reproduce collective subjectivities. Therefore, the point is not to recognise that Broadacre City project is a reflex of the American society (a sat-

elite image is enough to reveal how the grid and the arrangement of nature and urban interventions is just a mimesis of the Taliesin local scenario in an universal image). The point is to understand how his myth further reproduce the subjectivity of other architects. In our own society of spectacle and immaterial toil, the architectural office – once an elite's stronghold dividing intellectual and manual work – is now becoming a new sweatshop. In this sense, Bjarke Ingels gives a first-hand account of what it was like to work in Rem Koolhaas's office (Parker, 2012). The only way to rise in rank at OMA was by acquiring 'more and more sorrows', by creating 'space for designers beneath me in responsibility to crank out cool stuff'. Ingels recalls episodes of yelling and 'hurling of office supplies' and that designers were under constant tension and stress due to negative reinforcement. At some point, he felt he 'had paid [his] dues' and decided to open his own office. What was his alternative? To create his own sweatshop, employing dozens of architects, using up-to-date behaviourist techniques: rather than 'negative' he uses 'positive' reinforcement (a more tender way of dressage). This disciplining transforms architectural work into a form of subjectification (production of subjectivities).

#### *Abstract machines to capture innovation*

Arguably, the movement known as 'Autonomism' has investigated production through a renewed analysis of Marx's (no date [1857]) account of the 'general intellect' in the 'Fragments on Machines', a part of his notes called the *Grundrisse*. There, Marx proposes that the actual force of production is the general knowledge that results from society's functioning as a whole. Nevertheless, he argues, this knowledge is increasingly objectified into machines (a process he also calls thingfication, or reification), which, in turn, function as devices to capture more of society's collective productive forces. Thus, machines function as means of control and expropriation: 'In machinery, knowledge appears as alien, external to him [the labourer]; and living labour [appears as] subsumed under self-activating objectified labour' (Marx, no date [1857]: 695). This passage in Marx has been very fruitful for contemporary critical theory because it envisions how the actual production of innovation,

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science and technological development occurs under the development of mechanisms to frame and capture social work.

For Paolo Virno (2001), the dialectical nature of Marx's materialism reveals how the material conditions of production are objectified abstract scientific knowledge fixed into capital (one could say 'past labour' fixed into machines), thus revealing an 'inter-subjective foundation' in any labour praxis. In contemporary context, Virno asserts that the mass intellectuality that is not objectified in machines is later captured by a mass control of communication and sharing, thus further controlling living labour. Additionally, a politics of affects and cynicism makes possible a widespread pseudo-solidarity with those suffering, and at the same time it becomes the basis of ferocious forms of competition. As Jason Reads puts it: 'Competition is a paradoxical form of individuation in that it produces individuals who are all the more alike' (Read, 2010: 130).

For Lazzarato (2014: 31), this radically changes the search for a subject of history, as this condition is neither a worldview nor a lack of consciousness but rather a mechanistic entanglement of the parts involved. In this realm, there are no individual subjects being dominated (as in personal enslavement), rather, there is diagrammatic management of a whole community of workers.

In addition, David Harvey (2010: 40) stretches the emphases of Marx's *Capital* into the 'roles' people play in the market system. In this system, social relations are presented as an exchange of things (Harvey, 2010: 41). In addition, even if one might have ethical and moral principles when dealing with people face-to-face, when buying a commodity in the market, these relations appear as relations between things (commodity-money) and therefore as inevitable facts. For instance, at the moment you buy bread, you are reinforcing the system just as your own retirement fund is managing assets in the global market. That creates an unavoidable condition, Harvey (2010: 47) argues, which imposes specific 'roles' because 'the characters who appear on the economic stage are merely personifications of economic relations'. Therefore, people will, even unwillingly, become 'the bearers' of capitalistic social relations. In this sense, it is not a matter

of a 'bad' architect enslaving another but rather of a whole field of practice working as a collective apparatus reifying subjectivities, in order to create new objects that are nothing more than bearers of fetish (social relations objectified in commodities).

Thus, Marx's fragment on machines – and his considerations of the production of social relations in the form of fetishism – led many authors to investigate how subjectivity is produced in contemporary society rather than to investigate how subjects could free themselves towards a supposed true nature (Guattari, 1995; Lazzarato, 2014; Read, 2010; Spencer, 2012). For Jason Read (2010: 155), the expression 'production of subjectivity' has a double meaning: as something 'productive' and as something 'produced'. Subjectivity is historically produced by multiple processes of individualisation in physical, biological, collective, psychic, linguistic, and cultural sensibilities and through power struggles. At the same time, it is productive of social relations that impact the possibilities of action in society. Read rescues this idea from Marx's Capital:

the special productive power of the combined working day, is under all circumstances, the social productive power of labour, or the productive power of social labour. This power arises from cooperation itself. When the worker co-operates in a planned way with others, he strips off the fetters of his individuality, and develops the capabilities of this species (Marx, 1990: 447).

For Read, subjects are always subjects in a collective, therefore, a differentially articulated part of a whole. Therefore, subjects are individuations of a metastable field of trans-individuality. This means that subjectivity is formed by *a priori* elements (language, culture, structure, social expectations, and so on) 'externalised in machines and internalised in concepts, habits, and ways of thinking' (Read, 2010: 118-119). The political problem emerges because these machines operate not as atoms but transversally, capturing the collective intellect formed by society.

In the contemporary mode of production, there are many examples of such processes. The biggest new businesses are only abstract machineries, platforms that capture not only the labour of others but also their everyday lifestyle. Today, Facebook is the biggest

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platform of information sharing, which it does without producing any content, only capturing a series of 'interconnected' users gladly producing content as a form of leisure, without recognising it as production. Uber might be considered the biggest transportation company in our 'smart' times; without owning or maintaining any vehicles, it transfers all the risks of the business to its workers while it also exploits the socially produced infrastructure of the city without paying taxes for it. Similarly, Airbnb offers the world's largest variety of lodging, without owning any of the properties, through the creation of a new subjectivity of 'trendy travellers' and 'kind hostesses' based on people gladly providing undervalued goods and/or services in exchange for a 'social experience'. However, the fundamental question here is how does this fetish come to inhabit our very own abstract machines of design production?

### *The office, or the black box of architecture*

Latour and Woolgar (1986) investigated how abstractions would acquire life when they were reified into technical apparatuses. When scientists use an apparatus to 'discover new phenomena', what they see on the other side of the 'black box' of the apparatus is framed by the past theories and hypothesis that produced that 'black box'. Thus, he argues, the phenomena these scientists see only existed through the mediation of the machine, and the machine only exists because of the past labour reified on it (the theories inscribed in this material basis) (Latour, Woolgar, 1986: 64).

He uses Bachelard's idea that these scientific apparatuses of 'reified theories' are phenomenon-techniques, and thus explaining how they operate as 'black boxes': 'When another member handles the NMR spectrometer (...) to check the purity of his compounds, he is utilising spin theory and the outcome of some twenty years of basic physics research' (Latour, Woolgar, 1986: 66). The ideas inscribed and configured on the machine were based on arguments and theories, and these were the results of discussions at conferences and disputes in journals and articles, until they were finally accepted as 'facts'. Thus, the 'so-called material elements of the laboratory are based upon the reified outcomes of past controversies' (Latour, Woolgar, 1986: 87).

To create a theory of photography, Vilém Flusser (1985) developed a “philosophy of the black box”. Flusser (1985: 40) argued that it is the photographic camera that performs the operation of transforming reality into codified signals of visual communication, and the photographer is manoeuvred by the few potentialities inscribed in the apparatus. Therefore, the photographer actually looks inside the apparatus rather than outside, thus “revealing” rather than creating. However, for Cabral Filho and Baltazar (Cabral Filho, Baltazar, 2010), analysing Flusser’s theory in the realm of art and technology, it is not a matter of destroying the ‘magic’ of the black box or of making its devices predicable and dull but rather of opening its internal mechanisms for potential interactivity. A music box has interactivity, but only in the form of repetition; a piano does not reveal its content but allows creation and interactivity. Yet, in the same way as a photographic camera, it does so within a framed realm of possibilities. The challenge is to open the inner realms of the devices for interactivity if the goal is to create new possibilities.

In the field of architecture, the emergence of apparatuses such as CAD, renderers, and 3D software are increasingly ‘entailing’ the production of architecture, in the same sense that a refrigerator ‘entails’ a power source (to use an example from Taylor, 2010: 44), thus transforming architects into operators of machined global systems capitalised by companies providing access to this content.

Furthermore, one could agree with Mark Cousins (AA School of Architecture, 2016) that whereas previously the artist had a symbiotic relation with the ‘brush’, and the architect with the ‘pencil’, today the ultimate apparatus of architectural production is the ‘office’, which enables a ‘genius’ to seduce followers and to channel the work of a legion of workers. With a high-profile office, an architect can expropriate the work of hundreds of others. However, this abstract machinery only works if architects desire to be part of it.

Deleuze has famously asked: how do people come to desire their own exploitation? For Slavoj Žižek (2014), the answer of what we desire lies in fantasies: the narratives a subject creates to build a logical chain of causalities that assures our desires as unconditional. And

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that is why to deconstruct the mythology of individual innovation in architecture matters.

### *The reproduction of individuals by narratives*

Clearly, a complete analysis of the evolution of the epistemology of historical narrative is beyond the scope of this paper. Nevertheless, it is essential to underline the internal contradictions of different modes of architectural valorisation. In addition, and more fundamentally, this analysis might underline how a narrative of the evolution of the discipline is related to a specific form of imagining the development of architecture and the contribution of architects seen as individuals.

There is a long-standing dichotomy in historical narratives between a “chronicle of the princes” and a “history of the masses” (Rancière, 1994). For Rancière, there is a poetical struggle in the production of history, where those in positions of power aim to make history the result of their own actions, thus silencing the concrete history experienced by others.

It is in this sense that Kracauer (1995: 101-106) argues *biography* to be the ‘Art Form of the New Bourgeoisie’. For him, the *novel* of the 19<sup>th</sup> century, in which individuals were immersed in an overall context, was being replaced by (and condensed in) the history of highly visible heroes. As the ‘actual life’ of individuals gives a sense of ‘certainty’ to historical veracity. Biographies sounds as narratives ‘based on true facts’, so these facts become crystallised, and history seems to be the ultimate result of individual actions. For Kracauer, this is the ultimate form of ‘evasion’ from the masses and the collective character of history.

In this sense, the fundamental problem of the idea of ‘agency’ is the assumption of an ‘autonomous’ subject, acting with free will, even if surrounded by a (neutral) structure. Nonetheless, to move beyond the concept of agency does not aim to deny the possibility of action; rather, it aims to engage in how subjectivities and social structures frame possible choices, condition alternatives, foment drives, and induce behaviours by expectation; and, furthermore, to engage in how subjects are (from the start) subjected to a past that goes beyond individuals. As we saw, the ‘biography’ genre became fundamental for the individualistic subject of capitalist society. Beneath that, the architectural imag-



ination is trapped in a deeper conception of history based in the chronicles of ‘princes’ and ‘princesses’. Arguably, the notion of a ‘prince’ directing history was first systematised in Machiavelli’s (2008) book *The Prince* (originally written in 1513). According to Althusser (2000), Machiavelli’s ultimate goal with the ‘prince’ was to create an ‘intellectual dispositive’ to inform political practice. He was specifically concerned with *fortuna*, the circumstances or conjectures that a prince would have to face to ‘command and act’. The prince was a device thought to act ‘negatively’ and ‘objectively’ to control the randomness of the future. For Althusser, this negative objectivity was what Machiavelli conceived as *virtù*.

Machiavelli (cf. Althusser, 2000) was not inventing the figure of the prince *per se*. He was systematising a traditional practice in its purest form (as an ideal, a prince as a re-presentation). So, he deduced the representational character of the prince as an image, and specifically as a public image. This image, then, could support a figurative narrative of political developments and international affairs. The interactions among social conditions (*fortuna*) are then ideologically manipulated by means of the image of the ‘prince’, which aims to capture social drives and expectations to build a new (logical) chain of necessity in the form of a new linear narrative (*virtù*). In this sense, the prince is an operative image (a device) that manipulates social drives to achieve specific goals. For instance, in the case of Machiavelli, the goal was the unification of Italy, and a new virtuous prince should emerge in order to articulate this social transformation (in this sense, his prince was a re-presentation of a complex context, different forces and different interests that could mobilise and direct the action of a collective subject – the entire country).

Thus, a prince is an operative public image of a political narrative; it is an image of power or truth rather than power or truth itself. By the means of this intellectual operation, the ‘prince’ becomes ‘the subject’ of history, and the majority of theories and histories of architecture are arguably based on ‘architectural princes’.

This theoretical framework is also useful to understand why certain kinds of individuals rarely enter these narratives – as for instance minorities and

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women – as traditional institutions reproduce social prejudices. In misogynistic and male chauvinist societies, the images used to reproduce social power are male figures. It is not the case that the role of women and minorities are less important to architectural development, it is the case that they are strategically set aside in a supporting role – i.e. these narratives are also a form of institutionalizing and establishing systems of power.

In this sense, although much research, including Tafari's approach, has made great advancements in contextualising architecture in a social context, scholars have ultimately reinforced the abstract device of the 'prince' because their critique was centred on representations (mainly male white architects) conducting the evolution of architectural history. As Jodi Dean asserts, this is precisely the problem:

Not only is agency privileged over structure but the presumption that agents are individuals formats the alternative of autonomy or subjugation as an opposition between individual and collective. Collectivity comes to be associated with constraint, with preventing rather than enabling creativity and initiative. Liberal political theorists explicitly construe political agency as an individual capacity; others take the individuality of the subject of politics for granted. I argue that the problem of the subject is a problem of this persistent individual form, a form that encloses collective political subjectivity into the singular figure of the individual (Dean, 2014: 364).

#### *For a Subversion of How We See Subjects of Architectural Innovation*

Althusser (1971: 5) argued that 'The ultimate condition of production is therefore the reproduction of the conditions of production'. For him this reproduction is based on ideology, which he conceived as the image an individual has of his place in the world (Althusser, 1971: 165). This image places the subject in a specific relation to the world, and in a position from which this subject can act in the world. For Althusser, this image is created through ideological apparatuses (material-immaterial objects such as advertisement, books, institutions, or buildings) that positions the individual in a set of expected relations, reinforcing existing beliefs. Those apparatuses are, therefore, ob-

jectified social relations that frames the subjects. But, Jodi Dean (2014) inverts Althusser's famous formula by saying that it is not the case that ideology interpellates the individual as subject, rather, capitalism interpellates subjects as individuals.

Simondon (2013) builds his approach not on the basis of the individual but on the basis of the process of individuation. The error, he argues, resides in giving to the atom already-individualised a status of principle, i.e., in presupposing the individual already individuated as an essence, instead of looking for how and from where this individual came from. Simondon's (2013: 24-25) effort is to conceptualise being as becoming, to acknowledge the individual by means of its actual process of becoming – its concrete operation of individuation – and not the opposite way. In this sense, being is not seen as substance, nor matter, nor form but as a system in a precarious state of (not fully) resolved tensions and in a continuous process of transformation.

There are two views according to which the reality of being as individual can be approached: a substantialist view, considering being as consisting in its unity, giving to itself, founded upon itself, not generated, resistant to what is not itself; and a hylemorphic view, considering the individual as generated by the encounter of form and matter. But in those two views there is something in common (...) Departing from the created individual, the effort [of these views] is to reach back to the conditions of its existence (...) it considers the individual, as long as constituted individual, the reality to be explained (...) *Such a perspective of research gives ontological privilege to the constituted individual.* Thus, it risks not approaching a truthful ontogenesis, of not positioning the individual inside the system of reality in which the individuation is produced (Simondon, 2013: 23, *our translation*).

Alternatively, an ontogenesis considers becoming as a dimension of being, thus relations can receive the status of beings (such as relations between interior and exterior), without naming any new obscure substance. In the case of becoming as a dimension of the living being, the individual reveals a continuous 'theatre of individuations' (Simondon, 2013: 29). As we are always absorbing and purging matter, the living individual is the one who continuously re-enacts the

The error, resides in giving to the atom already-individualised a status of principle, instead of looking for how and from where this individual came from.

The first step would be to subvert the abstract machinery reproduced by the discipline of architecture in order to recognize the collective force behind architectural production.

operation of its becoming/individuation in a continuous exchange between inside and outside.

An individualisation is always also collective because the individual is just a provisional actualisation of a shared field of pre-individualities, thus it is formed of internal 'disparations'. In this sense, the subject is a mediation (a resolution/structuration) of disparate social subjectivities. This collective dimension of individuality is what Simondon calls the transindividual. In the case of the individuation of the subject of architectural innovation, one could argue that an architect is never just an isolated genius. She/he is the mediation of a broader and diverse subjectivity, the general intellect of his profession.

Although the concept of trans-subjectivity enables the understanding of the emergence of transformation, the theory of Simondon does not advance in the politics behind these transformations: the struggle for the emergence of new subjectivities. Arguably, the first step for that would be to subvert the abstract machinery reproduced by the discipline of architecture in order to recognize the collective force behind architectural production.

### *Conclusions*

As we saw, dead architects should not be able to innovate – they are dead! – and yet they seem to be doing it! The reason why we are entering this era of phantasmagorical architects is the intensification of these images of individuals (the operative work of the ideological image of these star architects, princes, princesses, and so on). That is why we are entangled in a politics of subjectivity: the way we narrate and see the innovation process of architecture sets a framework of power relations.

This paper started with this paradox, in order to reveal how current understanding of architectural innovation limits the role of architects and reproduces specific sets of power relations. As the investigation goes back regressively into the abstract machinery of invention, it is made clearer that the image of the genius is an apparatus that captures a collective 'general intellect'. Nowadays, in architecture this machinery is mainly framed through *The Office*. As a black box, *The Office* establishes a set of reified social relations and it is operational because architects believe in the narra-

tives and biographies of geniality it entails. The deconstruction of how these disciplined narratives limits the understanding of architecture is the first step to subvert the understanding of architecture as an individual agency. Thus, to build awareness on the collective processes that moves architecture innovation is the second step to subvert the way we see and act as subjects of architecture.

That allows a new field of research and practice as it repositions architecture's relation to the world: on the one hand, we can see how black boxes are controlling what architecture can do, and on the other hand, we can see how architecture operates in the reproduction of social subjectivities through the reification of social relations into space (something perhaps as old as Leon Battista Alberti's book titled *De Re Aedificatoria*, which literally means 'the thing building', i.e. spatial thingfication or the production of spatial black boxes). In addition, this small guide also allows us to see a new transversal position from which architects can act in the world – namely, through the articulation of collective subjects. To see the possibility of social change mediated by collective subjects of architecture is, in itself, a subverted form of social innovation.

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### *References*

- AA School of Architecture (2016), *Mark Cousins - Anon: The architect and his office - Part 6* [Online Video]. Available at: [https://youtu.be/fXN5Z\\_YcCLg](https://youtu.be/fXN5Z_YcCLg) [Accessed: 14 January 2019].
- Althusser, L. (1971), *Ideology and ideological state apparatuses*, in L. Althusser, *Lenin and Philosophy and Other Essays*, trans. B. Brewster, New York, Monthly Review Press, pp. 127-188.
- Althusser, L. (2000), *Machiavelli and Us*, trans. by G. Elliot, London, Verso.
- Bellis, M. (2016), *Thomas Edison's Muckers: Thomas Edison's Muckers would work with him the rest of their lives*, "About Money" [Online]. Available at: <http://inventors.about.com/od/famousinventions/fl/Thomas-Edisons-Muckers.htm> [Accessed: 30 October 2016].
- Bourdieu, P. (1996) *Distinction: A Social Critique of the Judgement of Taste*, Cambridge (MA), Harvard University Press.

- Cabral Filho, J. S., Baltazar, A. (2010), *Magic beyond ignorance: virtualizing the black box*, in Festival de Arte Digital (ed.) *Essays*, Rio de Janeiro, Instituto Cidades Criativas, pp. 12-23.
- Carlson, W. B. (1988), *Thomas Edison as a manager of R&D: the case of the alkaline storage battery - 1898-1915*, "IEEE Technology and Society Magazine", vol. 7, n. 4, pp. 4-12.
- Dean, J. (2014), *Enclosing the subject*, "Political Theory", vol. 44, n. 3, pp. 363-393.
- Erlanger, S. (2016), *Grieving and going forward: How Zaha Hadid's firm plans to move on*, "The New York Times" [Online]. Available at: <https://www.nytimes.com/2016/04/21/arts/design/grieving-and-going-forward-how-zaha-hadids-firm-plans-to-moveon.html> [Accessed: 10 July 2016].
- Flusser, V. (1985), *Filosofia da Caixa Petra: Ensaio para uma futura filosofia da fotografia*, São Paulo, Hucitec.
- Friedland, R., Zellman, H. (2007), *The Fellowship: The Untold Story of Frank Lloyd Wright and the Taliesin Fellowship*, New York, Harper Collins.
- Godin, B. (2008), *In the Shadow of Schumpeter – Working Paper No.2*, "University of Helsinki" [Online]. Available at: <http://www.csiic.ca/PDF/IntellectualNo2.pdf> [Accessed: 21 January 2019].
- Godin, B. (2010), *Meddle Not With Them That Are Given to Change: Innovation as Evil – Working Paper No.6*, "University of Helsinki" [Online]. Available at: <http://www.csiic.ca/PDF/IntellectualNo6.pdf> [Accessed: 21 January 2019].
- Godin, B. (2014), *The Politics of Innovation – Working Paper No.17*, "University of Helsinki" [Online]. Available at: <http://www.csiic.ca/PDF/WorkingPaper17.pdf> [Accessed: 21 January 2019].
- Godin, B. (2015), *Innovation Contested: The Idea of Innovation over the Centuries*, London, Routledge.
- Godin, B. (2017), *X-Innovation: Re-Inventing Innovation Again and Again*, "University of Helsinki" [Online]. Available at: <http://www.csiic.ca/PDF/X-Innovation2017.pdf> [Accessed: 21 January 2019].
- Guattari, F. (1995), *Chaosmosis - an ethico-aesthetic paradigm*, trans. by P. Bains, J. Pefanis, Indianapolis, Indiana University Press.
- Harvey, D. (2010), *A Companion to Marx's Capital*, London, Verso.
- Kracauer, S. (1995), *The Mass Ornament: Weimar Essays*, trans. by T. Y. Levin, Cambridge, Harvard University Press.
- Latour, B., Woolgar, S. (1986), *Laboratory Life: The Construction of Scientific Facts*, New Jersey, Princeton University Press.
- Lazzarato, M. (2014), *Signs and Machines: Capitalism and the Production of Subjectivity*, trans. by J. D. Jordan, Los Angeles, Semiotext(e).
- Lemley, M. A. (2011), *The Myth of the Sole Inventor - Working Paper no. 1856610*, "Stanford Public Law" [Online]. Avail-

able at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1856610](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1856610) [Accessed: 30 October 2016].

Machiavelli, N. (2008), *The Prince*, trans. by P. Bondanella, Oxford, Oxford Press.

Marx, K. (no date [1857]), *Fragments on Machines*, in K. Marx, (1973), *Grundrisse*, trans. by M. Nicolaus, London, Penguin Books - New Left Review.

Marx, K. (1990), *Capital - Volume 1*, London, Penguin.

Mazzucato, M. (2011), *The Entrepreneurial State*, London, Demos.

Newton, J. D. (1987), *Uncommon Friends: Life with Thomas Edison, Henry Ford, Harvey Firestone, Alexis Carrel, & Charles Lindbergh*, New York, Harcourt Brace Jovanovich Publishers.

Padgett, K. (2016), *Thomas Edison's research laboratory*, "Biography and History" [Online]. Available at: <http://agile-writer.com/Biography/EdisonLab.htm> [Accessed: 30 October 2016].

Parker, I. (2012), *High rise - A bold Danish architect charms his way to the top*, "The New Yorker" [Online]. Available at: <http://www.newyorker.com/magazine/2012/09/10/high-rise> [Accessed: 12 September 2015].

Rancière, J. (1994), *The Names of History: On the Poetics of Knowledge*, trans. by H. Melehy, Minneapolis, University of Minnesota Press.

Read, J. (2010), *Production of subjectivity: From transindividuality to the commons*, "New Formations: A Journal of Culture/Theory/Politics", Winter, vol. 70, pp. 113-131.

Simondon, G. (2013), *L'individuation à la lumière des notions de forme et d'information*, Grenoble, Millon.

Simonton, D. K., Reiter-Palmon, R., Tinio, P. (2015), *Thomas Edison's Creative Career: The Multilayered Trajectory of Trials, Errors, Failures, and Triumphs*, "Psychology of Aesthetics, Creativity, and the Arts", 2015, n. 1, vol. 9, pp.2-14.

Spencer, D. (2012), *Smooth operators: architectural Deleuzism in societies of control*, Unpublished PhD Thesis, London, University of Westminster.

Tafari, M., Dal Co, F. (1976), *History of World Architecture - Modern Architecture/1*, trans. by R. E. Wolf, New York, Electa.

Taylor, T. (2010), *The Artificial Ape: How Technology Changed the Course of Human Evolution*, New York, Palgrave Macmillan.

Toscano, A. (2006), *The Theatre of Production: Philosophy and Individuation between Kant and Deleuze*, New York, Palgrave.

Toscano, A. (2007), *The disparate: Ontology and politics in Simondon*, "Forum for European Philosophy Annual Conference", Brighton, Society for European Philosophy/University of Sussex.

Virno, P. (2001), *General Intellect*, in A. Zanini, U. Fadini (eds), *Lessico Postfordista*, Milan, Feltrinelli, pp. 146-152.

Žižek, S. (2014), *Event: Philosophy in Transit*, London, Penguin Books.