

DEVELOPMENT OF DRAWING AS A TOOL FOR *READING* THE CITYSCAPE THROUGH THE EXPERIMENT ON BLOCK 30 IN NEW BELGRADE

A B S T R A C T

The purpose of this paper is to identify the intersection point in the process of *the building of the drawing* as a methodological tool that occurred during PhD research, as well as to demonstrate the subsequent development of drawing experiments concerning the turning point for methodology. In the first part of the paper, we will try to explain why cityscape transformations are the subject of research. Through a brief historical analysis, we will point out the basic characteristics of the transformations of the space of Block 30. After that, we will cross the drawing as a methodological tool with the polygon for the experiment, i.e. with Block 30, and slowly start showing the steps that took place during the study on the elective course Architecture and Visual Language. The selected experiment aims to shed light on the turn that happened at that time for the methodology itself, but also to further point out the potential of contemporary drawing through layering and the connection between differently positioned architectural tools. In the final sections, we will discuss methodology reversal by examining current drawing experiments to see if it allows methodology to be constantly transformed and drawing to move from its static role to dynamic tool development. In this way, the drawing is enabled to include and follow contemporary currents in the design process at a higher level, as well as to move towards one that can respond to the speed and density of spatial changes that occur and provide innovative knowledge.

DRAWING,
METHODOLOGICAL TOOL,
EXPERIMENT,
TRANSFORMATION,
NEW BELGRADE - BLOCK 30

FIRST LINES OF METHODOLOGY

We believe that today's architectural and urban design frameworks are challenged by increasingly complex issues, and that these frameworks might sometimes indeed seem too flimsy. Architects could give up their position as saviours of the world and not limit their roles to only making design proposals to change the real world. Then they might find that their capabilities naturally expand towards more extensive work.

Very often, architects consider themselves as professional elites who know better than other people how to make a better world. They tend to believe that their design proposals for making a physical building or environment are ultimate solutions to urban issues. But we don't think such design proposals can solve problems. They have limits, and there are far more other factors to consider in complex urban issues. One alternative method is for architects to observe and represent the phenomena of the city so as to raise awareness and inspire other people. This could also be an important role for architects to play for the world.

In many cases, cities need expression rather than design. Cities have their own lives and inner logics. Because they allow scope for the continuous creation of wonders, they are the perfect stage for the expression of strong desires.

Many exceptional spaces are not designed by architects but created by average people who use them. We shall just represent those naturally grown spaces, not try to design them.¹

The research starts from the assumption that *reading* of the cityscape can contribute to the improvement of drawing as a contemporary methodological tool. We recognize the understanding of complex spatial changes that are reflected and shifted through the cityscape as those that can reveal values for future design processes through drawings. In this research, we will consider drawing as one through which an architectural structure can be generated, through a series of experiments through which various transformations, alterations, reshapes of the built space are recorded. We start from Paul Virilio's interpretation of built space, which is not just a material structure, but a set of spatial and temporal changes that form special aesthetic images of space in each individual moment.²

The instability of the elements that drive space is observed as a potential that can reveal new meanings for the design process. The mutual permeations of the

plane, at the same time multi-layered viewing and comparison, start from the fundamental elements of architecture, such as openings for windows and doors. The window represents the micro atmosphere of the cityscape that brings to life the impression of scale, rhythm and ambience.³ Their sum, or multitude, makes up the macro atmosphere of the cityscape. The research focus is to deal with the interrelationship of micro and macro atmospheres, regardless of whether they are directly *readable*, or are placed in such a way as to form a more complex structure that is more difficult to *read* - the construction of layered spatial situations begins with them. Exploring the movement relationships of space from inside to outside is indispensable for the *reading* process to be complete.

In this paper, the quest is whether and how drawing as a methodological tool can follow and analyze the speed of changes that occur in front of us, primarily in the extreme density of the building structure, but also through the ephemerality of elements that change in the appearance of the city. The problem itself includes the question of the appropriate tool technique to answer, finding its place between the greatest period in the history of architectural drawing, which is analogue, and the future, which is inseparable from several computerized techniques of the digital world. The special interest is the place where drawing is drastically transformed and whether there is an unexplored research point on that historical boundary of the technological turn of architectural tools that has lasted for the previous three decades or the undiscovered potential of drawing as a tool to act between all the qualities of analogue thinking with all the advanced features provided by digital tools. This specific position in which something disappears from previous techniques, while something else arises, needs to be examined within the very space that carries with it the highest degree of perceptual complexity, and that is, according to our assumption - the cityscape.

Initiation for research was deposited through a previous interest in New Belgrade during undergraduate and master's academic studies at the University of Belgrade - Faculty of Architecture, both for its history of origin and for its changing character that is reflected in the contemporary moment.⁴ During that period of education, I created numerous photographs of the cityscape during the last year of my bachelor's and two years of master's academic studies, which mostly recorded residential buildings with special attention to the space in which a person lives and what people discover through transparent parts of the building. Later, clearer insights were gained in the ways of forming the theoretical setting of the research, but perhaps even more importantly, a return to what was essentially the subject of interest in identifying the problem and perceiving it through a new degree of rationalization and systematization. The research by design methodology is thought to be one in which we can observe the

entire process through the product (in our case, drawing) and reach values from the identified problem related to a specific fragment of reality. The drawing was developed as a form of thinking, as one that tried to analyze and generate the architectural structure of the above-mentioned transparent and dynamic parts of collective housing in New Belgrade. Two types of answers were simultaneously developed: one in the form of written form and the formation of the theoretical setting of the work, the other, the experimental part of monitoring and maturing creative thinking through hand drawing of space. The drawings record fragments of New Belgrade, each a document of a specific moment, in which the inner experience of the human body is examined concerning the image of a fragment of the cityscape. The special importance of the research is pointed out in the very process of mental images and experiments that perception carries with it as a procedure. The main goal of the first experiments was to strive to achieve conceptual values in the images of fragments of the cityscape that are rich in visual complexity, from the identification of the problem, through the potentials and aspects we find in it. The fragment of reality was viewed as a creative situation that was reduced to a basic partition, to what was essentially visible, and that was the static and dynamic parts of the object.

In that way, in the period from 2013-2016, *Maps of Methodology* were formed as the Books of Hand Pencil Drawings that represent the first phase of research through drawing (Figure 1, p. 226).⁵ The Books of Hand Pencil Drawings (2013-2014) begin with two basic scales: static and dynamic; static refers to a physically closed, material structure, whereas dynamic refers to a moving, immaterial, *indoor landscape*.⁶ The two basic scales (static and dynamic) are two books of hand pencil drawings; each book contains one hundred drawings made in the pencil (0.07mm) technique, in a format of 29.7cm x 42cm. They treat only one half of the drawing paper, while the static one occurs even in the lower half in a monochrome repetitive expression. The dynamic one fills the whole half, appearing in the tonality of red, blue, and pink, which are defined as extremes of colour in a specific part of the day. Their interrelation tries to include all the subtleties of the atmosphere of the *indoor landscapes*, but also to reduce them to a basic element for the sake of future communicativeness. One of the important conclusions of these series is that documenting and analysing fragments of reality can't be determined by a precise number of drawings, but that they should be created through *serial vision*.⁷ Only in this way can a range of different insights be provided, which in their sum can be more valid for further research.

The methodology created a series of hand drawings that deal with the interrelationship of the two scales on selected fragments of the cityscape

by crossing these two scales. The sum of all the drawings builds a *Map of Methodology*, based on which they are further applied to the next series of photographs of certain fragments of the cityscape. Through the case study of Block 30, we will show how the *Maps of Methodology* were applied, but also how the specific micro-atmosphere influenced the shift of the methodology itself and its use at the macro level. Based on the initial experiments, the fragment of reality is perceived as one that allows us to perceive the essential facts for the process to which we aspire. It is a living form, whose dispersion of atmospheres seduces and produces as much expansion of the senses as possible, and which should be carefully studied, abstracted, and introduced through the following design processes. We do not necessarily choose the spaces in which we live, but we establish our own vision of them, and we choose whether we can move our own boundaries of perception and understanding towards different representations of physical space.

TRANSFORMATION OF NEW BELGRADE: THE CASE OF BLOCK 30

At the first level of checking the theoretical setting and the *Maps of Methodology*, we will determine certain historical facts that led to the spatial transformations of New Belgrade, so that through the next levels on the specific polygon of Block 30, we can fully apply the methodology we proposed (previous part). The permanently modified image of the once imagined modern, the capital city of the Socialist Federal Republic of Yugoslavia,⁸ through the continuous process of its development, led to the study of the causes of these changes in a selected fragment of New Belgrade. In each of the blocks, one local community was planned, which can function on its own. In addition to housing, the plan also included all the appropriate capacities needed for everyday life, such as supplies, social contacts, craft services, primary education, institutions for preschool children, recreation for children, youth, and adults, vehicle accommodation, and more. If we talk about the approach to resolving housing, it was approached integrally, from the smallest levels to the picture of one whole. With the introduction of the industrial method of construction, residential buildings were made by a prefabricated process, a series of prefabricated elements with the use of natural materials in their basic form. The unification of the elements was supposed to achieve unity and rationality, while at the same time avoiding monotony and uniformity.⁹ It arose from a schism between two ideologies: political and urban. It was not completely subject to the paradigm of International style or the paradigm of socialist realism, but the concept was essentially reduced and tended to become different.¹⁰

After the unfinished plan¹¹ of the imagined administrative modern city, housing becomes the dominant function of space, with the most pronounced collective

type.¹² In the 1990s, they began to get their manifestation through physical space as well. The criticized modern movement is not subject to a thorough re-examination of the realized state of the concept, but to a turn towards the occupation of space. A new, specific period of forced attitude towards architectural discipline, leads to filling the spatial field. The consequences of such approaches remain visible to this day. This situation directly affects the housing units, all the way to the whole that they form with other buildings. In other words, the period of uninterrupted struggle for space can be seen not only through the morphological transformations of the city itself, but also through special, individual cases that say what its inhabitants ask of it (the question of the distance of fragment analysis). The place where one can react is precisely that which is already largely “allowed” or left “freedom”. The post-socialist period marked the beginning of a series of transformations, from an economically unsustainable system to a strong market economy manifested by spatial disorder and degradation, commercialization, and illegal and unplanned construction caused by privatization.¹³

The population is establishing its needs according to the new conditions of (non)urbanization in the dominant objects of modernism. The concept of a modern city that each building brings with it individually, at least in memory, is slowly becoming more and more left to individual requirements and interests. The question is how does a collective housing facility affect morphological transformations today and how does it, as such, reflect on the cityscape? It can be said that in the history of the existence of buildings, they are actually more subject to individualistic, subjectivist struggles for space, than the one that was established by the plan. *The aesthetic representation of contemporary space* is characterized by the struggle for new and new physical interventions and the *multiplication of special impressions*. On the other hand, is it about the fact that the concept’s firmly established structure with stands all the attacks of the diversity of requirements?

Most of the changes in the objects of modernism happen according to the needs of the inhabitants, where the exterior suffers from the needs of the interior. In that way, if a resident estimates that he needs a couple of square meters more, and sees the terrace of his apartment as non-functional, he changes its purpose, increases the square footage, but also permanently changes the external image of the building. The greater the number of those who interpret the situation in the same way, the greater the number of newly formed different surfaces, which, in turn, are reflected on the exterior, so the interior determines the new exterior. The heterogeneity of the situation emerges from the set simplicity, and in a sense, it should be understood as a certain speech of the population. The

degree of reaction is constantly growing. Can architectural discipline neglect a general attitude, which in the end indirectly sends inputs to what the inhabitants themselves are looking for? Faced with a criticized lack of identity, changes in the use of residential buildings have reached a level where each apartment becomes a “separate plot”.

CHECKING THE MAPS OF METHODOLOGY ON THE EXAMPLE OF BLOCK 30 IN NEW BELGRADE

An open block in a modern city such as Block 30 does not relate to the street in the way that a traditional city block does, but his idea was to be open on all four sides so that the city could expand. At the beginning of the period “towards filling the field”, each of the blocks suffers from new commercial content and business facilities without a relationship to the plan and its plan of new content. Block 30 is just one of the blocks in the central zone of New Belgrade, which is dealing with all the transformations that have taken place. What sets it apart from other blocks (e.g. block 21 - extremely high degree of transformation) is that those objects that emerge in the period after the construction of a block of modernism have two important characteristics for our research. The first is that the newly created buildings use reflective transparent materials, which have developed the atmosphere from *the outside to the inside*, and with such set *material transparency* on their very surface, they create many different architectural images that we face. It is this “conflict” that becomes the subject of our research, the place where we develop a methodology for discovering the *immaterial*, the *materiality* that dissolves the unity and rationality of objects of modernism. The homogeneity that was in principle set in the visual expression in each of the blocks of the central zone of New Belgrade could hardly survive as such. Our research is focused on what remains of this morphologically transformed image. Secondly, it is significant that all the new buildings outside the modernist plan were built along the street (boulevard), which closed the open block, formed the *boundary*, and, paradoxically, provided a *different view*. Through reflection (Figure 2, p. 227) the block exists where it does not, and brings us back to a different *reading* of what is real for the sake of the next careful design process.

The observed complexity with a series of contradictions, ambiguities, and irony, is primarily characterized by the transformation of one model into another with the abandonment of space to social actors. As the meaning of the collective implies a collective name, where all people are indebted to something that is the same, common, and includes the notion of association, it remains questionable at what point and why the resident loses a sense of community and relates to the space in which he lives as something which excludes the care of the collective

object. Under such thinking, we do not ignore systemic issues but try to find a common social factor and thus establish an additional analogy with individual cases. The struggle for every square meter continues to establish its regime of space use every day and is permanently reflected in the architectural concept and image of the city. Individual interventions have reached an extremely high level of transformation, where the conquered living space seems to be increasingly asking if there is a way to find a measure of harmonization. The aforementioned uniformity exudes entirely new images of atmospheres and shifted housing boundaries. Today, the open block is painted along its block boundaries by the following buildings that close that same block, through its mutated image on reflective facades. We documented such spatial moments through photographs of fragments of Block 30 in different weather conditions and observed them as a phenomenon in themselves.

Further research checked the *Maps of Methodology* on the recorded photographs through an experiment conducted on the elective course Architecture and Visual Language in the second year of doctoral academic studies.¹³ Through the diagram, the basic terms are set that are separated from the theoretical setting and selected fragments of reality: *space, time, transparency, reflection - trace, trim, rhythm, action*. In *Figure 3* (p. 227) we can see how the Books of Hand Drawings, two basic scales (static - M1 and dynamic - M2) were established with the selected terms, how they were applied to each fragment, as well as how they developed their rhythm. R1, R2, R3 ... Rn). The application of the *Maps of Methodology* was performed from the photographs of the fragments, through the reduction of the photography to the basic geometry shown through the first phase of the analytical drawing, to the concrete application of the scales shown in *Figure 4* (p. 228).

The first phase of the application the *Maps of Methodology* was examined through six equal samples. The samples were selected as excerpts from the author's photographs of Block 30. The photographs were taken during the entire spring semester of the 2014/2015 school year when the elective subject Architecture and Visual Language was offered. They were created in different weather conditions so that the reflection of Block 30 had as many mutated representations as possible. The selection of photographs was approached to the previous research of architectural photographs from artistic practice, which recorded at least relatively similar spatial phenomena, and to the respect for the very character of Block 30 in New Belgrade. Each sample should have had enough similarities and differences with the one that precedes it and with the one that follows it. The conclusion that was drawn for the *Maps of Methodology* itself was also valid for the drawings that were created from the

selected samples, and that is the *serial vision*. Static and dynamic scales (M1, M2) were applied in architectural analytical drawings in a slightly more twisted form in relation to how they were set. Such a decision arose from the very logic of the mutated image. The first disorder of order that occurred in this way in the application of the *Maps of Methodology* will contribute to the later series of decisions in the construction of drawings. The final concept of the elective course Architecture and Visual Language was designed to contain ten drawings of fragments of Block 30 (dimensions 42cm x 150cm) which were previously examined through the mentioned six samples. According to the previous archiving practice, the first drawing was scanned and, as such was used for further comparison with samples. The format of the drawings of the final work differed from the samples, which had its own graphic impact on the density of the lines. Comparing the samples and experimenting with the plan of other drawings from the series, a collage is created in *Figure 5* (p. 229).

It has been observed that what happens in the very nature of the mutated image can be applied as a further course of image transformation. If we analyse an image that has already changed, a greater degree of distortion and fragmentation of the same image leads to the extreme of examining such spatial phenomena. When fragmenting, we started with the basic dimension of the line and the way it disturbs the image. In *Figure 5* (p. 229) we have selected a photograph of the fragment according to which the drawing was made and the drawing in its last phase of the experiment to show the difference that occurs through the procedure, but also to recognize the starting points in the drawing itself. The decomposition of the mutated image through the collage technique helped us as an experimental conclusion to introduce the transformation into the drawing process. In this way, a turnaround occurred in the very procedure we talked about in the introduction to this paper, a turnaround that an experiment can lead to, due to the process itself, which carries unexpected discoveries through a series of trials. The change that took place in the first drawing for the final exam on the elective course changed its further development. The other nine drawings were made according to the same procedure, and not according to the original plan, and then the collage of hand drawings became the basic thread of the methodological tool (*Figure 6*, p. 229).

REFLECTION OF THE EXPERIMENT ON BLOCK 30 ON THE FURTHER DEVELOPMENT OF DRAWING AS A METHODOLOGICAL TOOL

In the previous section, we singled out the terms *space, time, transparency, reflection - trace, trim, rhythm, and action* as seen in the diagram showing

the *Development and application of the Maps of Methodology* in Block 30. For the turn that happened for the methodological tool, the notion of *trim* is specifically important. It is among other concepts and has a cause-and-effect relationship when analysing a fragment of reality. The very trace that occurs on the reflection of transparent materials separates one layer of information. The sample is then also formed by *cutting off* and focusing more precisely on what is supposed to carry spatial potential. Analytical drawing also cuts unnecessary parts and highlights primary ones. Next, the procedure of application of the *Maps of Methodology* separates the value of the phenomenon of space. In that way, a field was slowly opened towards loading the previously performed steps, which were further implemented through the turn we talked about. The *trim* is applied to the drawing of Block 30 and opens up the possibility that the already disturbed image is undergoing new transformations. As we talked at the very beginning of this paper about the transformations of the cityscape and their degree of perceptual complexity, our aim was that the experiment we conducted on Block 30 could be further applied. From that moment on, the *Maps of Methodology* became the basis for future experiments.

They are no longer just hand drawings created in series like books M1, M2, M3 ... Mn, but an archive of phenomenological notes that are useful for future works. M1, M2, M3 ... Mn through its scanned form of hand drawings, becomes a digital archive. This form of the digital database has been used as a kind of palette when analysing various fragments of the cityscape from 2016 until today. The manual drawing used the technique of repeating the thin line at 0.07mm, which is also mentioned in this paper, to give an accurate reflection of the impression at the time of documenting. The line is constructed with a ruler tending towards vertical expression. It is important to note that the strictness of the expression of the line was preceded by the phase of freehand drawings, which were also created in the series. It was difficult to understand what was *meant* through the cityscape and to express it through a reduced drawing. The first works also decomposed fragments and dealt with dissecting one's own impressions, but through the organic form. Through the analysis of my own works, I concluded that there is a lack of architectural precision in the drawings and that the intention to reflect the cooperation of various elements, and their potential to function as a whole, is not achieved, despite the multitude of values and impressions.

It was through this procedure of objective reality, on the one hand, and subjective associations, on the other, those drawing experiments were purified, but also more precise features of methodology were obtained. In the process, we kept coming back to what we were *reading* and how to reduce the perceptual complexity of the urban dynamics we see. The drawings we mentioned that were

created through organic form were in one colour, while the ruler as a tool made it possible to feel that valerians can be introduced through two more colours that will not disturb the unity of methodology but will bring the exact change of impressions we face when perceiving. In certain places in the drawing, only one colour will react, then two, and then all three, until we return to one, where a series of works will present the accuracy of the reflection we talked about. The dilemma that was constantly posed before the process of *reading* is how and whether it is possible to completely abstract the *indoor landscapes* that we analyze. The multitude of impressions they carried with them seemed possible either to draw as accurately as possible and realistically confront all forms of everyday space (which we can see in the practice of the Drawing Architecture Studio) or to single out another state. The problem was also seen in the fact that the process of abstraction may prove to be inexpedient for the issues we are dealing with, i.e. that they may lead us to a reduction in which we may not pay enough attention to some factors. However, exactly what we mentioned earlier is that the drawing experiment essentially brings something unexpected where we test with all the previously known tools that we think can be useful for the problem we are dealing with.

Although at the beginning of the methodology there were only basic elements on the table, such as line, colour, and the ruler that organized them, fine differences were introduced through the process of abstraction, which helped to overcome the complexity of spatial situations we analyze. The collage, which is further used as a computerized technique, introduces a degree of rationalization into the process itself, although in its end it completely disrupts the image of space. Mapping, transforming, and dissecting hand drawings through collage leads to a new complexity of expression. What was reduced through hand drawing is confronted with it again and is redefined, used for the newly designed spatial situation. It is not about something that can be separated from what it is created from, that is, from a fragment of the reality of the urban landscape, but the drawing intends to shed light on a different spatial situation through the methodology we propose. As we seek a hidden order in the existence of the spatial disorder of the city, with this procedure we lead it to the extreme limits, in which it essentially returns to its complex state, but in a completely different form.

The next phases of research through drawing dealt with the application of such a developed methodological tool and its role in contemporary architectural practice through a series of drawing competitions that were important for the development of methodology, and took place in the period from 2016 to today (*Drawing Futures*) Bartlett School of Architecture), *Drawing of the Year 2016*

(Aarhus School of Architecture), RIBA Eye Line Drawing Competition 2017 (RIBA Journal & AVR London), KRob 2019 (Ken Roberts Memorial Delineation Competition), One Drawing Challenge 2019 (Architizer), etc. Some of the competitions have a long tradition of testing drawings as tools, while others turn to thematic issues for the current year. Common to all competitions and drawing practices is the role of drawing in the digital age and understanding analogue techniques concerning new circumstances. Every year, international competitions do not bypass the topic of drawing, and new categories are often introduced (e.g. *Emerging Technologies*, KRob 2017) as well as those that raise the question of the relationship between hand and digital drawing (*Digital / Mixed / Hand*). For our research, it was important to apply the methodological tool in parallel through competition practice and in that way to check drawing experiments. As the methodology itself was examined through a large number of competitions, it faced different requirements of competition tasks that were often extremely important in understanding the applicability of the methodology. It is especially important to understand the twists and turns in the competition when it comes to architectural drawing. Understanding these differences makes us try to find those who are really focused on problem analysis in the whole variety of architectural expressions. We would like to single out one example to illustrate what we are talking about: the *Drawing of the Year 2016* competition, when we first applied for it, introduced digital drawing in the 2016 competition call. It was possible to interpret the concept of digital drawing on the one hand only as one that is created with the help of digital techniques, but also as one that combines analog with digital, which in the context of our methodology coincided exactly with the time the tool was developed.

The submitted drawing *Cityscape Transformation Habitation* (Figure 7, p. 230) mapped the wider scope of the blocks in New Belgrade and their border relationship with neighboring estates, which differ in typology about the collective, mass housing. The *Drawing of the Year 2016* competition was preceded by the competition for the book *Drawing Futures* on the occasion of the 175th anniversary of the Bartlett School of Architecture, for which experiments were conducted for the first time as drawing collages on fragments of larger blocks in New Belgrade. It is important to note that this competition followed after the drawings for Block 30 in New Belgrade were completed within the elective course Architecture and Visual Language. As we mentioned earlier, the shifts that took place in the elective course actually established a drastic leap in drawing practice. The series of collages sent to the competition for the Bartlett School of Architecture represented a visually large difference compared to previous works but were based on carefully examined elements of the procedure. At the time, it was challenging and perhaps impossible, to

predict how much collage could progress in the future and how many variables the methodology itself could handle, while bringing a whole new kind of transformation (Figure 8-10, p. 231-233). In a sense, we could say that all the tests on the elective course have become a fundamental preparation for the further progress of drawing. The book *Drawing Futures* was focused on the issues of the present and future of drawing and coincided in time with all the dilemmas we went through in the context of refining our own methodology in the digital age. Working on an elective course shattered the advantage of one technique over another, and the process itself would lead to doubts about previously conceived and planned steps, which in our case proved to be crucial.

Freedom of expression has been developed under previously strictly examined conditions, which can be questioned over and over again, and thus actually leaves space for the methodology itself to always continue to emerge - which is especially important within the sensitivity of the phenomena we examine. Based on the received works that represent an overview of an architectural drawing of contemporary practice, the editors of the book and conference *Drawing Futures* singled out four categories of drawings: *Augmentations*, *Deviated Histories*, *Future Fantasticals*, *Protocols*.

The most important for our research is the last (*Protocols*), because it raises the question of how we can encode new data and transform information through drawing, and what new types of drawing practice need to be invented, to be able to *read* spatial changes in a world surrounded by data.¹⁵ In that way, the change that was examined at the micro-level of Block 30 in New Belgrade became a model according to which future drawings were developed, which also dealt with macro changes. More precisely, they marked the wider framework of cityscape transformations. It was difficult to check whether the setting of the methodology itself was flexible enough to be applied on a drastically different scale. Initially, the drawings of Block 30 served as a test model to experiment on a series of drawings. However, what happened in the procedure on that test through the selected above-mentioned notions of *space*, *time*, *transparency*, *reflection - trace*, *trim*, *rhythm*, *action* continued to multiply on a macro level. The drawings that we stated that we examined through the competition practice included a multitude of micro situations.

The drawing process of analyzing macro situations was not linear, nor was it about mapping a simple sum of micro situations, but about a new transformed image. Even though the following series of drawings were significantly more complex, in moments of confusion and difficult mapping, they always returned to the elementary parts of the procedure brought to us by Block 30.

The competition practice served as a series of additional tasks by which the boundary points of the methodology were examined. We could also say that these are approximately two time-equivalent processes, more precisely that the process of establishing the methodology itself is almost the same as the process of verifying the methodology itself. Both the first and the second involved several years of work, and in a sense required gradualness that at times seemed slow, but in fact, the phases of the work confirmed that the method was the right one.

TOWARDS A SYNTHESIS

The case of Block 30 that we presented in this paper revealed the gradualness that the methodology itself went through, but also the basic levels of the *building of the drawing* that will be developed in the coming years. Based on the conducted experiments, we would single out the levels through which the research resulted. The first level refers to the abstraction of mental images of the cityscape that we have perceived and from which the Books of Hand Pencil Drawings (static and dynamic scale) have emerged, based on which the *Maps of Methodology* have been established. The second level returns to the fragment of reality and confronts the previously established *Maps of Methodology* with a new and isolated complex spatial situation, which in most cases is a photograph of a specific part of the cityscape. At the third level, mapping and decoding of a fragment of reality is carried out about Books of Hand Pencil Drawings, i.e. *Maps of Methodology*, so it is an applied aspect of previously discovered elements which, according to its technique, becomes a collage. The fourth level reverses the current situation through a new type of transformation that multiplies at this level until it achieves a greater degree of distortion of the image of the cityscape as an extreme display of complexity that we face in space, but do not distinguish. In this part of the process, the collage previously formed at the third level is subject to a new phase of layering and potential image mutation. Through an extremely high degree of transformation, with a combination of analogue maps, the drawing redefines the spatial image and creates a newly designed situation. The fifth level introduces a hidden order into the thus redefined image of the fourth level by introducing a raster as a new metric layer of the drawing. It is at this level that another return to the test experimented on Block 30 in New Belgrade is taking place. The precise repetitiveness and metrics that exist in the basis of the projected Block 30 as part of a modern city were distorted through photographs that documented the same block in its reflection. In that part of the process, the raster and regularity were disturbed, to which we return at the very end, introducing it as a new layer

in the drawing. Thus, what has changed from the tests of Block 30 to *another image* is re-established as a new layer that introduces *systematic thinking* about drawing and thus completes the process of *the building of the drawing*.

The turn that happened during the experiment on Block 30 led to the key result of *the building of the drawing*. The analysis of micro atmospheres established the basic patterns according to which each subsequent macro atmosphere was examined. Drawings of macro atmospheres became a check for previous micro atmospheres. A series of hand drawings of the fragment of Block 30 led to the transition of the manual mapping technique itself to disassembling and decomposing it through digital tools. The process that was developed in such a way enabled *the building of the drawing* to develop in levels, but also for each subsequent level to move the drawing in its transformation. The combination of analog-digital mapping of micro and macro atmospheres creates new specific layers of space whose deposition creates excess that shifts the drawing from its static role to dynamic tool development, one that creates a *different image* of the city, and which can be useful for future design processes.

NOTES

- 1 "Architect as Urban Ghostpainter," in *Drawing Futures: Speculations in Contemporary Drawing for Art and Architecture*, eds. Laura Allen and Luke C. Pearson, pp. 135-138. (London: UCL Press and Bartlett School of Architecture, 2016).
- 2 Virilio, Paul. "Predugo eksponirani grad". In *Teorija arhitekture i urbanizma*, eds. Petar Bojanić, Vladan Đokić, p. 296 (Beograd: Univerzitet u Beogradu, Arhitektonski fakultet, 2009).
- 3 Pallasma, Juhani. *The Embodied Image: Imagination and Imagery in Architecture*. Chichester: John Wiley & Sons, 2011, p. 124.
- 4 New Belgrade has previously been researched from various aspects in several subjects in undergraduate and master's academic studies, but we would like to single out the master's student research that will later serve in doctoral academic studies as a basis for further research. During the school year 2010/2011, the central zone of New Belgrade was studied in the elective course

Contemporary Architecture: Modernism in Serbia (the head of the course was Prof. Dr. Ljiljana Blagojević, the associate in the course was then Dragana Ćorović, today Associate Professor at University of Belgrade - Faculty of Forestry). The work “Complete dossier on the urban plan of the central zone of New Belgrade” fully followed the form for the national section of the International Working Group for “Documentation and Conservation of buildings, sites and neighborhoods of the MODern MOVement” - d o . c o , m o . m o _ . It was also formed as a Report to be submitted for selection, and to a large extent, due to all the developed criteria required in the Report, it influenced the thoroughness and rationality of the previous research on New Belgrade. The section concerning evaluation especially meant to single out the values of the urban whole, such as the central zone of New Belgrade, which we will see especially during the retrospective of our research in doctoral academic studies. The part “Summary of important changes after the completion of works” dealt with the types of changes with very precisely listed buildings that were built after the open blocks 21, 22, 23, 28, 29 and 30. Blocks 24, 25 and 26 were treated separately, because the regulation plan of New Belgrade from 1962, which was designed by arch. Uroš Martinović and arch. Milutin Glavički stopped serving as a base in the 1980s. The center of suburban significance, i.e. the monumental zone of the center of New Belgrade, was annulled by the construction of residential block 24. After the systematic documentation of spatial changes, there was a basis for further research of spatial phenomena concerning our everyday life.

- 5 We have published more detailed steps of the theoretical setting and research in doctoral academic studies, with a summary in which the drawing stands out as the basic methodological tool for reading the cityscape through articles: (1) “Phenomenon of Transparency: Cityscape Transformations Mapping,” in *Drawing Futures: Speculations in Contemporary Drawing for Art and Architecture*, eds. Laura Allen and Luke C. Pearson, pp. 269-271. (London: UCL Press and Bartlett School of Architecture, 2016), (2) Snežana Zlatković, “Phenomenon of Transparency: Cityscape Transformations Mapping Research Issues”. In *Serbian Architectural Journal*, pp. 295-308. (Belgrade: University of Belgrade, Faculty of Architecture with The Centre for Ethics, Law and Applied Philosophy, 2016), (3) Marija Milinković, Snežana Zlatković, “Behind the Glitch: Research by Digital Drawing in Contemporary Architectural Education”. In *Arhitektúra & Urbanizmus: Journal of Architectural and Town-Planning Theory*, pp. 198-209; (Bratislava: Historický ústav SAV, 2018).
- 6 Cullen, Gordon. *Gradski pejzaž*. Beograd: Građevinska knjiga, 1990, p. 28.
- 7 Ibid., p. 7.
- 8 Благојевић, Љиљана. *Нови Београд: оспорени модернизам*. Београд: Завод за уџбенике: Архитектонски факултет Универзитета у Београду: Завод за заштиту споменика, 2007, p. 248.
- 9 The derived conclusion on the overall approach to solving the urban plan, as well as architectural concepts was set after a detailed analysis of the documentation that can be found in the journals: *Urbanizam Beograda*, No. 25(1973), pp. 14-21, *Urbanizam Beograda*, No. 30 (1975), pp. 27-34, *Arhitektura urbanizam*, No. 74-77 (1976), pp. 51-53, 54-56, 57-59, and together with the already mentioned book *Нови Београд: оспорени модернизам* (Ljiljana Blagojević), as well as a book *Iskustva prošlosti* (Miloš Perović) issued in Belgrade by the Institute for Development Planning of the City of Belgrade (1985). An extension of the opinion can also be gained through the following: Бркић, Алексеј. *Знакови у камењу*. Београд: Савез архитектата Србије, 1992; Маневић, Зоран. *Лексикон српских архитектата XIX и XX века*. Београд: Грађевинска књига, 2000.
- 10 Благојевић, Љ. *Нови Београд: оспорени модернизам*, p. 247.
- 11 Ibid., p. 249.

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- 12 Petrović, Mina. "Istraživanje socijalnih aspekata urbanog susedstva: percepcija stručnjaka na Novom Beogradu." *Sociologija* No. 1 (2008), p. 62.
- 13 Благојевић, Љ. *Нови Београд: оспорени модернизам*, p. 251
- 14 The head of the elective course Architecture and Visual Language in the second year of doctoral academic studies at the University of Belgrade - Faculty of Architecture was Prof. Branko Pavić, MA.
- 15 During the competition for the book *Drawing Futures: Speculations in Contemporary Drawing for Art and Architecture*, it was necessary to choose one of the four mentioned categories within which the work is submitted. The Protocols category was assessed as the one that would best suit the developed research through drawing. The paper and drawings were selected and published: Snežana Zlatković, "Phenomenon of Transparency: Cityscape Transformations Mapping," in *Drawing Futures: Speculations in Contemporary Drawing for Art and Architecture*, eds. Laura Allen and Luke C. Pearson (London: UCL Press and Bartlett School of Architecture, 2016), 269-271.

 BIBLIOGRAPHY

- Allen, Laura., Pearson, Luke C., eds. *Drawing Futures: Speculations in Contemporary Drawing for Art and Architecture*, London: UCL Press and Bartlett School of Architecture, 2016.
- Благојевић, Љиљана. *Нови Београд: оспорени модернизам*. Београд: Завод за уџбенике: Архитектонски факултет Универзитета у Београду: Завод за заштиту споменика, 2007.
- Cullen, Gordon. *Gradski pejzaž*. Beograd: Građevinska knjiga, 1990.
- Han, Li., Yan, Hu. *A Little Bit of Beijing: Nan Luo Gu Xiang*. Shanghai: Tongji University Press, 2017.
- Han, Li., Yan, Hu. *A Little Bit of Beijing: San Li Tun*. Shanghai: Tongji University Press, 2018.
- Han, Li., Yan, Hu. *A Little Bit of Beijing: 798*. Shanghai: Tongji University Press, 2018.

- Hill, Jonathan. *Immaterial Architecture*. London: Routledge, 2016.
- Jacques, Herzog., de Meuron, Pierre. *Treacherous Transparencies: Thoughts and Observations Triggered by a Visit to Farnsworth House*. Chicago, New York: IITAC Press, Actar Publishers, 2016.
- Koolhaas, Rem., Foster, Hal. *Junkspace with Running Room*. London: Notting Hill Editions, 2013.
- Marija Milinković, Snežana Zlatković, "Behind the Glitch: Research by Digital Drawing in Contemporary Architectural Education". In *Architektúra & Urbanizmus: Journal of Architectural and Town-Planning Theory*, pp. 198-209; (Bratislava: Historický ústav SAV, 2018).
- Pallasma, Juhani. *The Embodied Image: Imagination and Imagery in Architecture*. Chichester: John Wiley & Sons, 2011.
- Petrović, Mina. "Istraživanje socijalnih aspekata urbanog susedstva: percepcija stručnjaka na Novom Beogradu." *Sociologija* No. 1 (2008).
- Snežana Zlatković, "Phenomenon of Transparency: Cityscape Transformations Mapping Research Issues". In *Serbian Architectural Journal*, pp. 295-308. (Belgrade: University of Belgrade, Faculty of Architecture with The Centre for Ethics, Law and Applied Philosophy, 2016).
- Virilio, Paul. "Predugo eksponirani grad". In *Teorija arhitekture i urbanizma*, eds. Petar Bojanić, Vladan Đokić, p. 290-299 (Beograd: Univerzitet u Beogradu, Arhitektonski fakultet, 2009).

RAZVOJ CRTEŽA KAO ALATA ZA ČITANJE GRADSKOG PEJZAŽA KROZ EKSPERIMENT NA BLOKU 30 NA NOVOM BEOGRADU

Snežana Zlatković

Osnovni cilj ovog rada je da ukaže na presečnu tačku u procesu građenja crteža kao metodološkog alata koja se desila tokom doktorskog istraživanja, kao i da prikaže dalji razvoj crtačkih eksperimenata u odnosu na prelomni trenutak za metodologiju. U prvom delu rada pokušaćemo da objasnimo zašto su predmet istraživanja transformacije gradskog pejzaža. Kroz kratku istorijsku analizu, ukazaćemo na osnovne karakteristike transformacija prostora bloka 30. Nakon toga ćemo ukrstiti crtež kao metodološki alat sa poligonom za eksperiment, odnosno sa blokom 30 i polako pristupiti prikazivanju koraka koji su se dešavali tokom rada na izbornom predmetu Arhitektura i vizuelni jezik. Izdvojeni eksperiment ima za cilj da osvetli obrt koji se u tom trenutku desio za samu metodologiju, ali i da dalekosežnije ukaže na potencijal građenja savremenog arhitektonskog crteža kroz slojevitost i spregu između različito pozicioniranih arhitektonskih alata. U poslednjim delovima, ispitivanjem kroz tekuće crtačke eksperimente iznova ćemo pomenuti obrt metodologije sa namerom da otkrijemo da li je upravo on omogućio da se i sama metodologija konstantno transformiše i da crtež iz svoje statične uloge pređe u dinamički razvoj alata. Na taj način crtež se osposobljava da se na višem nivou uključi i prati savremene tokove procesa projektovanja, kao i da se pomeri ka onome koji može da odgovori na brzinu i gustinu prostornih promena koje se dešavaju i da pruži inovativna znanja.

KLJUČNE REČI: CRTEŽ, METODOLOŠKI ALAT, EKSPERIMENT, TRANSFORMACIJA, NOVI BEOGRAD - BLOK 30

DEVELOPMENT OF DRAWING AS A TOOL FOR *READING* THE CITYSCAPE THROUGH THE EXPERIMENT ON BLOCK 30 IN NEW BELGRADE

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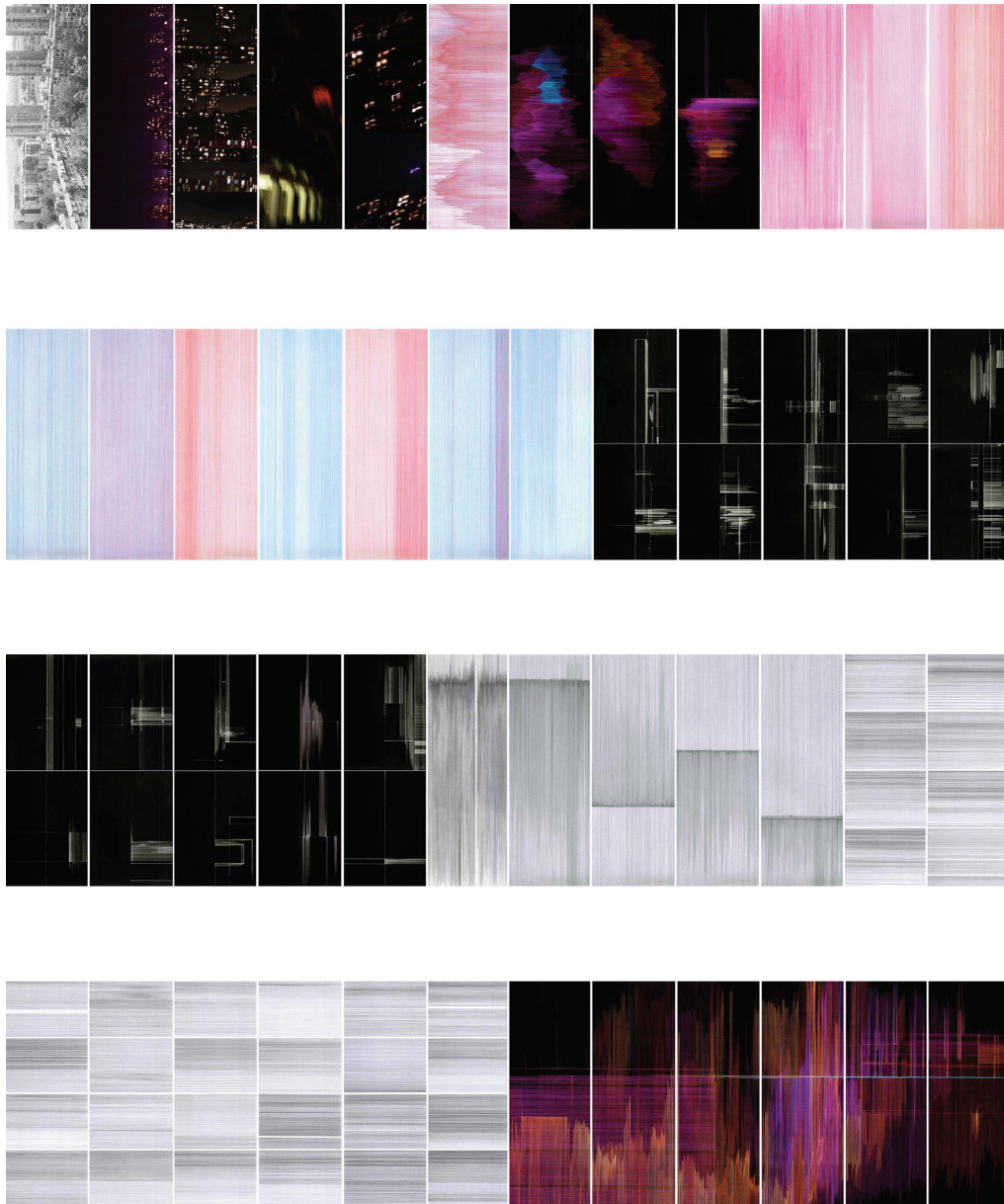
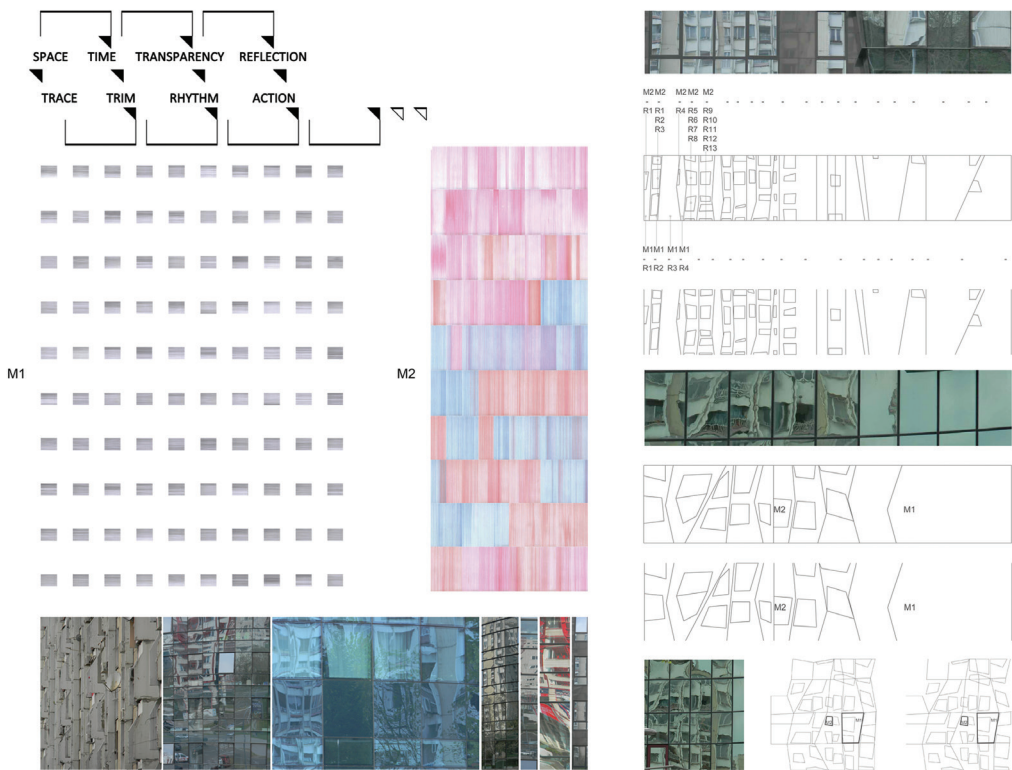


Fig. 1. Forming the Maps of Methodology



UP: Fig. 2. Fragments of Block 30 in New Belgrade - the phase of documenting through photography, 2015

DOWN: Fig. 3. Development and method of application of the Maps of Methodology on Block 30, 2015

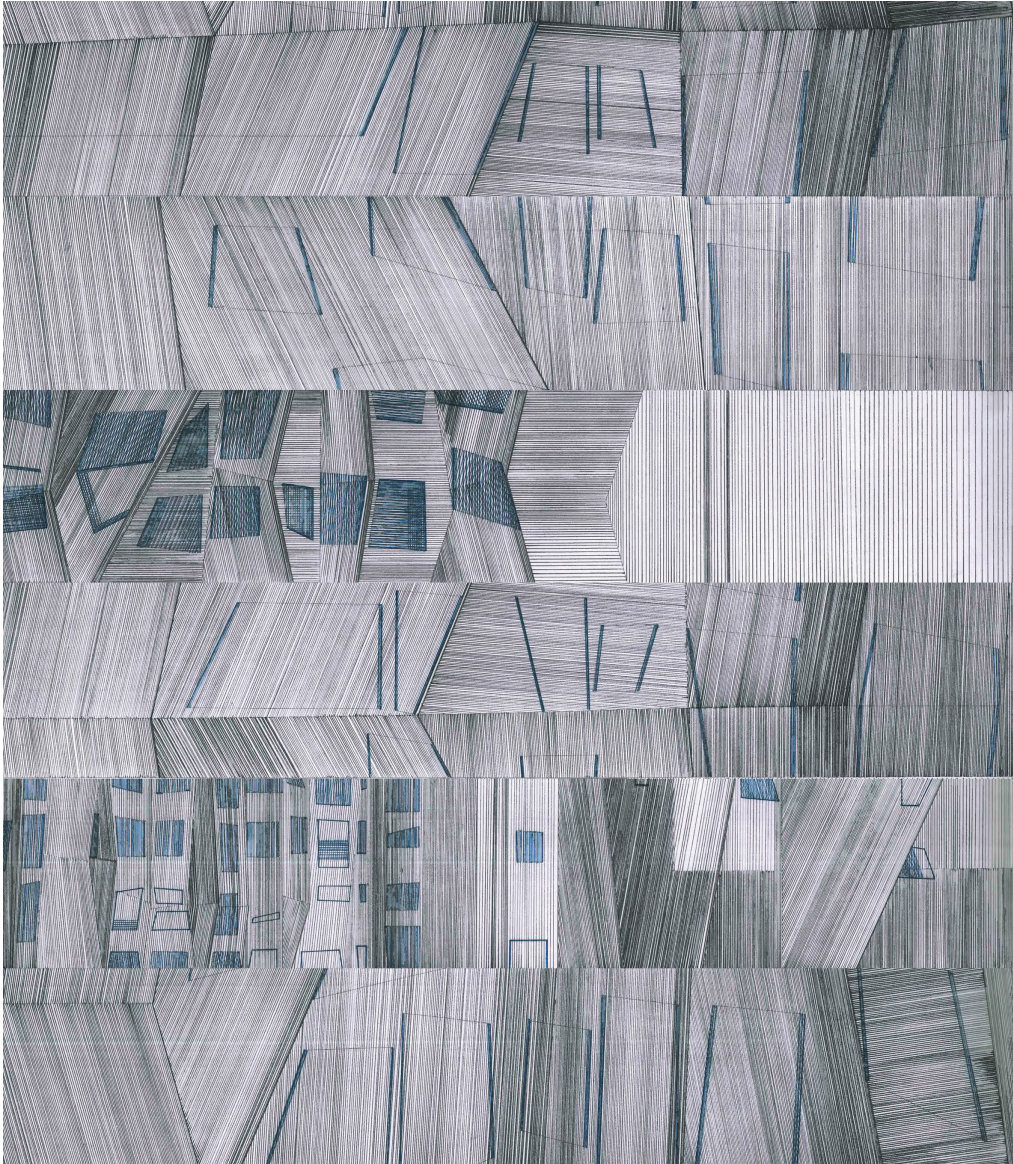
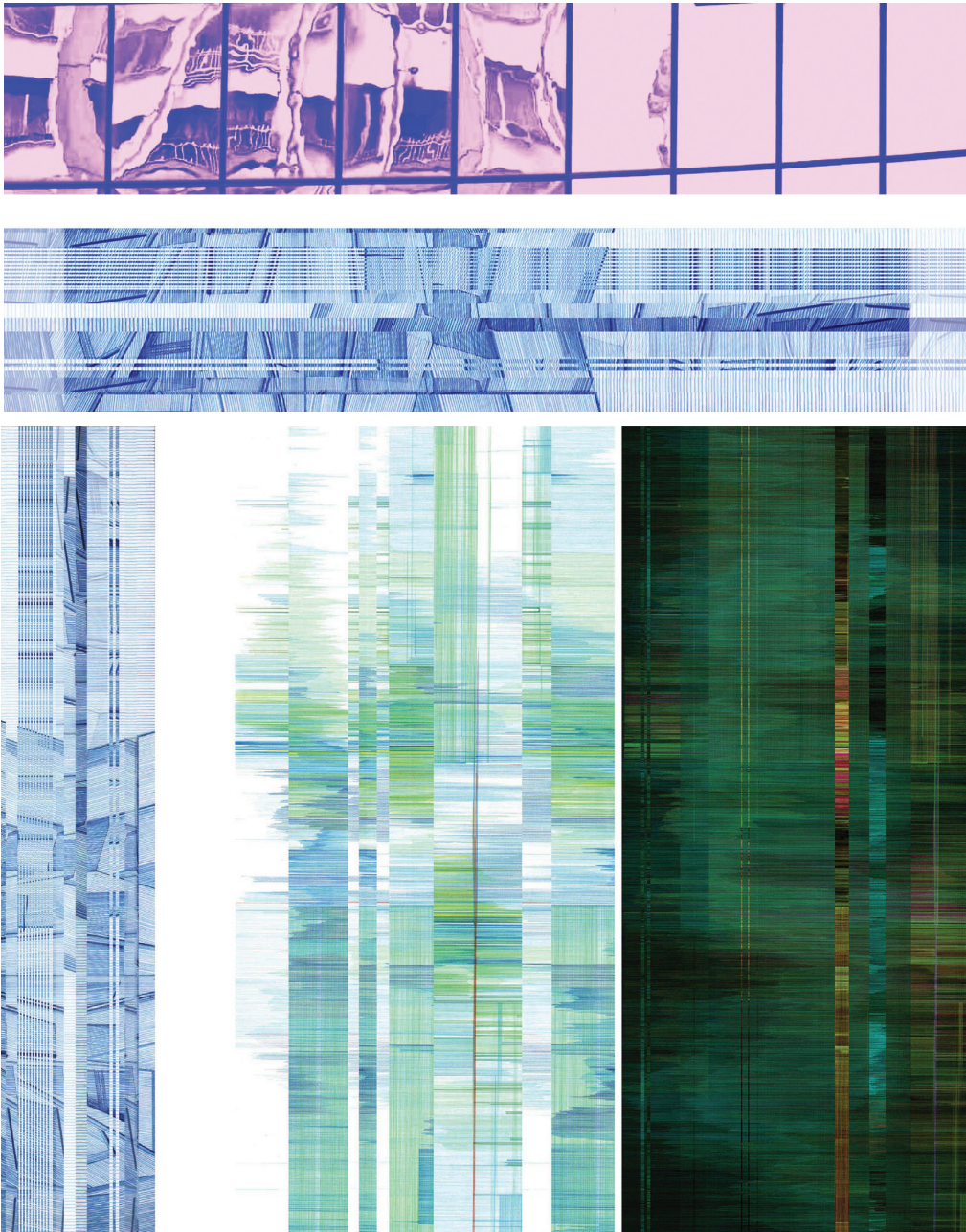


Fig. 4. Application of the Maps of Methodology on block 30 - first six samples, 2015



UP: Fig. 5. Application the Maps of Methodology on Block 30, 42cm x 150cm, 2015

DOWN: Fig. 6. Turn of drawing process - a collage of hand pencil drawings



Fig . 7 . Cityscape Transformation Habitation, Drawing of the Year, 2016

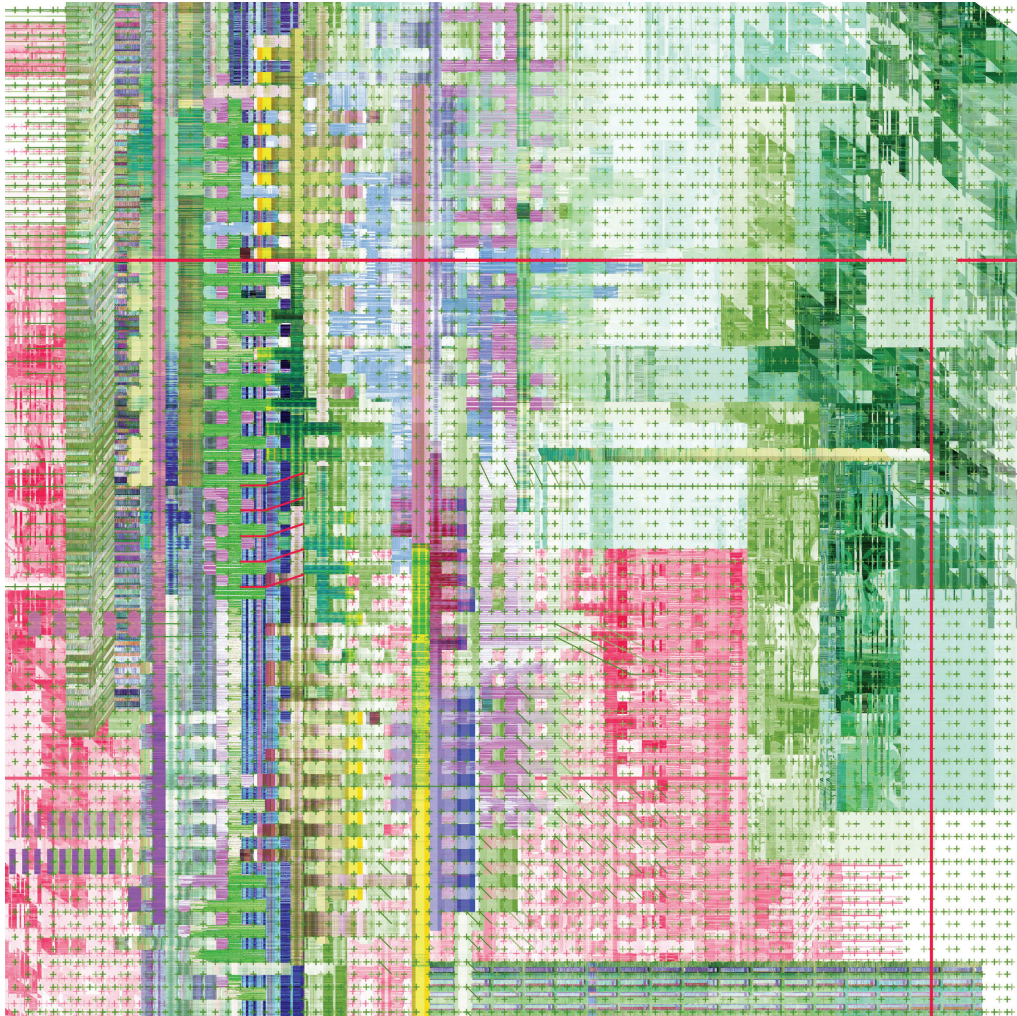


Fig. 8. Methodology variables - a new type of drawing transformation, 2019-2020

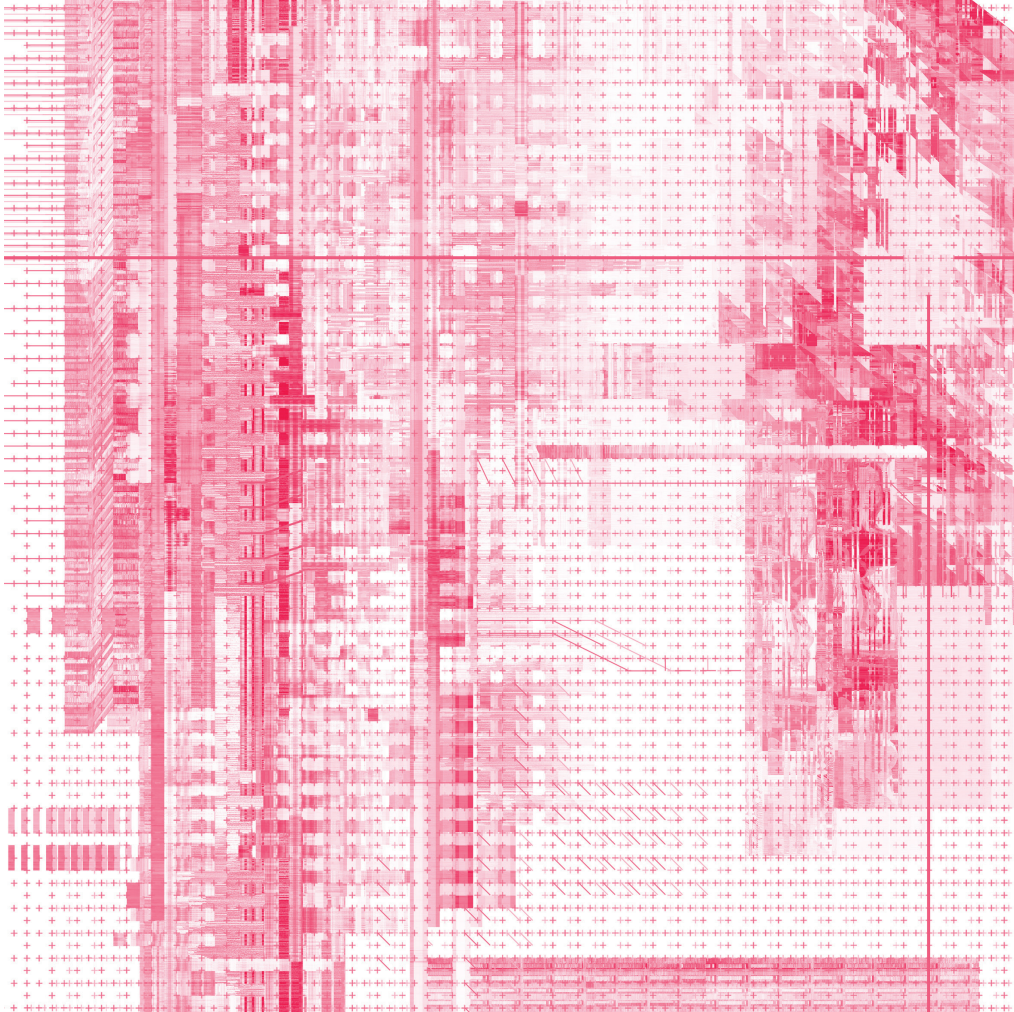


Fig. 9. Methodology variables - a new type of drawing transformation, 2019-2020

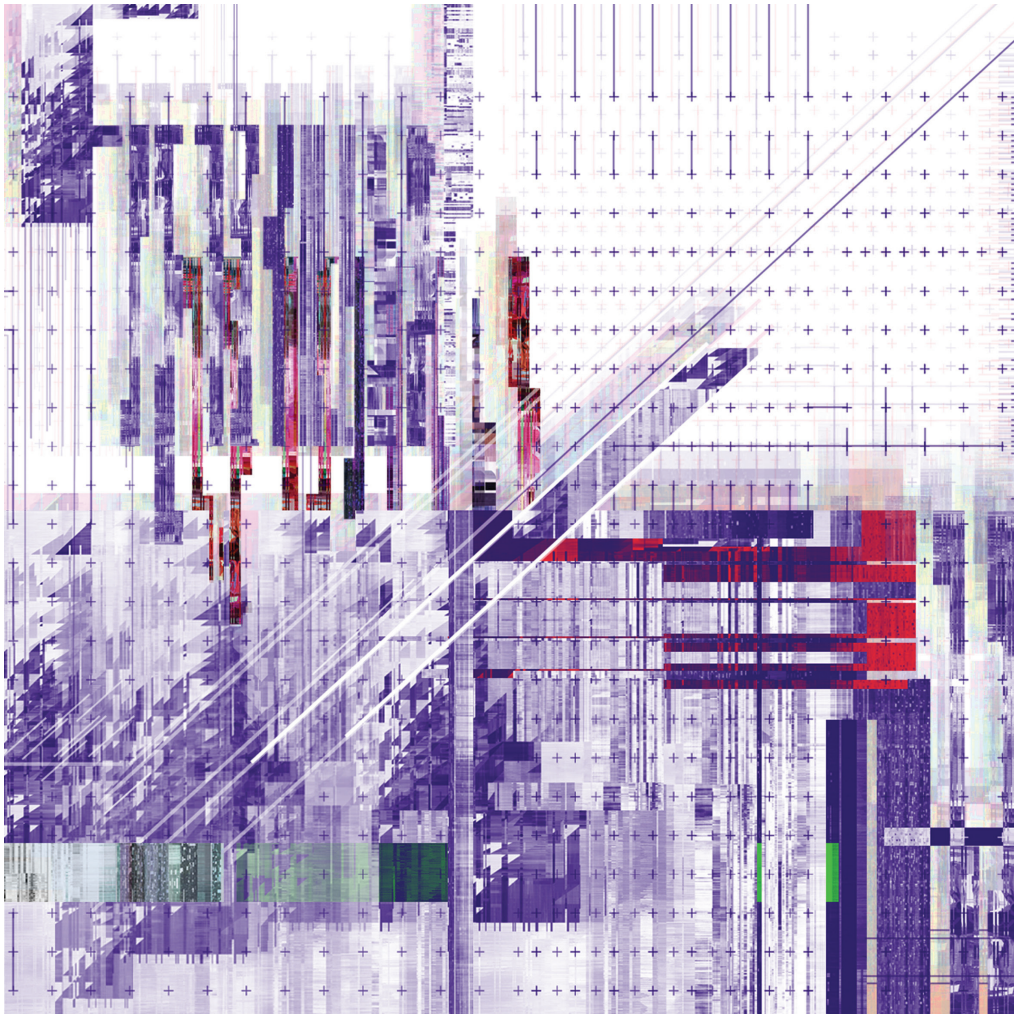


Fig. 10. Methodology variables - a new type of drawing transformation, 2019-2020