

Andreas Broeckmann  
and Gunalan Nadarajan (editors)

# **PLACE STUDIES IN ART, MEDIA, SCIENCE AND TECHNOLOGY**

Historical Investigations on the Sites and the Migration of Knowledge

VDC

# Stepanova's 'Laboratories'

Irina Aristarkhova

## Introduction

With the growing number of art and science collaborations, the question of what it is exactly that artists and scientists do, as well as where and why they do it, and how their modus operandi relates to the public at large, is being posed with a renewed sense of urgency'. One aspect of this development is the question of the locus of scientific or artistic work, usually identified as the studio in the case of an artist, and the laboratory in the case of a scientist. However, whereas art-science collaborations are not a new phenomenon, neither is the problematization of this 'labor division' between artists and scientists in studios or laboratories. This chapter examines one example of such an earlier problematization as presented in the work of Varvara Stepanova, with surrounding her cultural transformation conceptualized and led by A. Lunacharsky in Bolshevik Russia and later in the Union of the Soviet Socialist Republics in the early 1920s<sup>2</sup>. Her work encompasses various art forms, creative collaborations, and writings. After presenting these disparate endeavors in relation to Stepanova's 'laboratories', I present a current example of art-science collaboration through a critical examination of how the concept of laboratory was posited within, and especially as opposed to, the artist's studio.

## Stepanova's Post-Revolutionary 'Laboratories': Art as Work, Innovation and Experiment

Varvara Stepanova was born in Kaunas (Kovno), Lithuania, then a part of the Russian empire, in 1894. She moved to the city of Kazan where she studied at a local art school, and then relocated to Moscow before ending her studies. She was 23 when the Bolshevik Revolution took place in Russia in 1917. By 1920, she was involved in many of the new governmental and professional organizations that were working towards a 'new art culture' and whose members would later become known as the Russian/Soviet avant-garde: Udal'tsova, Malevich, Rosanova, Meyerhold, Mayakovsky, Eisenstein, Popova, Gan, Rodchenko (Stepanova's life-time partner), Tatlin, and others. She was a Scientific Secretary of the Institute of Artistic Culture (and a member of the Institute's "Objective Analysis" and "Constructivist" groups); a board member of the visual arts section of the Union of Art Workers; vice-director of the literary-artistic sector of the Visual Arts Department of the Narkompros (loosely translated as the first People's Commission / Ministry of Culture and Education, headed by A. Lunacharsky). She was also a faculty member of the visual arts studio in the Academy of Communist Education named after N.K. Krupskaya for five years, between 1920 and 1925. In addition to that, she was a full-time editorial board member for the famous avant-garde publication LEF and later New LEF art journals (1923–1927). In 1924 she became a professor of the textile department at the Highest Art-Technical Workshops (VKhUTEMAS). Between 1924 and 1925 Stepanova (along with Lyubov' Popova) worked at the 1<sup>st</sup> Cotton-printing Factory (former Zindel factory). In 1925 she was a participant in the legendary Soviet Pavilion at the International Fair in Applied and Industrial Arts in Paris, with work submitted into the disparate sections of theatre, textile, publishing and graphic design, and hence probably the most 'interdisciplinary' artist in attendance.

Stepanova's catalogue essays and lectures show her complex and changing relationship to the notion of the artist and art in the first few years following the Bolshevik revolution of 1917. It becomes clear that claims to 'utilitarianism' and 'technicism' in art were exaggerated on the part of Stepanova and her colleagues in constructivism in order to, on the one hand, respond to governmental pressures to re-invent art as labor and make it relevant to the working class and the industry; and on the other hand, respond to the modernist art coming from romantic, mystical, religious and 'art for art's sake' positions held by the majority of her contemporaries.

Thus, the idea of the artist as inventor in Stepanova's work reveals her insistence on the "unpredictable" and "unintelligible" quality of creative practice, both in art and in science. She calls this "wonder" – as in the "unknown"<sup>3</sup> – in one of her early texts from the year 1920. Many of the ideas that she developed in this text would

migrate (in modified form) into her later writing and artistic projects. This untitled text starts with a quotation from Camille Flammarion (1842–1925) that relates to the problem that many innovations and innovators face, i.e. rejection: “At one point in time, practically everything that is now a part of the positive sciences was rejected.” (Stepanova, 1994: 56). But unlike the positivist standpoint of Flammarion (who believed that anything mysterious or unknown could be analyzed and explained by the scientific method, therefore for him spiritualism was science), Stepanova does not believe in the total power of the scientific method. On the contrary, she insists that the sciences too rely on the unknown for their progress: “A person cannot live without wonder. He lives his life fully when he invents, discovers, experiments, following his human nature... Precise knowledge does not create an inventor, who realizes his work [proizvedenie], invention, and the unintelligible, by the force of his imagination and technical skills... Only after the fact does the scientist discover the laws behind his invention, producing his explanation. The painter today knows no limit to his desire to comprehend and master the technique of painting. He targets the essence of painting. He starts knowing his mastery. True, when compared to the future, these are only first attempts. However, that serious and attentive attitude that he manifests towards his work today, gives us hope that a lot [about painting] will be discovered in the near future.” (Stepanova, 1994:56–57). The Russian word for ‘experiment’ is the same as the word ‘experience’ – *opyt*. Soviet avant-garde artists used this double meaning of ‘opyt’ when arguing for an affinity between scientific and artistic experimentation.

Simultaneously with arguing for inventions in painting, painters were joined by many non-painters and even non-artists (“Experimental-Spatial Group” members such as the Stenberg brothers, Medunetsky, Gan, were from industry), supported by the new governmental cultural institutions with an aim to invent ‘new art’. In the entry to her diary on March 5, 1920, Stepanova discusses the future synthesis of various art forms, arguing that unlike sculptors, painters are more flexible with media and inclusive of those who strive to invent new ways of creating. She argues that experimentation and research in the visual arts have the potential to discover new ways of organizing life as a whole, and not just to be placed in a museum (thus overcoming the Western canon<sup>4</sup>): “Russian art – it is the street, the square, the city and the whole world... Visual art making will discover new opportunities, will synthesize with other art forms, and we can expect from it to achieve that yet unknown and yet incomprehensible synthesis of art that should overcome the professional [disciplinary I.A.] boundaries of all arts.” (Stepanova, 1994:106–107). These inventions are in jeopardy from the limited support that the visual arts have, Stepanova complains, compared to other art forms such as literature, theatre or music. In addition, they are in jeopardy from the majority of artists themselves, who reject such inventions as non-art (*ibid*, p. 106).

Seeing the changing nature of the 'art work' as the essential quality of the 'new art', which could be enabled by the revolution, the supporters used the scientific language of invention to call on artists to change their practice and place in society:

"Artistic culture, as a culture of invention, can only reveal itself in so far as artists either completely change their relationship to the elements of artistic process or change these elements themselves." ("The Art of the Commune #11, 16-II 1919", cited in Matsa, 1933:63–64).

The notion of the laboratory was used widely, from the narrow sense of the 'scientific' laboratory setting (as in 'chemical laboratory', such as in the textile factory where Stepanova worked), to more experimental usages of laboratory in art and life. Thus, according to Stepanova, it was Franketti who in 1920 charged Rodchenko's art works with going well beyond the concept of 'laboratory experiments' in a narrow sense, through entering public space as a laboratory (Stepanova, 1994:142). This was consistent with Rodchenko's wider definition of an 'experiment', not limited by a laboratory as a room for an experiment; for example, the same year Rodchenko (1920/1991) published an essay entitled "Everything is Experiment/Experience" where, just like Stepanova, he argues for the definition of art as the organization of life, as an experiment in the form of 'new life' on a scale of a city or a country.

### Laboratory as Collaborative Practice

Stepanova, similar to her colleagues in the Proletkult (Proletarian Culture) movement, rejects the individualist approach to art making, insisting on the collective quality of art production: "He, who thinks that he knows subjectively, based on his own individual learning process, does not comprehend the component of collective creativity of individuals through working in a group". (Stepanova, 1994:169) I argue that this was another step in expanding the laboratory principle of artistic work, which is usually understood as collective research, as opposed to a studio, where the creative onus rests on the individual. Here, Stepanova makes an assertion that was only to be acknowledged much later in the 20<sup>th</sup> century, namely, that the work of art, even if made by an individual artist, is not an individual achievement, but a collective work. In this sense, she is not opposing an artist's studio to a laboratory practice, but is actually arguing that artists have always worked collectively. Stepanova undermines the notion of an individual genius struck by a lightning bolt of sacred knowledge as a myth of an artists' guild to keep their production processes away from the "consumers" of art, the public.

The concept of laboratory could also be widened in order to step outside of its limited walls not so much to extrapolate the 'scientific method' to society, but to embrace a particular ethos of work as a collaborative, experimental and not necessarily teleological activity. In this sense, Stepanova's various work processes allowed her to expand both the concept of art as confined to a studio, and the concept of an avant-garde artist as an individual(istic) rebel. Without reducing art to a pure formal or technological procedure through her emphasis on 'wonder' and 'unpredictability', Stepanova managed to sustain her creative and social practice innovatively, never completely abandoning the technological or traditional part of artistic work. It could also be noted that the Russian equivalent of an artist's studio – *masterskaya* (the workshop) – interestingly resists the neat separation between a studio and a laboratory, as well as between art and labor, while placing stronger emphasis on the 'master' in the old-fashioned meaning of a 'guild master'. To work in a collective, anonymously, is one way through which an artist can change 'old' ideas about art as a special, sacred and genius-centered activity: "Out of this situation of continuing deceit, an artist, following the path of the least resistance, when he finally opens his work for display, makes us believe in [his sacred knowledge], while actually substituting history with science." (ibid., 142). It would seem that what Stepanova is attempting to say is that what we consider to be the special, sacred skills of artists in representation, so far has often simply been the lack of communication on how working on a particular project is done. Moreover, it is a kind of trick of the trade, an old entertainment technique of an illusionist transformed into the sacredness of the sublime. And when the trick is revealed, the artist is "naked", stripped of his illusionist representational role (be it an illusion of reality or of sacredness). In this sense, the technological, medical, scientific or artistic are not far apart, since each is trying to preserve the secrets of their trade to achieve a desirable effect of "secret knowledge" (ibid., 142).<sup>5</sup>

The notion of the laboratory in its original sense, as a place of labor, suited Stepanova in her deconstruction of the "finished product" of art. Therefore, the art process becomes a 'non-doing' of sorts, as well as a kind of play, or an experimental collective game. The fact that one creates collectively was very much at the core of Stepanova's theory and practice, especially exemplified in her work as a professor (when she insists that working in a laboratory setting one should move away from making students into "little Stepanovas", like in the studio or an artisan art school tradition), as well as in her work in both a laboratory theatre and a textile factory.

Government, through the figure of Lunacharsky, initially promoted radically new ideas for the arts, and supported innovative artists through providing them with studios and places to live, purchasing their works for a newly established Contemporary Art Museum and organizing art exhibitions, conferences, and

educational and research institutes. These principles were summarized by Meyerhold (an avant-garde theatre director who was also given important positions within the cultural institutions in the first few years after the revolution). First, he argued, that “under communism, labor should become the labor of joy, and art should become art-labor”. Second, that tradition should be understood as “a living past from which only those elements that are important for the current moment should be taken aboard”. Third, there is no one approach that can work in the current moment of art making: “probably the masses will create their own artistic culture of art and therefore art education should be sensitive to that.” And finally, “the proletariat should destroy the sharp distinction that has existed so far as a class opposition between life and art.” (Meyerhold, cited in Matsa, 1933:76).

Stepanova clearly supported the new definition of art as work, and artists as “workers of artistic labor” [*trudyaschiesya khudozhestvennogo truda*], the concept that later in the Soviet period was transformed into the expression “makers of culture and art” [*deyadeli kul'tury i iskusstva*]. These new figurations of what artists could become in this new order were meant as alternatives to the old definitions of art as a private or public decorum, supported by the Kantian aesthetics of ‘sublime’ experience of ‘beauty’. Furthermore, Stepanova opposed the mysticism and ‘sacredness’ of art that made it an obscure activity and that targeted a particular audience. Rather, “an art work becomes an experiential laboratory and an experiment. Development of industry and technology deconstructed the notion of beauty coming from nature. Invention of new apparatuses and devices that are not connected to any natural form and do not aim at overcoming nature, enable us to make art based on the concept of the ‘artificial in an art work’... The issue of mastery does come up in a situation of art for art’s sake. ... However, the complexity of contemporary culture is such that the position of art as a separate activity is being questioned.” There is a need to reject art, according to Stepanova, “as an aesthetic activity based on specialized art production, to resist its role as a maker of world aesthetics.” (Stepanova, 1994:167). In contemporary society, art is characterized more by temporality and transience, than by eternal notions of beauty, argues Stepanova. Therefore, Stepanova makes ‘temporal’, ‘situated’ art through her stage design and laboratory theatre work. The process is more important since style is not a fixed term anymore, and industrial culture leads to a speeding up of reproduction of old styles and an invention of new styles: “Science and art are not different where the laboring of intellectual and technical production is concerned.” (*ibid.*, p. 170). This content of labor is the same in both cases, argues Stepanova, especially when art is capable of moving beyond representation and mimicry, but is focused on ‘making’ something, which is a characteristic of her new art (theatre furniture, clothing design, factory work). An aesthetic of clothing now gives way to revealing how this clothing is made: through

apparent stitching and places of folds, as well as accentuating the movements of the body. It is also now revealing what a person does, as it becomes production clothing, a uniform, and so on.

Thus, during her factory work and her collaboration with Popova at the former Zindel textile factory, Stepanova understands the difficulty of suspending old definitions of art and its *modus operandi*. An entry in Stepanova's diary on March 10, 1922, reads: "It's not easy to agitate for Constructivism, but it's even harder to really reject art to begin working on production." When discussing their future work at the factory, Stepanova and Popova wrote their famous memo for the management. It reveals the scope of their ambition, suggesting that artists could take on various tasks in production, such as organization, supervision, and research. Stepanova and Popova demanded:

1. "To participate in the work of [various] production units, to work closely with, or to direct, the artistic side of things, with the right to vote on production plans and models, design acquisitions and to recruit colleagues for artistic work.
2. To participate in the chemistry laboratory as observers of the coloration process...
3. To produce designs for block-printed fabrics, at our request or suggestion. [Stepanova is referring to the artists' ability to request changes in the range of goods produced and her right to propose the release of experimental and industrial designs specifically geared to factory production. I.A.]
4. To establish contact with the sewing workshops, fashion ateliers and journals.
5. To undertake promotional jobs [agitwork] for the factory through the press and magazine advertisements. At the same time we may also contribute designs for store windows." (cited in Lavrentiev, 1988).

These five points show that the principles of this proposed plan of action were sufficiently broad to be applied to any concrete area of production. Despite the small number of designs that were actually produced (20 out of 150), the influence of Popova's and Stepanova's work on the renovation of textile design at the first Textile Printing factory, was significant: "voile and prints have not just become artistically acceptable, they have reached the level of real art, and have brought the rich colors and intense ornament of contemporary art to the cities of our immense Republic," the critic D. Aranovich stated in 1926. Clearly, it could be seen as one of the examples of a larger desire on a part of these artists to participate in changing the material conditions of everyday life, and not simply as an exercise in 'moving construction into production'.

Stepanova, following Lubov' Popova, demonstrated a collaborative character in her expanded laboratory practice. One could argue that this was as much a 'production'

as it was a laboratory of theatre when she collaborated with Meyerhold, Eisenstein and others to produce the play "The Death of Tarelkin" in 1922. She conceptualized and made not only mobile furniture, but was also responsible for the costume design, which she approached as an experiment in collective art. "A Conversation with V.F. Stepanova" on a set design of "The Death of Tarelkin" reveals that she understood the problems surrounding individualism in art as one of the main obstacles to a real transformation of 'old' into 'new' art making.

While Popova's designs in earlier productions were static – what Stepanova calls a 'decorative' failure of theatre production in relation to set design – Stepanova's objects were, in contradistinction, supposed to be part of the play as moving and dynamic, one more "material" of the action. She calls her objects "apparatuses", "tools of stage production", and not stage decoration/design. Interestingly, she names Meyerhold's and others' inability to work collaboratively as the main reason why she could not show the full potential of her clothing and stage designs. Stepanova is clear in her charge that Meyerhold and his actors were not capable of suspending the individualistic character of traditional theatre where acting and directing is supposed to represent a large portion of the personal and subjective input. Here Stepanova, in a very interesting critique of Meyerhold's directing style, notices how his interpretation of "biomechanics" was problematized by his highly authoritarian and even tyrannical style of working. For individual actors it was also difficult not to "show themselves off" and concentrate on the overall effect of their bodies moving in space just as one more object. Stepanova calls this "acting through oneself and from oneself", irrelevant to a material context of their acting. In this case, her set production was meant to be much more of an overall experience, but was undermined by actors who did not engage with it. If actors do not engage with such actively constructed objects, they become separated from them and automatically "fall dead". Or, in her own words, "they are dead without a working productive connection, and as a result, they become decorative simulation." (Stepanova, 1994:175–176). One of her most successful collaborative works in the early 1920s could be considered "The Book Evening" – a performance and public event – where she played a key organizing role. A report on this event lists multiple strategies that Stepanova employed experimenting with materials and spaces where the event occurred so as to produce maximum effect on her audience: poetry, stage design, what today would be considered performance art and community organizing, and so forth (Stepanova, 1924:19–21). It is not possible here to list in detail her pedagogical experiments, but it is important to mention that as early as in 1923 she asked her students to keep a "diary-notebook" as a method of training them to become attentive to everyday life when working on new clothing designs. What Stepanova was trying to do in her pedagogy is not an isolated case, nor a method of her individual taste. The strategy of including what today could

be called "new media" into teaching art and framing it within the concept of the laboratory went hand in hand with the governmental push to transform the concept of work as such. One could even argue that the environment filled with devices, machines and technology, such as in a workshop and laboratory, helped to ease working class, hands-on students into 'high' art. Inevitably, they would have been more intimidated by the atmosphere of a painting studio with its "nude models" and "museum-like reproductions"<sup>6</sup>.

### Contemporary Art Laboratory

The concept of 'laboratory' has been defined progressively narrower throughout the 20<sup>th</sup> century, especially in relation to art. And while collaborations between art and technology, artists and scientists, become more numerous, these terms seem to be pulled apart just at the moment they are brought together. Thus, if in his 1965 publication "The Theory of the Avant-Garde", the influential, though today somewhat unfashionable Renato Poggioli cites *experimentalism* as one of the primary characteristics of avant-garde art, in contemporary examples such as "Artists-in-Labs" (Jill Scott, 2006) and "Laboratorium" (H.U. Obrist, 2001) artists seem to be positioned within the studio while scientists within the laboratory. However, Poggioli renders experimentalism exclusively in technical and formal terms, unlike Stepanova, Scott, Obrist, and Latour, who will be discussed further.

Already in Poggioli we see the obliteration of Stepanova's insistence that art should become an experiment, a kind of laboratory work. Poggioli sees it as a clever technique, more of a social endeavor to make "avant-garde" art. According to Poggioli, "experimentation is at once a stepping stone to something else and is gratuitous; if one looks closely, it is, when not harmful, useless or extraneous to art itself. But socially it is a very interesting fact, since it tends not so much to form the artist as to transform the public, that is, to educate it." (Poggioli, 1965:136). Thus, when exposed to merely formal experimentation in form (he gives the example of experimental theatre), the public serves as a kind of transmitter of formal experimentation to future generations of authors, who will digest the formal elements and rework them for other avant-gardes. Moreover, experimentation is understood in the technical sense that Stepanova and others around her were trying to transform. For Poggioli, the work that results from it is not a finished work for display in the traditional sense, but rather, serves as a stepping stone to future innovations, it is a process of testing things out, like in the narrowly defined scientific laboratory of 1960s Italy. "Laboratory" and "testing ground", writes Poggioli, "these are phrases suggested by the scientific and industrial technology of our time, and it would perhaps be wrong to regard

them as metaphors, pure and simple. They reveal above all the concept of artistic practice, which differs radically from the classical, traditional, and the academic. The laboratory and the testing ground doubtless serve to train the artist: that is, they aim toward his perfection as an artist, which is profoundly different from the goal of a school, which is the perfection of the school itself. The laboratory and testing ground serve, in the second place (perhaps it is really the first place), an even higher aim: the technical and scientific progress of art itself.... Experimentalism, so conceived, results in the contradiction or negation of the purely aesthetic end of the work of art." (Poggioli, 1965:136). It does so, according to Poggioli, because its experimentation is focused on the process, and an art work is always in transition towards becoming something else, while creation is focused on aesthetic perfection towards an end result. However, he resolves this contradiction temporally: "experiment precedes creation; creation annuls and absorbs experimentation within itself. Experiment fuses into creation, not creation into experiment... Creation resolves experiment, or transcends it: the experimentation that is not, as such, annulled, tends to remain not only *ante-* but *anti-*creation." (ibid., 137)

With time, this narrow definition of the 'laboratory' as an exclusively scientific place for experimentation and innovation, has been strengthened. While acknowledging the need for changing scientific and artistic ways of working as historically and fundamentally separate, current projects, especially in the West, that bring artists and scientists together, or that target the 'education' of the public with regards to 'scientific' or 'artistic' methods, re-create, I argue, 'pre-Stepanova' views on art. On the one hand, seeing the 'laboratory' exclusively as a work place of a scientist, or the 'studio' exclusively as a work place of an artist, and on the other hand, 'the public', as a separate entity from the work that takes place within a laboratory and a studio, tends to re-create a pre-Revolutionary approach to art and science in terms of their place in society and way of working.

To illustrate my point about this assumed separation between art practice, laboratory practice, and public space, that was challenged by Stepanova and others in the 1920s, I present here the curatorial statement from an ambitious recent project titled "Laboratorium":

"Laboratorium is an interdisciplinary project in which the scientific laboratory and the artist's studio are explored on the basis of their various concepts within the different disciplines. How can we attempt to bridge the gap between the specialized vocabulary of science, art and the general interest of the audience, between the expertise of skilled practitioners and the concerns and preconceptions of the interested audience?"

Laboratorium will search the limits and possibilities of the places where knowledge and culture are made. Throughout the summer we will establish within the city of Antwerpen networks, fluctuating between highly specialized work by scientists, artists, dancers, and writers. 'Working places' where the participants communicate their findings on the 'work in progress'. Also the scientific laboratories in Antwerpen will be involved in the initiative.

Laboratorium started as a discussion that involves questions such as: What is the meaning of laboratories? What is the meaning of experiments? When do experiments become public and when does the result of an experiment reach public consensus? Is rendering public what happens inside the laboratory of the scientist and the studio of the artist a contradiction in terms? These and other questions are being offered in this interdisciplinary project that starts with the 'workplace' where the artists and the scientists experiment and work freely." (Obrist, 2001:17)

Bruno Latour, a well-known researcher into the 'laboratory' as a scientific-cultural framing and phenomenon, summarized this contemporary dichotomy in relation to the art-science nexus in his text for the above-presented publication. For Latour, turning this dichotomy into collaborative practice with the public, as well as expanding the concept of a laboratory, still lies in the future that will have to challenge a particular economic order. His words echo many ideas of Stepanova and her colleagues, especially in terms of the way in which 'art' and 'science' could be connected through 'work' and 'labor', through their *modus operandi*:

"The relation between scientists and artists is no longer for the second group to take up what is left once the first has swallowed reality in its entirety. Instead, they have to compete in demonstrating how much locality, particularity, multiplicity, how many realities and naturalities can be elicited through practice. What used to be impossible when the comparison between art and science was made with the results of their respective works now becomes possible when one connects them through their *modus operandi*. With the reign of mononaturalism, there was not much the artists could do but contest it. With the coming multinaturalism, they can be back at work on the same realities as scientists." (Latour, 2001:185-187).

## Conclusion

Within art historical literature there is a reference to a 'laboratory work' and sometimes to a 'laboratory period' within Russian Constructivism<sup>7</sup>. This chapter has tried to show that we can also propose a wider understanding of 'laboratory' in the work of Varvara Stepanova, a major figure in that group, if we widen the notion of 'art' as 'work', as it was articulated in the early years of Soviet rule. Laboratory, in Stepanova's

work, is not only a metaphor, borrowed from scientific vocabulary, but an attempt to challenge the notion of the separateness of what artists and workers actually do.

I would argue that her insights and practice are particularly relevant for us today, when artists struggle to define their position in relation to new technologies, the scientific spaces they inhabit, as well as social responsibilities. I have tried to show that the question of laboratory, experimentation, work and product / production, are not simply about 'artists entering technological and scientific spaces', working with engineers or in factory laboratories. Nor do these cross-pollinations constitute a mere moment in political history when artists were forced to respond to the revolution and when, as many have written, 'everything has become one large experiment'. For Lunacharsky, Stepanova, and others at the time, working on an art product [*rabota nad proizvedeniem*] was fundamentally revealing something about art, as well as about technology, namely what is produced when it is produced, what is work and labor for an artist, and what artists actually do in terms of collective production when they make art. For Stepanova and her colleagues, it meant to question art first as representation, then as technology, i.e. the medium of painting itself, and finally, question it as an activity, as to what it actually does vis-à-vis other modes of human activity in a given society.

Varvara Stepanova's range of creative production is as wide as any contemporary artist could claim. She was not as 'embarrassed' as some of her colleagues and friends to carry out creative tasks that would be considered "non-traditional"<sup>8</sup>. Though it could be suggested that Stepanova's rather unconvincing trials with painting led her to experiment with other materials and art forms, and to question the modernist notion of the artist as 'selfish individualist'<sup>9</sup>, her writings on, and pioneering work in, theatre production, graphic design, clothing and textile production, and art education, point to a long-term commitment to 'new art' as inventing new forms of life. A great deal of invaluable historical research has been carried out on the terms and conditions that surrounded Stepanova's artistic practice such as 'constructivism', 'art production', 'new everyday life (*byt'*)'<sup>10</sup> and their interpretation for the Western (in particular, the American) art reader.<sup>11</sup> In addition to that literature, Stepanova's specific ideas on, and experiences with, the 'laboratory' as an inquiry into the artistic (and therefore, scientific) *modus operandi*, place and nature of work, and what constitutes *labor* in art, have been presented here, and might prove useful when conceptualizing future projects for "artists-in-labs".

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A version of this text was presented in Berlin at the "re:place" Conference, November 2007. I would like to thank the School of Visual Arts and the Office of Research, Pennsylvania State University, for their financial support that allowed me to travel to Berlin. I am also grateful to colleagues who com-

mented on the drafts of this chapter and/or provided critical feedback after my presentation, among them: Edward Shanken, Faith Wilding, Oliver Grau, Gunalan Nadarajan, Andreas Broeckmann, and Machiko Kusahara, and the other panelists Olga Goriunova, Margareta Tillberg, and Margarete Vochringer for their feedback and fruitful discussion.

### Endnotes

- 1 Two examples that are central for this chapter are: Hans Ulbrich Obrist's project "Laboratorium" (see Obrist, et al., 2001), and Jills Scott's "Artists-in-Labs" project (Scott, 2006).
- 2 A detailed discussion on Bolshevik and early Soviet attitudes to labor and work lies outside of the scope of this study, though some elements of this discussion will be presented in the later part of this chapter in how they relate to art as work and labor. For more information in English, see the extensive and important studies by Kendall E. Bailes, for example his article "Alexei Gastev and the Soviet Controversy over Taylorism: 1918–1924" (K.E. Bailes, 1977).
- 3 The Russian word that Stepanova is using – *chudo* – could be translated in various ways, and it is the same as the word "miracle". I am translating it here as 'wonder' following the pan- and extra-religious meaning that Stepanova is striving towards, as in the phrase «seven wonders of the world», for which 'chudo' is used in Russian (*sem' chudes sveta*). I am also seeking connections to our current discussions of the place of the unknown and wonderous in the relation between artists and scientists, both in a laboratory setting and beyond.
- 4 On Stepanova's (and the Russian avant-garde's) questioning of the traditional museum, see M. Gough's thought-provoking paper "Futurist Museology" (Gough, 2003).
- 5 Stepanova, committed to rethinking artistic processes, clearly questions the modernist paradigm of the artist-genius, working alone in his studio like in some kind of alchemic laboratory. It was expressed succinctly by Linda Nochlin in her seminal essay: "What is stressed in all these stories is the apparently miraculous, non-determined, and asocial nature of artistic achievement; this semi-religious conception of the artist's role is elevated to hagiography in the nineteenth century, when art historians, critics, and, not least, some of the artists themselves tended to elevate the making of art into a substitute religion, the last bulwark of higher values in a materialistic world." (Nochlin, 1988:158). Bruno Latour, comparable to Stepanova's formulation, goes further in the double problematization of this modernist notion of an artist and a scientist through their individual work within spaces of studio and laboratory: "The very idea of an avant-garde, autonomous esoteric artist, free to raise his or her own technical puzzles, unfettered by social demands and the opposition of Philistines – to what extent does this ethos depend on the model of the scientist? Two dreams of total autonomy and utter technicity, the absolute right to become esoteric, the referral to peer judgment against that of the public – how much do they have in common, no matter that one is working in a lab and the other in a studio? There isn't a single feature of the arts not drawn in contrast to or in imitation of those of science. Change the view of science, and the arts are bound to change as well." (Latour, 2001:186). Our question, then, is if this works the other way too: whether Stepanova, Lunacharsky and others, when changing the modernist view of art, especially positioned in relation to laboratory processes, also changed the view on science.
- 6 There were heated discussions on what are the best ways to involve working class students into art making. Many insisted that "if these art studios are to become a laboratory" of the truly new proletarian culture, "they should only accommodate the worker-student in this last sense [based on the worker's role in production]" (Matsa, 1933:50–51).

- 7 For example, Christina Lodder, in her groundbreaking book "Russian Constructivism" writes: "The Constructivists used the term 'laboratory work' to describe formal investigation, usually in three dimensions but sometimes in two, which was undertaken not as an end itself, nor for any immediately utilitarian purpose, but with the idea that such experimentation would eventually contribute to the solution of some utilitarian task. Theoretically, therefore, 'laboratory' work consisted of artistic explorations into the component elements of form, material, colour, space and construction which were initiated not for their sake, but with the longer term purpose of establishing the objective bases of artistic criteria and general laws of their interrelationships, so that these could be exploited later in the design process. Although laboratory work was not necessarily harnessed directly to design work, or to the solution of a specific design task, it did provide the artistic bases for such work, and often suggested completely new approaches to it. At the same time the investigations, which comprised laboratory work, were direct continuations of these artists' previous work in the area non-utilitarian constructions." (Lodder, 1983:7).
- 8 It has been suggested that "gender" played a significant role in Stepanova's "non-traditional" creative practice throughout her life. This notion is out of the scope of this study, however, the following art publication considers the 'gender' aspect in some detail: "Amazons of the Avant-Garde", edited by Bowlt and Drutt (2000). The legacy of female avant-garde members in post-Soviet art is evident in the art publication "After Perestroika: Kitchenmaids or Stateswomen". (Independent Curators Incorporated, New York, 1993). For a pre-revolutionary context of women in the sciences, arts and society, see Ann Koblitz (1988 and 1983).
- 9 For an excellent discussion of this argument see Christina Kiaer, (2007).
- 10 An exemplary summary of the position of Western art historians in relation to art experimentation as "utopia" in the early Soviet art is presented in a fascinating book by Christina Kiaer "Imagine No Possessions: The Socialist Objects of Russian Constructivism" (Kiaer, 2005). The Western art historical position usually involves an agreement that "the utopian experiment failed" due to various contributing factors, such as NEP (New Economic Policy) and backward Soviet industry: "In various ways, Tatlin, Rodchenko, Stepanova and Popova used their experience with artistic experimentation to build a bridge to industry and to the 'socialist object'. Their activities occasionally intersected with the theoretical proposals of Productivists like Brik and Arvatov, but more often they developed those proposals in unexpected directions. To a great extent, they shared the Productivist fascination with engineerism and technology, but as they attempted to put utopia into practice in the years following the INKHUK debates, they confronted the particular historical moment of the New Economic Policy (NEP), which would significantly alter the picture of Soviet industry with which most Productivist theorists operated. The transitional period of NEP provided another set of productive limits on Constructivist activity, leading to the creation of comradesly 'socialist objects' that exceeded the theoretical boundaries of Productivism... Productivism was invented with the expectation that artists would participate in this process of socialist industrialization. The unformed, even imaginary nature of Soviet industry in 1921, was always a projection into the future and facilitated the invention of the optimistic concept of the 'artist-engineer' to an extent that the established industry of Western modernity, with its more ingrained traditions of the division of labor, could not" (Kiaer, 2005:17-18). The "utopian" aspects of the Soviet relationship to technology and art in contemporary settings are also echoed in the exhibition titled "Ground Control: Technology and Utopia" (S. Buck-Morss, 1997).
- 11 For two very different accounts of direct and indirect influences of the Russian avant-garde on Western art practices and art history, see Hal Foster's article "Some Uses and Abuses of Russian Constructivism" (Foster, 1990: 241-253), and Allan Kaprow's collection of writings "Essays on The Blurring of Art and Life" (Kaprow, 1993).

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