3.3.1. A *SAMODEIATEL'NOST'* AND THE "PEOPLE'S CULTURE"

The first and the most conservative approach is exemplified by the Art Studio of the Institute of Peoples of the North (*Hudozhestvennaia studiia Instituta narodov severa*), which existed in Leningrad from 1926 to 1941. The Institute of Peoples of the North was founded by the Bolsheviks in 1926 with the aim of "civilizing" the ethnic minorities of the North. This initiative was in line with the broader program of modernization initiated by the Soviets, which included a clear interest in the exploration of natural resources in the peripheral areas of the state, but also the pursuit of initiatives aimed at educating and "civilizing" local minority groups. This program included, for instance, linguistic study and the creation of alphabets for local languages, the organization of schools and creation of state-sponsored possibilities of higher education for locals, who were to become modern Soviet citizens.

Yet, as was often the case, complete control over the concrete realization of the Art Studio was given to the professional artists who lead the Studio, namely Petr Sokolov, Leonid Mess and Aleksei Uspenskii. As noted by their contemporaries, all three of these pedagogues demonstrated a serious interest in and even admiration for the particular artistic imagination of their students from the North (*severfakovtsy*). Rather than "teaching" them, professional artists observed traditional techniques and the individual styles of their trainees and aimed to foster them without reeducation. As Mess explains this method in his book,

> We aspired to keep our students away from [simply] copying nature and losing that free imaginative cognition, which is inherent to folk art (*narodnoe iskusstvo*) and lies in the basis of any artistic activity. We aspired for *sevfakovets* (students of the faculty of North) to learn to use that toolkit of artistic devices which is peculiar to him with control, rationale and purpose, but without mechanically transferring him into our conventional figurativeness. (Mess, as cited in Musiankova 2008, 43)

This first approach exemplifies, therefore, how the project of enlightenment and modernization was negotiated, sometimes, in a conflictual way, during the early Soviet period. Although hosted within a new Soviet institution with explicit ideological goals of modernization, the leaders of the Studio did not follow the Bolshevik agenda to "civilize" the art of their students, but rather reproduced practices of "conservation" typical of the intelligentsia of the late 19th century. Moreover, while inspired by early romantic ideas about the achievement of a kind of cultural vivification by touching upon the people's profound spirit and soul, these pedagogues remained, in fact, followers of the European *beaux arts* tradition. In the quotation above, Mess makes a clear distinction between "them," having a "free imaginative cognition" and us, working within the system of "conventional figurativeness," and expresses the hope to achieve

an original (by modern standards of the arts) artistic language through the mixture of "native" imagination and artistic tools, and the modern rational mind. In other words, Mess, a former student of the French art school and a follower of the Petrov-Vodkin studio St. Petersburg, was more involved in the project of reinventing the modern visual artistic language than in the Soviet project of fostering a new modern Socialist world. From time to time, political curators would criticize the Studio for the "conscious non-development" (*v umyshlennom nerazvitii*) of students and for "bringing culture backward" (Musiankova 2008, 41). Nevertheless, the Studio kept functioning until 1941, when its activity was interrupted by the war and the consequent mobilization of many of its students.

This relatively conservative approach to the folk tradition was, however, rather unique for the early Soviet period and did not receive any wider implementation. Focused on fostering and somehow preserving traditional ethnic artistic features, this approach was doomed to failure because of its genetic link with the Imperial Russian past and because of its ambition to preserve, rather than to revolutionize and transform, native cultures.

3.3.2. A Revolutionary Take on Materiality and Creativity

The second approach to collaborations with non-professional artists was close to the radical conception of Proletkul't. Musiankova exemplifies it by the activity of the association entitled Art Workshops for Working Youth (*izomasterskie rabochei molodezhi*), which functioned from 1925 to 1932. The leaders of this project, including Vladimir Maiakovski, an important revolutionary poet and thinker, and other radical leftist artists, aspired to a radical rupture with the bourgeois art tradition and looked for new art forms and language. They struggled, for example, "to free" the traditional and realistic visual forms performed by workers, hoping that they would produce a radically new revolutionary visual art. Yet, in practice workers were not so experimental as theorists expected them to be: coming to the workshop after long and tiring hours at the plant, they were not so eager for revolutionary theorizing and demonstrated an open preference for realistic forms.

Importantly, this productivist approach fostered the idea that the arts are inseparable from other forms of material production and, therefore, ignored the very division between art and technology. Moreover, according to the logic of Proletkul't, art was mainly a form of life, a process, therefore there was no need to be too focused on the final product. Rather than being collected, these pieces were to "live" and to transform life. Most of works produced by

individuals who participated in the experimental laboratories are gone (Musiankova 2008). In what follows, I will address one of the rare cases, by which this approach to art and materiality can be exemplified.

In 2006, an exhibition in Moscow entitled "Gifts to the Leaders" presented to the public a considerable number of gifts that had been offered to the Soviet leaders between 1920 and 1990. Ironically, some journalists called this exhibition an "exhibition of people's art" (*vystavka narodnogo iskusstva*). This euphemism was provoked by the fact that a considerable number of artifacts were self-made personal presents from ordinary people. Moreover, many of them were made with the most unexpected materials, such as bird feathers, tobacco leaves, rice grains, airplane rivets, and so on. One of these gifts was a portrait of Lenin made out of human hair.

Figure 24. Portrait of Lenin made out of human hair
Author: Grigory Borukhov. Early 1930th
Reproduced in: Ssorin-Chaikov and Sosnina 2006, 15

This gift was created in the early 1930s by Grigory Borukhov, a hairdresser from Ostozhenka, a street, and an area, in central Moscow. The portrait was accompanied by a letter addressed to Voroshilov, the People's Commissar for Military and Naval Affairs and a very influential personage of the time. In his letter, Borukhov sought support for his "absolutely original" art – a tapestry made of human hair: "I am proud that I myself, as a Soviet working man, a citizen of

the USSR, became the first to lay the foundations of this rare type of art" (Ssorin-Chaikov and Sosnina 2006, 15).

Borukhov stressed that Voroshilov "saw and appreciated his art" and "volunteered to help." He continued:

> Bearing in mind your advice […], I left the barbershop two months ago and started working on a new picture. Among other things, I want to make a big panel for the future Palace of Soviets in the belief that it would be appropriate there. The theme of the first blow against [general] Denikin [during the Russian Civil War] has suggested itself. (Ssorin-Chaikov and Sosnina 2006, 17)

Commenting on this piece, Nikolai Ssorin-Chaikov and Olga Sosnina, curators of the exhibition and editors of the catalogue, pointed out the fact that this gift is well in line with the long-standing tradition of presenting rulers with samples of innovative technology and art and aspiring for institutional and/or financial patronage (Ssorin-Chaikov and Sosnina 2006, 17-18). For the purpose of my analysis I would like, however, to emphasize another aspect, namely the emancipation of engagement with materiality during the revolutionary period and the demolition of conventional borders between art, craft and technology.

While initiating the production of art pieces with the material he knew the best, that is, human hairs, Borukhov, in fact, literally reified the main hope of leftist theoreticians: he rendered his workplace a creative laboratory, drawing inspiration from the work and materiality he already knew with his own hands. Although his personal plan to devote himself to art contradicted, in fact, this theoretical logic (because, should he abandon his work, he would again restore the normative borders of art as a distinguished field of human activity), the very example of his work is a good and rare practical demonstration of how the public appeal of leftist theorists was received by large audiences.

Although I have briefly mentioned the Proletkul't movement in the previous section, the focus there was rather on the genealogy of the term *samodeiatel'nost'* than on its material aspect. In what follows, I revisit this Marxist intellectual current, paying particular attention to how it imagined the relationships between humans and things and, therefore, theorized the morality of materiality.

Russian art historian and curator Ekaterina Degot was perhaps the first to observe that revolutionary-driven artists and intellectuals of the 1910s and 20s developed a new political approach to things (Degot 2005) and to attribute such an approach to them (the same issue was

then studied by Kiaer (2005) and discussed by Alexander (2012) and Kravets (2013)). In her article "From the Commodity to the Comrade" (*Ot Tovara k Tovarishchu*) Degot demonstrates that Alexander Rodchenko, one of the key artists and philosophers of Russian constructivism, attempted in his work to overcome the mercantile, commodity-based relation to the object.

In 1925, Alexander Rodchenko wrote to his wife Varvara Sepanova, who was herself an original designer and thinker, from Paris, where he had been working on the construction of the Soviet Pavilion at the World International Exhibition:

> The light from the East is not only the liberation of workers, the light from the East is in the new relation to the person, to women, to things. Our things in our hands must be equals, comrades, and not these black and mournful slaves, as they are here. (Degot 2000)[32]

According to Rodchenko, the socialist object should be separated from the necessity to be shown, to be advertised. Instead, it ought to demonstrate its function, its utility and to incorporate values of labor and human brotherhood: it is an object meant to help, to participate in, to interact with, but not to be exchanged. These early Soviet artists were looking for a new philosophy of the object which would be coherent within the new socialist mindset and style of life.

While a capital good is attractive because of its false exterior beauty and its capacity to hide human work, the aesthetics of socialist production is to be based on an honest ode to labor and human effort. Within the ideal socialist society, use value was supposed to dominate exchange value (Degot 2000). In terms of aesthetics, this intention to keep the socialist object "honest" and to uncover the incorporated labor was thought of *per se* as a justification of its potential awkwardness, under-madeness and imperfection.

Although the intellectual and aesthetic heritage left by constructivists has long been studied as a highly original artistic and intellectual current – which was considered to be completely dissolved by the later period of Stalinism – contemporary scholarship provides evidence of important connections between this early intellectual current and its influence on the consequent development of Soviet art (Groys 1992; Reid 2007), industrial design (Cubbin 2016) and, more generally, on the valorization of functional, simple and "open" beauty.

[32] I use the English translation from (Alexander 2012), who cites the same passage from Kiaer (2005).

3.3.3. INSTITUTIONALIZATION OF *SAMODEIATEL'NOST'*

Finally, the third approach of collaboration between professional and non-professional artists can be exemplified by the All-Union Association of Autodidact-Artists (*Vsesoiuznoe ob'edinenie hudozhnikov-samouchek*), organized within the Central House of Amateur Art in the City and Village (*Tsentralnii Dom samodeiatelnogo iskusstva v gorode i derevne*). The association developed a stable format of amateur artwork supervised by professionals, non-revolutionary in spirit yet aligned with the civilizational model of the Bolsheviks. The main goal of this program was to teach and educate workers and peasants according to the "good models" and, therefore, to "share" the bourgeois culture with proletariat, thus rendering it public and accessible to all social strata. This format brought into life a new conception of 'culture' (*kul'tura*) based on education and progressive enlightenment, rather than on spontaneous revolutionary impulses of self-expression. Nadezhda Krupskaia, Lenin's widow and the active politician in the field of public education and the "female question," contributed a great deal to the advancement of this approach, which would be adopted as the standard for years to come. This approach to culture founded the basis of Soviet culture as we know it later, that is, accessible to broad audiences, and yet privileging the adherence to genres of "high culture." This approach, however, ruptured with the Proletkul't experiment and marked the end of the revolutionary art period. Moreover, it reestablished a hierarchy of knowledge: although amateur art was officially promoted and supported by the state as an instrument of cultural integration and enlightenment, amateurs could only be imitators and copyists of professional art. Following the same logic, national arts and crafts received their place in the grid of Soviet culture, a placement inferior to that of the "supra-national" high culture. The preservation of these national arts and crafts was important to the demonstration of the diversity of the Soviet Union – the union of national republics – but, according to the dialectical logic of progress, they were imagined to be "transitioning" from the national ("peasant" and "backward") to the supranational ("progressive") state.

The institutionalization of amateur art that followed produced a new semantic transformation of the expression *hudozhesvennaia samodeiatel'nost'* (Eng. 'art self-activity'), which increasingly meant a formal denomination of amateur institutions, a bureaucratic term, rather than one that implied any individual or collective social initiative and creativity.

Although all of my previous examples concerned art *samodeiatel'nost'*, the term was also used to signify technical everyday innovation (*tehnicheskaia samodeiatel'nost'*). Yet, contrary to the term "art *samodeiatel'nost',"* it was not incorporated into the bureaucratic language of institutions and is therefore less obviously traceable. In the following chapter, I will address "technical creativity" (*tekhnicheskoe tvorchestvo*), that is one facet of *samodeiatel'nost'* in more details.

3.4. CONCLUSION

The Soviet modern project aspired to precipitate the emergence of a new citizen, the New Soviet Man, as Russian Studies scholarship calls it. This citizen would combine socialist political consciousness, modern belief in progress, science and technology, "kulturedness," and commitment to the personal struggle for self-development and self-realization. The concept of *samodeiatel'nost'*, which I explored in this chapter, serves to penetrate the paradoxical structure of this project, which originates from a top-down program but still relies on its bottom-up interpretation and the creative mobilization of the individual.

The history of the lexeme *samodeiatel'nost'* informs this paradoxical structure. Expelled from the amorphous territory of revolutionary *byt* and used to fill the in-between space of formal state-institutions, this concept with a high emancipatory potential power was hosted within the structure of state-sponsored culture with well defined institutional and semantic borders. Yet, its close connection with "creativity," as it is broadly understood, and with pedagogical thinking did not expel it from either pedagogical language or practice. Both words persist in both pedagogical literature and that of Marxist social psychology (e.g., works by Alexey Leontiev, Alexander Luriia, and Lev Vygotsky).

For the specific purpose of this work, the main idea I try to convey here is that the modern, rational and materialist epistemology of this concept, informed by both the British protestant-like morality of education, work and practical self-development on the one hand, and Marxist critics of labor alienation on the other, all contributed to a particular way of thinking about human interaction with matter and the role of materiality more broadly in Soviet society. On the one hand, the individual work towards self-development was smoothly integrated into the Soviet modern project and became a moral obligation of each and every Soviet citizen. On the other hand, this way of thinking imbued the material condition and immediate environment (where social and material conditions are inevitably intertwined) with a high level of agency

upon an individual. Early Marxist writers, composers, film-makers, and artists attempted to grasp the raw materiality (of the plant, machine or mine) through their work and created a number of extremely original and experimental pieces aimed at catching the dialectical dynamics of human effort and material strength and resistance.

Although most of these experiments were over by the end of the 1920s when Stalin came to power and initiated the politics of so called “forced industrialization,” which was largely based on discipline and state-sponsored violence, a particular material sensibility remained in the cultural narrative, in which raw matter mattered and called for creative interaction. In the 1960s it was, for instance, remobilized within the Soviet school of industrial design.

CHAPTER 4
"TECHNICAL CREATIVITY" AND DIY SPACES FOR SELF-REALIZATION

In Russia, DIY objects representing technologies, such as self-made radios, refrigerators, bicycles, but also models of planes, cars and houses, can be referred to as examples of "technical creativity" (*tekhnicheskoe tvorchestvo*) or, as it is sometimes named in documents, "technical *samodeiatel'nost*'." Yet, although "technical creativity" and "technical *samodeiatel'nost*' can function as synonyms in the official language of the Soviet era, "technical creativity" is the more frequently used of the two. The stabilization of the word combination "art *samodeiatelnost*" (*khudozhestvennaia samodeiatel'nost'*) during the 1930s and its routine and bureaucratic application to refer particular types of art amateurism in the 1950-1960s, closely associated the term *samodeiatel'nost'* with the realm of arts rather than technology. At the same time, when the revolutionary impulse for syncretism was over, the taxonomic logic of modernity required further "practices of purification," as Bruno Latour would call it (Latour 1991).

In the late Soviet context, "technical creativity" was a term that referred to phenomena of different scales. On the one hand, it could be used to describe a particular type of individual practice, such as aviamodelism or radio amateurism, even professional inventorism. On the other hand, the same term might be used to refer to the broader context of the infrastructure that was put in place to promote science and technology for audiences of different ages. This infrastructure included popular magazines devoted to science and technology, amateur clubs and associations, public lectures, and other social settings established with the aim of propagating science and technology and involving young and adult citizens in the realm of knowledge and practices of technomodernity.

In this chapter, I focus mainly on cases that exemplify the infrastructural aspect of technical creativity and its "middle ground" nature between the state and the individual. I find this angle particularly important as it is helpful in understanding those institutional supports that remained rather invisible during the Soviet period, yet which constituted crucial channels of sociality (Vasilyeva 2018). Situated on the periphery of professional and private life and often understood as unimportant leisure activities, the contexts of technical creativity were taken for granted in the past and, similarly, escape the attention of present-day historians. Supported by state-sponsored institutions, these social contexts for creative activities disappeared with the

state-sponsored economy, leaving their users with a sense of surprise and disappointment and without a clear understanding of why the practices and respective communities that accompanied them had ceased. As one of my subjects summarized, "people somehow didn't have time for that anymore" (*vsem stalo kak-to nekogda*). And yet, technical creativity was an important realm of Soviet society, through which solidarities had been formed; as such it reappears retroactively in the post-Soviet context as something very meaningful that has been permanently lost.

In the first section of this chapter, I describe how technical creativity emerged in the early 1910th and 1920th as a facet of the revolutionary impulse for *samodeiatel'nost* and as an initiative imbedded in the Soviet project of modernization. In the following sections, I address two particular cases that explain and exemplify the infrastructure of technical creativity. My first example concerns the establishment of the magazine *Modelist-Konstruktor*, one of the most popular periodicals of the late Soviet period. The second deals with the spontaneous bottom-up institutionalization of a community united around an interest toward TRIZ, a theory of inventive problem solving.

4.1. TECHNICAL CREATIVITY AND INVENTORISM

As early as in the 30th of June 1919, Lenin signed the decree *On inventions*, which was directed at re-articulating the relationship between individual inventors and the state. On the one hand, this decree guaranteed inventors authorship and social and economic support; on the other hand, it redefined the property status of invented products, therefore breaking with the copyright regulations of the Russian Empire. The status of inventions as private property was canceled and inventions were henceforth considered to be the heritage of the RSFSR:[33] According to the decree,

> 1. Any invention recognized as useful by the Committee for the Invention Affairs can be proclaimed, by order of the Presidium of the High Council of the People's Economy, to be the heritage of the RSFSR.
>
> 2. After publication, inventions considered to be heritage of the RSFSR (excepting those that are secret) will be made available to the public

[33] Russian Socialist Federative Soviet Republic. After the formation of the Soviet Union in 1922, RSFSR became one of the Socialist Republics within the USSR.

> disposal of all citizens and institutions under special conditions, defined for every specific case. […]
>
> 4. The authorship of the invention can be claimed by the inventor and is certified by the certificate issued by the Committee for Invention affaires. […]
>
> 10. All laws and regulations about privileges regarding inventions issued before this decree are cancelled. (Sobranie 1919, 341)

In the Soviet literature on innovation (the original Russian word *izobretatel'stvo* literally translates into 'inventorism'), this Decree is conventionally mentioned as a milestone in the history of the mass popularization and democratization of science and technology (Alekseev 1969). The political support for innovative activity and the ability to certify authorship free of charge created a new legal framework and opened this field to individuals without particular privileges related to their origins or social and economic status. Moreover, innovative activity was henceforth considered a creative part of every industrial profession. It was thought to become an activity of the masses, workers and peasants, who were openly invited to participate in the process of developing national industry for the sake of the common good on the way toward communism.

The Soviet historiography emphasizes Lenin's personal engagement in the issue and attention to inventors, independent of their political views and social origins (Alekseev 1969; Gorbunov 1934). The leader of the Russian Revolution identified inventors as a particularly important group, crucial to the success of the communist project. Very determined to put all contemporary knowledge of science and technology to the service of the communist project, Lenin was ready to cooperate with both engineers of bourgeois origin and self-educated individuals. To exemplify this attitude, Soviet authors cite, for example, the following quotation from Lenin's correspondence: "We have to know how to keep on with inventors, even if they are a little capricious" (Lenin 1967, 254).

It is more instructive, however, to contextualize the short excerpt within the rest of the letter dated 5 June 1921, in which Lenin asks Ivan Radchenko, one of the leaders of the peat industry, to permit an engineer, Kirpichnikov, to go abroad (to Germany) in order to learn about a new technology for the hydropeat process:

> We have to know how to keep on with inventors, even if they are a little capricious. But I don't see a caprice so far. Kirpitchnikov is an inventor. We need to let him go and send him [abroad]. Objections can be only of a political character – if you have them, let me know secretly. If not – send

> Kirpitchnikov without fail… I ask you: don't make a mistake, don't nag at *Gidrotorf* [Hydropeat]. (Lenin 1967, 254)

Indeed, Soviet historians usually don't cite another letter that Lenin wrote Radchenko two days later, in which he explains his position even more clearly:

> I understand very well that it's painful for you to see how the non-Soviet people – even, perhaps, in part enemies of the Soviet power – used their inventions for the purpose of profit [*dlia nazhivy*]. I believe very much, that Kirpichnikov is this sort of [person].
>
> But this is exactly the essence, that though your feeling of anger is righteous, [we can]not make a mistake, [we should] not submit ourselves to [this feeling].
>
> Inventors are foreign people (*chuzhie liudi*), but we must use them. Better to let them to earn, to leave them to their salacious money [*perekhvatit', nazhit', tsapnut'*], but to move the affair forward *for us*, [as it] is of outstanding importance for the RSFSR. (Lenin 1967, 260)

This correspondence uncovers a strong political tension within the relationship between the Bolsheviks and the old technical professionals whose political views were often skeptical of new power. Although some engineers began to cooperate with the new state after the Revolution, they did so while still demonstrating loyalty to their professional guild and national industry rather than to the Soviet political project (Graham 1993; Schattenberg 2011). At the same time, the new state was in urgent need of experts to normalize and modernize the economy after a decade-long breakdown provoked by the First World War, the Revolution and the Civil War. Though very suspicious of the intelligentsia and the broadly defined bourgeois class, Lenin nevertheless openly articulated the necessity to cooperate with "old experts" before the new state would be able to create a new technical elite that would not only be loyal to the Bolshevik regime, but also competent. Indeed, in this respect Communist Russia demonstrated quite a different approach from, for example, China, where to be "red" was better than to be an "expert" (Ray 1970). This approach to cooperativeness on the part of Soviet authorities even led Lewis Siegelbaum to identify "the reproduction of capitalist relations":

> Despite Lenin's best efforts, this movement [in which the central economic logic won out over the workers' own regulation of production] was toward the reproduction of capitalist relations of production and the formation of a "state bourgeoisie," unlike Mao's China, where "redness" prevailed. (Siegelbaum 2006, 468)

The collaboration with the old technical experts was, however, seen as a necessary evil rather than a deliberate choice. The real goal was to build a new educational system capable of

reaching large audiences of young people and providing the state with loyal professionals in science and technology (Ryzhkovskii 2012). This goal would necessitate the large-scale mobilization of young people eager to study, build professions and develop their creativity on the job; the mass popularization of technical knowledge and innovation was a step on the way to identifying "talented administrators, organizers, inventors from the milieu of workers' and peasants' masses" (Lenin 1967 [1920], 10).

In the course of the 1920s, the Party initiated the development of policies and regulations, "to introduce principles of individual and collective interest in inventions, improvements, saving of labor power, energy, materials…" (KPSS in Resolutions 1953, 575). This set of documents described mechanisms and industry procedures to activate and celebrate innovators by specific political and economic means. This legal basis allowed organizations to create local units aimed at stimulating inventions and helping innovators to develop their technical proposals and calculate economic efficiency. In some cases, these units would specialize in a specific industrial task or the simple popularization of technology.

The official policy on inventions, coupled with Lenin's personal engagement in the issue of innovation, resonated with the revolutionary understanding of the nature of transformations of social and economic relations throughout the transition from capitalism to communism in a new Soviet Russia. Such transformations implied the building of a new type of economy and, most importantly, the building of a new type of citizen—a self-conscious Soviet man wishing to contribute his labor for the common good of the society. Much like the involvement of workers and peasants in artistic practices, which I discussed in the previous chapter, the mass popularization of innovative activity was a part of the ambitious project meant to "awaken" the creative relation of the worker to his labor. Well in line with Marxist philosophy, the development of class consciousness was imagined as being dependent on the success of the project in overcoming alienated labor. In other words, professional creativity and inventiveness on the job was seen as a drive capable of bringing together political consciousness, subjective self-development and economic effect.

This particular vision of inventorism as an essential element of transformation – economic, material, social, and subjective – emerges through various publications in the magazine *Inventor*, founded in 1929. Thus, Viktor Shklovsky, a Russian critic and writer who acquired several technical professions in the fields of the First World War, wrote:

> …Nowadays, the number of inventions increases, they suddenly appear across the whole country, and this is not because people became immediately more talented, but because the country is industrializing and artifices are in demand. (Shklovsky 1929, 39)

While celebrating the process of industrialization and social and economic change, Shklovsky implicitly criticizes the *ancien régime* of the Russian Empire, which did not allow gifted individuals to realize themselves. The new era is presented here as incarnating a particular momentum which, paired with historical circumstances, opened the way for individual capacities.

In the same vein, Sergei Oldenburg, Russian orientalist and Indologist who managed to cooperate with the Soviet power regardless of his noble origins, also contributed to the issue:

> In times like ours, inventions and inventors get a specific mission. Revolutionary eras are periods of high life-creativity (*zhiznennoe tvorchestvo*). The personality of inventor comes up in relief against this general creativity. (Oldenburg 1929, 4-5)

Oldenburg's utterance points particularly to the "creative energy" (the title of the article) which enables personal drive to join the general drive of the historical moment and achieve fruitful metamorphosis.

The list of celebrities who contributed to the first issue of the new magazine demonstrates the extraordinary enthusiasm of intellectuals and industrial leaders for the initiative, and their hope for the democratic involvement of people in the economic and social development of this new Russia. The revolutionary mood was still tangible, and inspired them to dream of the future progress and blossoming of the communist society.

In the pages of the magazine, the term "inventor" is used very broadly, indicating a person capable of developing a complex project or simply improving an element of the industrial process. The journal's use of the term included people from all categories of the population, independent of their educational background and professional competences. Such representation was a contrast to pre-revolutionary standards, when all important symbolical and economic power was concentrated in the hands of engineers and foremen, while workers were seen as an unreliable group, useful for hard physical work only. Moreover, it aimed to challenge the hierarchy of manual and intellectual labor, thus encouraging experts with no degrees — in particular workers, who were seen as the main driving force of the proletarian revolution — to participate in economic and social transformations.

Contrary to the conditions of the Russian Empire, under which engineering remained a privilege of the bourgeois class and foreign experts, the magazine, *Inventor*, insisted on equal access to technical knowledge and the practice of innovation, regardless of social origin and gender. Indeed, the magazine also recognized the inventive capacity of women, regardless of their social position and professional occupation. Its writing put forth that everybody could invent something, as long as he/she approached a job seriously and creatively. The immediate professional context and the everyday opportunity for learning provided by the job were represented as the main sources of innovative imagination.

Andrei Lezhava, a revolutionary politician who started his career as an apprentice in Tiflis, writes in his article for the magazine:

> I suppose that every person should be an inventor. All life – culture, everyday life, economy – moves further [thanks to the] never-ceasing widespread participation of inventors of different scales and different classifications.
>
> For instance, a cleaning lady in an organization. [Perhaps] she found in her job such methods of the production of cleaning that assure her, compared to other cleaning-ladies, extraordinary success in her job, both in terms of quality and quantity […]. There you go, [she is] an innovator! No doubt her achievements will necessarily become the heritage of comrades that surround her – if not today, tomorrow; if not completely, then at least partly…
>
> How many craftsmen, handymen, qualified workers, introduce anonymous and unknown improvements into their work! They look absolutely pennyworth, but nevertheless, all together they ceaselessly change the face of every industry. (Lezhava 1929, 5)

Lezhava's example with a cleaning lady illustrates once again the dialectic nature of mutual transformation of humans and things. The inventor himself represents an element of the industry and, at the same time, he is the main creative producer of further material transformations. Reconstructing this Marxist logic for the purpose of a more general theorization of materiality, Daniel Miller summarizes:

> The idea (Hegelian in essence) that the subject becomes him/herself through the reflection upon his/her labor receives here its socio-economic reasoning. The labor is imagined as "the process by which we create form and are created by this same process." (Miller 2005, 8)

What is particularly interesting in Lezhava's passage about the cleaning lady, is that it uncovers the dialectical principle of thinking about economic (material) progress through the chain of individual experiences of creative labor. This type of relationship between the individual and

the organization posits an understanding of industry as a "work in progress" as opposed to a strictly preplanned and well functioning mechanism. Just as Soviet technologies were not conceptualized as flawless and ready-to-use "black boxes," the very body of the national industry was similarly imagined as an open system, relying not so much on a perfect organization, but rather on multiple and "ceaseless" individual contributions and acts of improvement.

Although this interpretation provides a stark contrast to the conventional vision of the Soviet industry as extremely rigid and strictly guided by the plan, it resonates with ethnographic descriptions of Russian working environments documented in the early post-Soviet era (Alasheev 1995; Clarke 1995), to the memories and practices of the former Soviets (Luehrmann 2011; Reid 2015) and even to the approach shared by some contemporary (post-Soviet) technological entrepreneurs (Kharkhordin 2018, 198-242). Moreover, it resonates with the critical approach to the capitalist black-boxed technology, and which suggests an understanding of innovation as "a kind of ongoing or unfolding transformation" (Suchman 2011, 13).

In the *Inventor*, the political danger of closing and monopolizing technologies was explicitly articulated by Albert Einstein in a celebratory letter to the magazine. Einstein cautioned, however, that the lack of competition may produce other problems within the industry, such as stagnation, bureaucracy, and jealousy:

> The monopolistic right of the inventor is an unavoidable evil of the free (capitalist) economy. Within the planning economy it should be replaced by systematic encouragement and stimulation. (Einstein 1929, 4)

Inventor, therefore, articulated the new Soviet approach to economy and technology, in which the anonymous creative worker was imagined as the key figure of Soviet industrialization. Moreover, as we can understand from reading the articles published there, it aimed at helping workers recognize themselves as creative subjects and invited them to participate consciously and creatively in the modernization of the industries they worked for. Thus, the magazine articulated the connection between this state-sponsored call for innovation and a new type of civil subjectivity, based on a self-motivated drive for creative self-development. The emphasis on creativity also effectuated the discursive work of singularization: although the ultimate goal of the creative labor was, of course, the communal social good, the way to it was paved through individual struggle for self-development and individual creative acts performed for the sake of a better future.

The romantic celebration of human creativity coexisted on the pages of the magazine with the more pragmatic expectations and worries of economists and scientists. For instance, the magazine discussed actual problems that industry was encountering. The issues addressed reveal that the actual industrial effect of popularization was rather limited, at least during these early years. Historian David Hoffmann, who studied the identities of Moscow workers in the 1920s-1930s based on archival sources, demonstrates that early Soviet workers were rather "migrants" from villages with mixed levels of self-understanding:

> More emblematic of self-identity was the migrant who remarked that "at the factory I call myself a worker, but in the village – at the village assembly – I call myself a peasant." (Hoffmann 2000, 157, as cited in Siegelbaum 2006, 473)

The majority of workers were illiterate and under-skilled, and the lack of qualified manpower caused everyday troubles and accidents in manufacturing factories. Yesterday's peasants, who moved to cities with the intention of getting a job in a factory, were hardly able to submit

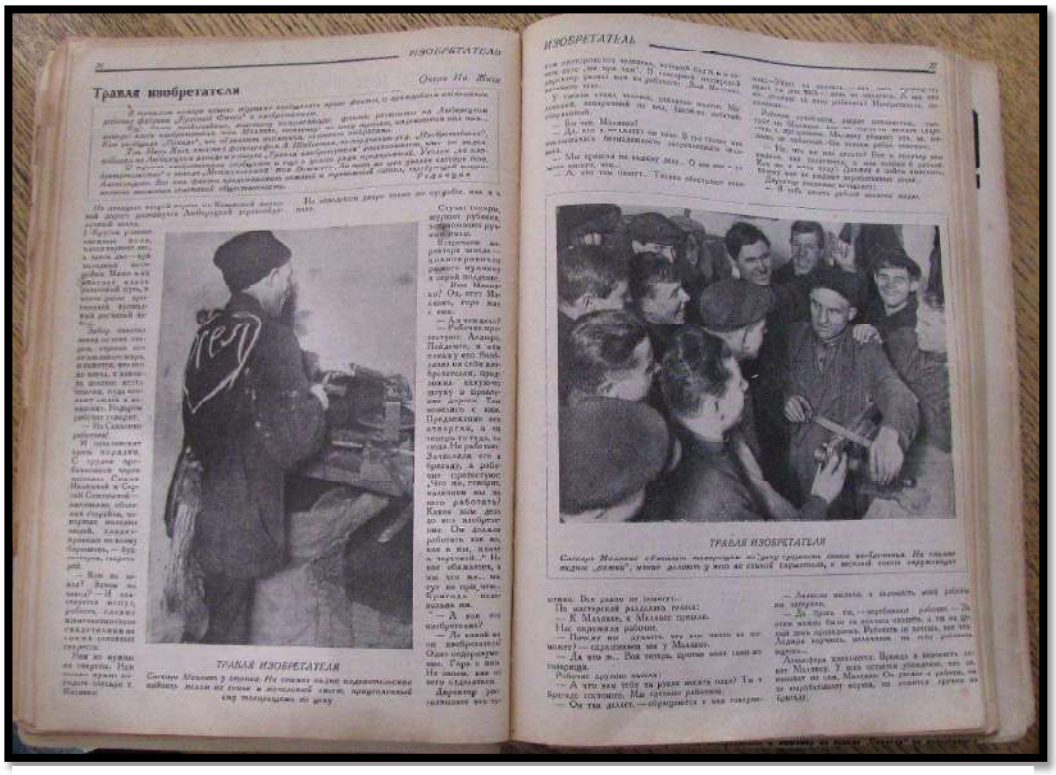

Figure 25. Magazine Inventor. 1929. N3. Article criticizing cases of inventors' mobbing
Photo: Zinaida Vasilyeva

relevant technical proposals, even if in some cases they demonstrated strong motivation and political engagement. Moreover, innovators were not always welcome among conservative workers and administrators who interpreted these innovations as a way to slack off at work: a number of articles discuss cases of mobbing of inventors at their plants.

The foundation of the magazine, *Inventor,* was a step in the process of institutionalization of inventorism, which reached its climax in 1930, when the All-Union Society of Inventors (*Vsesoiuznoe obshchestvo izobretatelei – VOIZ*) was founded. Its goal was to assemble heterogeneous local units, ranging from amateur clubs and seminars to specialized units within enterprises, into a centralized network. During the first year, VOIZ welcomed around 400,000 people across the country.

Parallel to the promotion of invention, the post-revolutionary period was characterized by the development of the network of clubs and associations uniting radio-amateurs (since 1918) Young Naturalists (since 1918), Young Technicians (since 1922), and other amateur associations making a new way of social participation through knowledge-centered activities available to many audiences. The same period was rich in publishing popular brochures aimed at promoting technical knowledge among different social groups, particularly youth and women.

Although supported by the Soviet authorities, these initiatives were often organized locally by enthusiasts with "bourgeois origins" who sympathized with the new social agenda and were eager to join the Bolshevik impulse "to enlighten the masses." This top-down impulse meshed well with the self-proclaimed social mission of Russian intelligentsia who aspired for the democratization of political and social organization and a more equal distribution of economic wealth.

As David Hoffmann summarizes:

> The pre-revolutionary Russian intelligentsia had a particularly strong feeling of obligation toward the masses. Russian professionals were keenly aware of their country's backwardness, and they believed it was their responsibility to overcome it and improve the wretched conditions of the lower classes. They blamed the tsarist autocracy not only for its failure to ameliorate conditions but also for excluding them from power. As a self-identified but disempowered elite, the intelligentsia developed a sense of mission to lead the people. (Hoffmann 2003, 16)

Figure 26. Brochure "[Make] a way to young technicians" from the Series "Struggle for Polytechnism." 1930. This particular issue is devoted to the subject "Girls and Technology." The author documents the difficulties of involving girls in technical clubs and provides advice on how to overcome popular prejudices. Photo: Zinaida Vasilyeva

Such individuals insured the transmission of knowledge between the "old" and the "new" regimes and created a social pattern of cooperation between intellectuals and the Bolshevik political power. This pattern consisted, for instance, of the demonstration of a moral and institutional ability to pursue a bottom-up social initiative with a humanist pedagogical agenda within the framework of a regime largely based on violence. Such activity was not a resistance to this violence, but rather a kind of tolerance of the structural violence for the sake of democratization and further social cohesion. Importantly, such bottom-up initiatives were based on the recognition of common expectations and shared social values such as education, science,

and democratic access to them rather than pragmatic interests. Indeed, the ethos of a non-lucrative enthusiast-enlightener who pursues his/her own pedagogical mission (though within the official framework) was inherited by the Soviet intelligentsia. Genrikh Altshuller, who I address later in this chapter, is an example of such a Soviet enthusiast.

In a broader historical context, the process of institutionalization of inventorism, just like the process of institutionalization of the infrastructure of "culture," briefly discussed in the previous chapter, inscribes itself in a larger history of the Soviet project of modernity, which implied the modernization of the national economy by means of science and technology, on the one hand, and the creation of new citizen through the program of "people's enlightenment" (*narodnoe prosveshchenie*), on the other hand. During the first years after the Revolution, Russia remained a largely agrarian country with an overwhelmingly peasant population with high rates of illiteracy, disease, and infant mortality. In this context, the Soviet politics of popularization of science and technology was only one element in a large program of "acculturating" and "civilizing" the masses which covered fields as various as hygiene, basic literacy, work discipline, political participation, and so on. (Hoffmann and Kotsonis 2000; Hoffmann 2003; Hoffmann 2011).

This early Soviet period of celebration and the institutional construction of inventorism came to an end by the middle of the 1930s. After Lenin's death (1924) and the consequent arrival of Stalin into power (1929), the revolutionary era, marked by structural violence and trouble, but also spontaneous bottom-up social and political dynamics and official recognition of their importance, was to be replaced by the authoritarian turn. Stalin's politics of "forced industrialization" (*forsirovannaia industrializatsiia*) left little space and resources for local, socially-oriented initiatives. In order to ensure rapid economic improvement, Stalin's administration adopted a stronger centralized technocratic approach and restored the authority of engineers and many of the pre-revolutionary structures. In the sphere of technical education, the institutionalization of the network of technical schools and universities, that is educational institutions aiming at formatting Soviet technical experts, both professional and, importantly, politically loyal, was instituted under Stalin's rule (Ryzhkovskii 2012). At the same time, political mobilization was used to ensure the efficiency of enterprises. For instance, since 1935, the activities of VOIZ were submitted to the centralized goals of the so called "Stakhanov movement," which rewarded and aimed at reinforcing overachievement at work (Siegelbaum 2012).

The development of the ideological campaign against espionage in the following years made individuals dealing with industrial innovation a particularly easy target. The years 1937-38 were marked by industry-wide purges of engineers and inventors (Graham 1993; Schattenberg 2011), and in the year 1938, VOIZ was closed, just like many other mass-oriented and very much bottom-up regulated units. That same year the magazine *Inventor* was shutdown.

The restoration of the infrastructure of popular knowledge restarts in the late 1940s and even more in the 1950s, after Stalin's death in 1953. This post-war and post-Stalin period, known in Russia and in historical literature as "the thaw" (*ottepel'*) was characterized by the general return to revolutionary ideals. Post-war enthusiasm, along with the official denunciation of Stalin's dictatorship by Khrushchev during the 20th Congress of the Communist Party, allowed for the negotiation of a new social consensus built on socialist values and post-war national Soviet pride and non-violent social development (Zubkova 1998). In this respect, the late 1950s to the beginning of the 1960s was the period of a "second start" for the revolutionary project, this time driven by the ideas of the post-war restoration, peaceful coexistence and collective solidarity rather than survival, "crash industrialization" and violence.

4.2. Technical Creativity: a Post-Soviet Perspective

When I started my fieldwork in 2010, I found the infrastructure of Soviet technical creativity in a "stage of decay" (*stadiia raspada*), as one of my interlocutors characterized it, alluding to the physical disintegration of an organic whole. Current and former editors and journalists of popular technical magazines, VOIR employees, and leaders of technical clubs all spoke to me about the disintegration of the "system" (*sistema*). Regardless of their personal historical and moral evaluations of the Soviet past (which were, in fact, diverse),[34] they all deplored the ongoing process, which can be summarized as an obvious disinterest of the state in supporting the infrastructure of popular technical knowledge in Russia. On several occasions, my interlocutors emphasized that their current engagement in the journal was nothing but a charity that they continued to carry out on principle, while their personal financial security was not dependent on the miserly income they gained as editors or journalists. These specifications were to underlay the importance of the purpose they served for years and were not ready to give up

[34] In several cases, my interlocutors were eager in their criticism of the Soviet system as well as of contemporary realities.

for economic reasons. Indeed, I was openly approached several times with the question of whether I might be able to find interested people and/or organisms that would be able to promote this or that journal or even invest into it.

Yet, it would be a mistake to think that nostalgia was always the leitmotiv. In fact, their emotions were not so much nostalgic as enraged. "How do they [the government] not understand?" wondered the VOIR executive. After one such contradictory interview, I asked my interlocutor, "So, what was the strength of that time?" The answer was rather unexpected: "It was possible to cooperate," he said. "That was the strength of that time." In order to explain what kind of cooperation my interlocutor was referring to, I will describe the "infrastructure," as I call it, of technical creativity in the late Soviet period.

4.3. THE INFRASTRUCTURE OF "TECHNICAL CREATIVITY": *MODELIST-KONSTRUKTOR*

"Modelist-Konstruktor" was one of the most popular technical magazines in the late Soviet Union. Not only was it frequently listed by my interviewees amongst their favorite readings, but the magazine even transformed certain discussions after my presentations at academic conferences in Russia into venues for participants to share personal testimonies pertaining to it. Launched in 1966 it developed successfully through the 1960s-1970s and 1980s.

In my interviews just as on internet-forums, the magazine is typically listed alongside a number of other magazines, such as *Technology to the Youth* (*Tekhnika – Molodezhi*), *Young Technician* (*Yunyi Technik*), *Lafe & Science* (*Nauka i Zhizn'*), *Radio, Chemistry & Life* (*Khimiia i Zhizn'*), and others. All together, there were 13 popular magazines specialized in popularization of science and technology.

Institutionally (and financially), most of them were subordinated to the Komsomol organization, that is the youth division of the Communist Party, some to the "Knowledge Society" (Obshchestvo "Znanie"). Each magazine had its own particular focus and target audience. Thus, *Science & Life* and *Chemistry & Life* targeted the most general audience and focused on the popular delivery of news from fundamental and applied science and the history of science. *Young Technician*, *Technology to the Youth* and *Modelist-Konstruktor* mainly targeted young audience and focused on technologies and innovation.

The structure of such journals typically consisted of a number of standard rubrics: political news interpreted in relation to science and technology; articles about various phenomena in the

worlds of science and technology on local and international arena (with a focus on countries from the Socialist bloc and Asian communist countries); concrete examples of technologies and inventions, often provided with drawings and DIY suggestions (when it comes to everyday technologies); the personal stories of inventors/scientists/industrial designers; pieces of lyrics and/or science fiction; and, finally, answers to readers' letters.

Regardless of this consistent structure, each magazine had its own face, both visually and in terms of content. Ilya Kukulin, literary critic and author of numerous essays on the cultural history of the Soviet Union, rightly observed that many of the popular scientific magazines in the late Soviet period were, in fact, "author's projects" (*avtorskie proekty*) (Kukulin 2017). Although I don't share Kukulin's main argument that popular magazines reified one of the straightforward "tasks" (*zadacha*) of the party administrators to "project" the life-world of the young professionals and students of scientific and technical specializations" (Kukulin 2017), his observation about the "authorship" of these periodicals is correct.

This "author approach" is particularly obvious if we look at the magazines with a stable editorial board. The magazine *Technology to the Youth*, for example, was headed for many years by Vasilii Zakharchenko. A big science fiction fan and a writer himself Zakharchenko made his periodical famous by publishing good pieces of science fiction in its pages. Although the publication of short science-fiction stories and lyrics in popular magazines was a rather common phenomenon, Zakharchenko rendered this element particularly important. For instance, he organized translations of several pieces written by foreign authors, and even organized a seminar for young writers (Interview with Stoliarov, b. 1932; Interview with Anatolii, b. 1953). He thus created an institutional model for the production of texts combining interest in technology with an emphasis on futuristic imagination.

Modelist-Konstruktor is another example of the magazine with a stable editorial board. Yurii Stoliarov (b. 1932), the founder of the magazine, remains its main editor for more than 50 years, from 1962 to date. As Stoliarov himself explained me, the magazine had a particular focus on transport, inventorism and creativity. Indeed, Stoliarov had a personal strong interest in creativity and is the author of numerous books on technical creativity and a dissertation entitled *The development of the system of the afterclass creative technical activity of school students in USSR* (1985). As Stoliarov, explained to me during my interview with him, he wanted the periodical to combine both the romanticism of and the practical approach to construction and engineering:

> Our [specificity] was the creativity, which is flavored with romanticism, be it snow that can go across any snow-covered surface or flying apparatus. Can you imagine what does this mean [the feeling] one get making a plane, and then taking off in it? Or in a helicopter? These are kinds of things, where a lot of emotions are involved. Romanticism, emotionality…[…] And this goes with history… history of aviation, history of ship construction, of automobile construction, tanks, and so on and so forth...

With all specific differences, all these popular technical magazines shared an identification with modernity (*sovremennost'*), imagined as a secular socialist society driven into the future by scientific and technological progress. In this respect, these magazines shared a great deal with their Western counterparts.

Thus, although the most general framework of the infrastructure was, of course, provided by the state and its ideologists, the concrete content of these magazines depended on the personalities of their main editors, the specific skills and interests of their editorial teams and, last but not least, the negotiations with their readers.[35] As my interviews show, readers actively participated in shaping the agenda of the periodicals by writing letters, expressing their satisfactions and dissatisfactions, and explicitly asking to provide them with information about this or that topic. The significance of this communication with the readers should not be underestimated, particularly in those cases where periodicals attempted to become independently funded.

While most distribution was organized on a subscription during the early post-war years, retail increased with time. Moreover, in some cases, Party leaders explicitly stimulated editors to increase their profits, a task that was not so hard if one takes into account the fact that the magazines were accessibly priced and the demand always exceeded the offer. As demonstrated by my interviews, the same issue could circulate through a network of friends, neighbors and colleagues, before finally being carefully stocked at home. One proof of such popularity lies in the practice, by communities of former readers who kept their archives, of digitalizing their old issues and making them available online.

A particular feature of *Modelist-Konstruktor* was also its organizational role. The magazine not only published articles on self-made transport, but also organized meetings around and

[35] Similarly, local implementations of technical clubs relied very much on bottom-up initiatives and efforts of concrete individuals and, therefore, varied considerably in form and content. The profile of a given technical club would depend on personal interests of its leader and corporate resources (if any) of a local industry or school.

exhibitions of these vehicles. Quoting from Lenin with a smile, Stoliarov explains the ambition of the magazine:[36]

> If you remember Lenin's words on the *Iskra* newspaper… [he] defined it this way that "a newspaper is not only a collective propagandist and collective agitator, but also a collective organizer." And we worked exactly according to this principle [laughing]. Well, and in fact, the magazine became all at once, a propagandist, an agitator and and organizer.

For instance, in the 1980s the magazine initiated assemblies of the amateurs, who built by themselves different kinds of transportation: planes, helicopters, microlighttrikes, snowmobiles, etc. These events were organized with help and participation of famous aviators and cosmonauts who celebrated the winners of the concours.

Stoliarov describes the magazine as one of the pulsing centers of the DIY-network; more or less reliable threads are extending in diverse directions: friendly editorial departments, professional associations, structures of the Party administration, and also high-school libraries, youth and children's hobby clubs, and, finally, private residences.

Most importantly, the infrastructure of technical creativity provided individuals with concrete material and institutional settings – places of knowledge – that enabled individuals to actively join the realm of "science and technology" and participate in it in a practical or imaginative way. For instance, in the interviews I was told about people who were subscribed for magazines of technical creativity but never made something themselves. Similarly, the leader of one technical club in St. Petersburg explained, that making a final product was never his ultimate goal. Instead, he aspired to bring his students to a particular experience related to the feeling of happiness achieved through labor. Thus, this infrastructure offered physical and imagined spaces for communication and exchange – a fruitful "cross-fertilization," as one of my interlocutors put it – and hence was productive for the social fabric.

The story of the magazine's appearance shows the value of horizontal social connections based on shared ideas and values; in this case, this was a shared interest in science, technology, and scientific and technological progress (and scientific and technical creativity as an element of the latter). One of the key-words of Stoliatov's narrative is *entuziasty* (Eng. 'enthusiasts'), that

[36] Indeed, it is rather unusual, that in 2012 one would cite Lenin without hesitation and insist on the communist political identification.

is individuals who helped him to develop projects and initiatives of technical creativity with a great enthusiasm. Communities of enthusiasts that were formed around popular magazines, clubs and similar amateur activities are reminiscent to that type of late Soviet sociality that Yurchak termed as *svoi* (Eng. 'ours', 'ourselves'), loose grooping of like-minded people (Yurchak 2005, 108-114). Communities of *svoi* constituted constituted invisible, and yet very important channels of social solidarity that implied mutual support and help across different social strata. For instance, the list of the enthusiasts mentioned by Stoliarov includes people from very different social groups, ranging from teachers in regional schools and technical clubs to the Komsomol leaders who helped him to promote his projects and to reknown aviation engineers and cosmonauts who supported his initiatives and accepted to participate in meetings with and inaugurations of winners of the concurses, basically, school-students.

The point I would like to make here is that by the late Soviet period, technical creativity as a particularly form of imaginary and as infrastructure of knowledge did operate as a realm of promoting and experiencing modernity, yet modernity which is to be made by yourself. Rather than being just a form of ideology, it was rather a vivid realm of social interactions and activities. Moreovere, these activities allowed for individual projects of self-realization and self-development; projects, that, indeed, remained within the borders of the publicly appreciated and recognized system of values and, therefore, co- produced forms of citizenship and imaginaries of national belonging.

Stoliarov himself openly declares that education, science, and scientific and technological progress are his personal moral values. For those who tend to imagine the Soviet order as a totalitarian system, his declarations and biography – from a miner to a member of the Moscow journalist elite, traveling abroad on business and having personal connections to famous Soviet pilots and cosmonauts – might look morally suspicious rather than convincing. In Russian Studies, though, this kind of "exemplary career" is usually analyzed as a "loyal" career, one based on political allegiance in exchange for social mobility (Fitzpatrick 1979; 2002). Yet, I would like to emphasize that this is, perhaps, a conscious loyalty stipulated by ideological convictions and the subjective adherence of values promoted under the frames of the Soviet modernity. Throughout his entire life, Stoliarov had been serving the cause of the USSR and scientific and technical progress by helping to build the infrastructure for scientific and technical creativity. His service, as well as his personal enthusiasm, allowed him to network with many people who shared similar ideas and values. Some of this network became his closed friends. Indeed, after the dissolution of the Young Guard Press, the publishing house under the

auspice of the Komsomol organization, Stoliarov got his new office within the walls of Roskosmos, the Russian state-owned corporation that developed and promoted space technologies. This fact is nothing but proof of the perpetuation of these networks of allegiance and friendships in the post-Soviet period.

Figure 27. Poster "Learn to do everything by yourself!"
Artist: Sergei Datskevich. 1954
Source: https://www.kp.ru/daily/26529/3546587/
Accessed December 10, 2018

4.4. TRIZ Community: The Case of Self-Organization Around Inventorism

In this section, I describe the Leningrad community of TRIZ, a Russian abbreviation for the "Theory of inventive problem solving" (*teoriia resheniia izobretatel'skikh zadach*), which I first approached in 2010 (Vasilyeva 2012). I use this example, as it is demonstrative of how the popularization of technical knowledge in the Soviet Union stimulated local, bottom-up activities in the domain of innovation. In my description of the community I will pay particular attention

to the logic of communication in and social organization of the community, as, I believe, it exemplifies the horizontal and bottom-up politics of "cross-fertilization" which I mentioned in the previous section.

4.4.1. The Emergence of the Community

Genrikh Saulovich Altshuller (1926-1998), the main theoretician of TRIZ, lived in Baku – the capital of the Soviet Republic of Azerbaijan. As is often the case for people of Altshuller's generation, his biography is marked by the dramatic events of Soviet history: the Second World War interrupted his studies at the Azerbaijan Industrial Institute; in 1951 he was detained and imprisoned because of his critical publication concerning the Soviet politics of invention; after his liberation in 1954 he experienced difficulties in finding a job; and etc. Regardless of these objective difficulties, by 1950 Altshuller already had about 10 registered invention certificates and had gained certain popularity as an author of science fiction (Geller 1985, 172-176), an occupation he developed due to the difficulties he experienced in finding a job. By the end of his life, Altshuller had more than twenty scientific publications. Indeed, Altshuller's biography is a telling example of the Soviet order — the paradoxical combination of state-sponsored violence and opportunities for further integration and participation in social life, all aligned with the solidarization of Socialist modernity.

After his demobilization in 1945, Altshuller was employed at the patent office of the Caspi Fleet. His work consisted of analyzing existing patents, helping marine inventors to develop their projects into correct proposals and, afterwards, proceeding with the formalization of the proposals. This means that, for several years, he had to routinely look through hundreds of proposals and compare them with already published patents in order to evaluate their technical novelty. While analyzing this corpus of data, Altshuller concluded that the majority of actual inventions fit into five particular categories that corresponded to five respective levels of inventiveness. The first and the most technically simple level corresponds to problem solving within a single "technical system," which means that this task can be solved within a single field of expertise (profession, as Altshuller would call it), while the fifth level demands a particular type of technical imagination and wide interdisciplinary knowledge. In addition to that, he concluded that most inventors work inefficiently because they do not have a systematic approach to their work and, therefore, attempt to solve problems by groping in the dark.

This conclusion led Altshuller to the idea to develop a systematic approach to the process of invention: TRIZ, the theory of inventive problem solving. He formulated the hypothesis that all technical systems evolve according to the same natural and predictable laws, basically the laws of physics. Once these laws are defined, it is possible to problem solve step by step and, at the same time, to develop a new systematic way of thinking. To facilitate the development of such a type of cognition, Altshuller started to formulate the Algorithm of Inventive Problem Solving (ARIZ)[37], which became the central element of the theory. The algorithm offered a list of analytical steps one had to follow while solving a problem. Altshuller believed that the consequent application of this kind of reasoning would lead to a logical solution and simultaneously save time.

In 1956, Altshuller and his colleague and friend, Rafael Shapiro, published their breakthrough article where they argued that "the study of the psychology of inventive thinking cannot be undergone in isolation from the study of the main objective laws of technical development" (Altshuller and Shapiro 1956). Contrary to the widespread notion that invention is the result of a sudden finding, so argued the authors, it is, nevertheless, the logical result of a scientific search, based on the identification "of the puzzle which impedes the problem's being solved with only the help of the usual, already known scientific ways" (Altshuller and Shapiro 1956). In the pages that followed, the authors analyzed typical methods of invention and proposed a concrete sequence of steps that were to help inventors to solve technical problems. Today, members of the TRIZ community consider this article to be the first published version of ARIZ, the algorithm of inventive problem solving.

This publication gained public interest and provoked a number of readers to contact the authors though mail correspondence. Aspiring to find like-minded people, Altshuller answered all letters; moreover, along with his answer, he sent back inventive puzzles, drafts of his publications and further materials that might stimulate communication. By this token, he established regular contact with the most active inventors across the Soviet Union who, with time, determined the core and geography of the TRIZ community.

Hence, the TRIZ community developed indirectly by correspondence and through individualized communication thanks to Altshuller's personal enthusiasm, which helped him to maintain correspondence with interested readers. As I mentioned above, most of his life he lived in Baku, a rather wealthy and capital, but still peripheral, city of the Soviet Union.

[37] In Russian – *Algoritm resheniia izobretatel'skikh zadach.*

In parallel to the extension of the network by correspondence, Altshuller launched thematic seminars in Baku on the basis of the Azerbaijan Industrial Institute where he had studied. The first seminar took place in 1958 within the walls of the Azerbaijan Ministry of Construction; later on this seminar grew into the Public Institute of Inventorism (*obshchestvennyi institut izobretatel'stva*), an institutional form comparable to *Université Populaire* in France and *Volkshochschule* in Germany. The People's Institute was open to all interested public and functioned on the quasi-volunteer basis in the evening hours. As far as the popularity of TRIZ grew and Altshuller's correspondence network extended, Altshuller started to receive invitations to come to different regions of the Soviet Union to deliver lectures or to lead seminars.

Eventually, amateur clubs formed by way of inventors who studied TRIZ and tried to implement it in practice. These clubs mushroomed across the Soviet Union. In St. Petersburg, (Leningrad, back then) the widespread recognition of TRIZ is connected to the personality of Voliuslav Vladimirovich Mitrofanov, who worked as the head of a department at the "Svetlana" plant. As Mitrofanov explained to me, inventorism – or industrial research and development, as some would call it today – was his actual everyday struggle. An engineer and head of the sector himself, he suffered from a lack of literature and methodology:

> I headed three laboratories then. And practically all the developments we worked on, they all passed through my department. And I wanted to find some theory, some methodology to teach them [to develop]. And yes, in fact, I could not find anything suitable. No methodology. Some things were there, of course, but still it was very hard.

Thus, when Mitrofanov first learned about TRIZ, he organized a seminar for the engineers working under his supervision. But, his organizational efforts grew over time. In 1973, he organized the so-called School of the Young Inventor within the wall of a municipal House of Culture in Leningrad. In the following years, the school was renamed several times: it was the Institute of the Young Rationalizer and Inventor, the University of the Science and Technology Creativity and then the People's University (*narodnyi universitet*). Today, Mitrofanov enjoys the reputation as the founder of the scientific school of "practical TRIZ."

Thus, the way TRIZ was institutionalized in St. Petersburg mirrors how it happened in Baku: a personal interest grew into an association of like-minded people who were able to invest their interest and effort within the framework of state-sponsored infrastructure: within the walls of the local House of Culture and in the form of the People's Institute, in this particular case. Houses of Culture, Public Institutes, schools, and more rarely, district libraries and regional

museums, were typical spaces that hosted these kind of bottom-up initiatives and provided them with institutional support and organizational help. For instance, they helped local initiatives to spread information and gain visibility on local and municipal levels. Thus, Mitrofanov's endeavor gained journalistic attention from *Smena* (Eng. 'changeover'), the youth targeting newspaper, which published an article about the Leningrad School of the Young Inventor. Funded through local municipalities and, in some cases, sponsored by local enterprises, these settings constituted important institutional contexts for socialization with like-minded people outside working hours.

As it emerged from the interviews, most followers learned about TRIZ at their workplaces, through publications or flyers.

For instance, Alexander (b. 1959) stumbled across Altshuller's book in the library of his plant:

> In 1972, I stumbled across the book "The Invention's Algorithm" in our library, at work. Why did I start to look for this? I came [to the plant] due to the [job] distribution [system] and, therefore, had to develop something. I guess, sooner or later I would find this material in any case, or someone would suggest it. Yes. And what I've done: I didn't get an idea to write Altshuller; I just organized a seminar at work and we started to study it, I led this seminar. And later I saw this flyer about the Vyborgskii House of Culture.

Similarly, Valentina (b. 1937) read an announcement at her workplace:

> In 1977, I saw in the corridor at my [workplace] an announcement that some University of Science and Technology Creativity had an open enrollment and all this is situated in the House of Culture [*DK*], just in front of our Institute… And that there was such a program, and among other things, the algorithm of inventing problem solving. And I thought: this is a nonsense! And this is why I went there.

Nikolai (b. 1925) learned about TRIZ when he was in Leningrad on a business trip from Sosnovyi Bor, an important industrial suburb, where a nuclear power plant is located:

> The first time, I heard about TRIZ [in our main office] in Leningrad. I went quite often for some issues in our leading organization. And somewhere there I had seen a VOIR announcement: [they] invited to study the theory of the inventive problem solving. And that's why [I went]. Back then, VOIR was a very strong organization, an important organization.

Most of my interlocutors – leaders of the community and practicing teachers of TRIZ – are professional engineers who dealt with inventorism before learning about TRIZ. Their involvement in the community was, therefore, in the mainstream of their professional

occupations; and yet, it would be wrong to imagine TRIZ as an exclusively professional community of engineers. According to my subjects' accounts, among the attendees of the University were individuals with all social and educational backgrounds: highly educated professionals and workers, school and university students and teachers, experts and housewives; among the concrete professions, my interlocutors remembered engineers, doctors, workers, artists, writers and a cook. In other words, TRIZ attracted different people interested in "creativity" as it is broadly understood. Some of them read about TRIZ in the *Smena* publication, others with word of mouth.

The regular curriculum of the University of Technical Creativity consisted of two years with a weekly charge of 2 days and 6 hours. The classes took place during the evening hours, typically from 6 to 9 pm, and included specific subjects, such as ARIZ (algorithm of inventive problem solving), RTV (the development of the creative imagination – *razvitie tvorcheskogo voobrazheniia*), and practical problem solving. With time, different subjects were introduced, depending on the specific interests of teachers. The University eagerly invited former graduates to teach, thus insuring the reproduction of the TRIZ community.

At the end of the second year, students were to write and submit a diploma project which was to be theoretical and a practical. The theoretical part consisted of a critical analysis of one of the TRIZ theses — based on the practical material; the practical part was an application of inventive problem solving. While the analysis of technical systems remained the core of the program, some courses, like for example RTV, the development of the creative imagination – one of the main courses in the curriculum, offered a much broader perspective on creativity. The ultimate goal of this course was to break the stereotypical reasoning and help students to think beyond their usual framework. I was told that during this course, Mitrofanov often used examples from literature, arts and music, thus, consciously breaking borders between arts and technology and suggesting that human creativity in all fields is of the same nature.

What I would like to demonstrate here is that attending TRIZ classes was, indeed, a demanding enterprise. It required a significant investment of time and, therefore, a strong personal commitment. Although students received a certificate after completing the program, it was a rather symbolical document, which did not formally improve one's professional situation or status. Yet, there are reasons to think that many people found the attendance of TRIZ classes subjectively rewarding. To give an idea of the popularity of TRIZ, I cite Valentina who described the level of attendance as follows:

> We had 50-60-70 people, sometimes 100. The conference hall was full. There were a lot of people. But in the course of the education there was a group of people who dropped out and left. And there were usually 30-40-50 people who defended a diploma.

The Leningrad case was not unique: similar initiatives were undertaken in Volgograd, Moscow, Novgorod, Novosibirsk, Petrozavodsk, Samara, to name just the best known. Every center developed its own particularities, often depending on the specific interests of their initiators. Mitrofanov, for example, was particularly interested in semi-conductors, the newest technological direction in the 1970s, the field, indeed, unknown to Altshuller. Today TRIZ followers distinguish themselves between the Ural and the Far East scientific TRIZ schools. According to Alexander, one of my interlocutors, "with time, this [TRIZ] scientific school turned out to be a public movement."

To summarize up, TRIZ is an example of *svoi* community organized around interest in "creativity" and based on the widely interiorized agenda of self-development and self-realization, which was characteristic of the late Soviet society. Moreover, similar types of clubs and associations provided Soviet citizens with venues and organizations for self-education and self-development, according to their individual interests and inclinations.

4.4.2. Crisis of TRIZ-Identity and Morality of TRIZ

In the course of the 1980s, and especially during the1990s, many TRIZ members emigrated to Germany, Israel and USA and got employment within different technological businesses. Moreover, some of them founded consulting firms based on TRIZ, which, in some cases, proved to be successful. In contrast, TRIZ-members who remained in Russia not only lost the infrastructure they relied upon, including state-sponsored Houses of Culture and other public organizations, but in many cases they lost their jobs too, thus, falling into the amorphous category of the post-Soviet *biudzhetniki* (Eng. - 'state-sponsored employees'). Some attempts to promote and mobilize TRIZ skills under the market condition led members to the field of youth pedagogy where TRIZ was welcomed as yet another method of child education.

With the beginning of the territorial Nagorno-Karabakh war between Armenia and Azerbaijan after the dissolution of the Soviet Union, Altshuller himself had to leave Baku. With the help of his disciples, he settled down in Petrozavodsk, a city in the Karelia region, about 430 km north of St. Petersburg, where, from the 1980s onward, TRIZ followers started to organize regular conferences. As one of my subjects put it,

> [in Petrozavodsk we] bought him a cooperative [apartment] in a Youth cooperative on the last Soviet possibilities [*na poslednikh sovetskikh vozmozhnostiakh*].

Regardless, it was a relatively easy opportunity to move to Germany or Israel because of his Jewish origins[38], as well as offers of assistance from his former students. Altshuller, however, refused to emigrate, insisting on his communist convictions and national belonging to the Soviet Union. Valentina remembers:

> Altshuller was socialist to the marrow of his bones. Even when he was completely sick and we asked him, "Please, for goodness' sake, go to Finland at least, we will cure you there." But he was saying, "No, I will not go anywhere, this is my Motherland." And he didn't go, although his students have already been gone.

Altshuller's socialist identity and especially his intellectual heritage after his departure in 1998 raised a new wave of discussions about the fate of TRIZ under conditions of marketization. In the memory of the community, this period is marked by a number of conflicts due to the attempts of Althsuller's offsprings to copyright his heritage and, at the same time, intentions of some of the TRIZ fellows to use the abbreviation for the promotion of his consulting services.

While under the Soviet rule, inventorism was a realm for self-development and eventually, a part of professions, under post-Soviet conditions, TRIZ looked like a unique method of problem-solving, a method, which could be described and placed into the "black box" of the copyright. To the surprise of some of the TRIZ followers, the context of competition on the free market did not further the free exchange of ideas. Indeed, some of my interlocutors mentioned with some bitterness that their emigrated colleagues do not teach TRIZ, but rather offer their consulting services.

> They understood there [in Western countries] that in a capitalist world it's not profitable to teach TRIZ, but better to invent things by yourself and then sell them. It's not profitable! Because, if you would teach TRIZ, everybody would be able [to invent things]. And then: how can I sell? Better I do it myself and sell afterwards.

Aside from frustrations caused by the "privatization" and commercial success of TRIZ by colleagues abroad, the Russia-based members of the community were divided by a more abstract controversy. This was one steeped in the morality of TRIZ under capitalist order. The

[38] Both countires, Israel (since the late 1970s) and Germany (since 1990) developed special programs of immigration for individuals with Juwish origins from the Soviet Union and later post-Soviet regions.

essence of this controversy can be summarized as follows: TRIZ is a universal method to problem-solving and as such can be compared to a universal "weapon." Teaching TRIZ can, therefore, be compared to the distribution of a weapon for which its user fosters bad intentions. I myself bore witness to a vivid discussion of this controversy at a TRIZ conference I attended in St. Petersburg in 2010. This topic was, perhaps, central for the final discussion of the conference. For instance, a handful of big, Russian corporations were mentioned as potentially "dangerous" clients, and had ordered and organized a number of TRIZ seminars for their employees.

To understand this controversy we need to come back to Altshuller's understanding of TRIZ as aiming at two interdependent purposes. The first: education for a new method of inventive problem solving. The second: education of qualities of a creative person (Altshuller 1985). To say in concisely, Altshuller believed that a truly creative person should have six necessary qualities. While five of them pertain to self-organization and individual work efficiency, the first and the most important one is having a "significant, new (not yet achieved) and publicly useful goal" (Altshuller 1985). In other words, creativity for Altshuller was a way to organize work, moreover, work which could bring public good.

Taking this perspective into account, it is easy to understand, why the post-Soviet attempts to marketize TRIZ and sell it as a method for private companies, raised discussions in the community. The delivery of private seminars for corporations would "privatize" knowledge, which afterwards could eventually be used "against" people — for instance, the increase of efficiency of advertisements and, therefore, accumulation of capital in hands of a few.

My ethnographic documentation of the TRIZ community in 2010-2012 demonstrates that even twenty years after the introduction of the capitalist economy, subjects who grow up under Soviet rule cannot take the issue of the commodification of knowledge for granted. They also tend to perpetuate a Marxist understanding of the universal labor that includes "all scientific labor, all discovery and all invention." Moreover, many of them seriously regret the particular atmosphere of free intellectual exchange and "cross-fertilization," which they enjoyed in the 1970s-1980s. As Alexander put it,

> […] this was a completely free exchange of ideas. To some extent it is still implied within the TRIZ milieu. Plus, there is such an aspect: self-regeneration. I can easily figure out something new, and I don't mind; it is much more important to me that this new could be implemented. Even if my name would be in co-authorship, or without my name at all. I don't mind, because I can figure out some other things. There are more than enough

> [*vyshe kryshi*] of ideas. This is not a philosophy, when one stole an idea, is not able for something himself, and then cocks his nose for the rest of his life.

The feeling of the continual loss of the free-exchange of ideas expressed by Alexander and many of my other interlocutors resonates with the regret of the VOIR executive who I cited above: "It was possible to cooperate," he said. "That was the strength of that time."

4.5. CONCLUSION

Technical creativity, which I addressed in this chapter, was a social space, which provided individuals with multiple contexts for socialization and self-realization and, at the same time, with institutional infrastructure, which enabled them to participate, in practical or imaginative ways, in the collective project of modernity. This social space can be imagined as an infrastructure, a network of DIY-spaces, that were created to foster DIY skills and were themselves co-produced thank to the efforts of enthusiasts.

Although some authors tend to describe this realm as a top-down authoritative project of the formation of non-reflexive Soviet subjects, my ethnographic material demonstrates that "technical creativity as an infrastructure" was very much a result of individual endeavors and aspirations. Rather than addressing it as a top-down and politically motivated project of social engineering, I suggest, that the world of technical creativity was a framework, which fostered solidarities around imagined futures and values, helping to build these futures.

In contrast, the controversy that divided the TRIZ community in the post-Soviet decades demonstrated disagreements about the eventual destinations of contemporary Russia and systems of values that underlie those destinations. While the Soviet version of modernity was "do it yourself, but for all," the post-Soviet interpretation lacks any clear consensus and instead is often articulated with help of narratives of loss.

In the next chapter, I will show how DIY manual skills acquired and developed within various contexts of this DIY infrastructure were accommodated in the post-Soviet years and how these experiences influenced the status of DIY knowledge in contemporary Russia.

CHAPTER 5
THE CULTURAL BIOGRAPHIES OF SKILLS

In this chapter, I return again to the post-Soviet context, that is the timeframe of my fieldwork, and explore some of the "Soviet DIY practices" as they are remembered and narrated from the post-Soviet perspective. More specifically, I address two individual biographies that inform the ways in which two Soviet citizens, one female and one male, received manual skills training promoted by the state and made these skills an important part of their intimate worlds. I am particularly interested in how my interlocutors inscribe these manual skills into the narrative of their subjective self-realization. While suggesting this analysis I would like to demonstrate how the discourses and institutions of *samodeiatel'nost'* and "technical creativity" effectively co-produced the intimate worlds of the late Soviet generation.

Methodologically, in this chapter I rely on Igor Kopytoff's method of drawing cultural biographies of things, though in my case I'm focused on skills rather than things. In other words, I explore the dynamics of value and social meanings that particular knowledge and skills receive and lose at different historical moments. I also pay particular attention to how these dynamics of value inform gender regimes and subjective perspectives on knowledge as part of the modern world.

In his often cited article on the cultural biographies of things, Igor Kopytoff (1986) gives attention to the cultural and cognitive processes that enable some things to become "commodities" while others remain, quite simply, "things":

> Commodities must be not only produced materially as things, but also culturally marked as being a certain kind of things. Out of the total range of things available in a society, only some of them are considered appropriate for marking as commodities. (Kopytoff 1986, 64)

Moreover, Kopytoff emphasizes the temporal and situational contingency of the differentiation between commodities and things:

> […] the same thing may be treated as a commodity at one time and not at another. And, finally, the same thing may, at the same time, be seen as a commodity by one person and as something else by another. Such shifts and differences in whether and when a thing is a commodity reveal a moral economy that stands behind the objective economy of visible transactions. (Kopytoff 1986, 64)

This logic, which Kopytoff applies to objects and bodies, can be transposed to the knowledge and skills involved in the production of things and commodities. Not every "ability to make" is socially recognized as a "skill" or a "competence." A particular knowledge and "know how" needs first to be socially constructed as such and endorsed with a particular moral and practical value. Moreover, those values do not necessarily follow the same moral line. Some practical skills can very well be necessary for the everyday household, but ignored or downgraded on the scale of moral value or social prestige. Furthermore, much in the same way that it is with things, the value of skills is historically contingent: skills that were of great value in the past can lose their significance with time, due to changes enacted upon technological and moral regimes that were involved in the production of their value.

In what follows, I will show how the socio-political transformations of the late 1980s-1990s transformed regimes of value involved in making-do and DIY practices and how these transformations affected the professional and personal worlds and subjectivities of individuals. Taking inspiration from Kopytoff's text, I read the biographies of skills that I encountered in my field research as examples of commodification of knowledge, occurring due to the fact that they suddenly received a differentiated exchange value.

5.1. LARISA

Larisa was born in 1955 in a small mining city in the Donbass region of Ukraine. Her native town, Stakhanov, was named after a miner, Alexei Stakhanov, who in 1935 became a Soviet hero and public celebrity due to his labor record: he had mined 102 tonnes of coal in 5 hours and 45 minutes, which amounted to 14 times the quota; [39] this record gave the name to the "Stakhanovite movement," which I mentioned in the previous chapter.

When Larisa was 7 years old her father, a mining engineer, and her mother, a trained accountant, decided to relocate to the Komi region in the Russian North, because taking jobs "in the north" implied special bonuses, referred to as "northern money" (*severnye den'gi*), and the immediate allocation of an apartment to young specialists. After the move, the family enjoyed a relatively wealthy life and supplemented the monetary advantages of the North with fruits and vegetables

[39] Later, Stakhanov set up and achieved new records and was widely mediatized across the Soviet Union as a model of socialist labor. Today, the history of the Stakhanovite movement and Stakhanov himself is very much contested and studied as an example of complex and contradictory relations between the state, industry and local initiatives (Siegelbaum, 1988). In everyday Russian speech (just like in French too), *stakhanovsy* became a common noun to refer to someone who works too much, often used ironically. It can also be used in a negative form in order to justify reducing work, *i.e.*: "I am not a *stakhanovets.*"

from Ukraine where their daughter spent every summer with her grandparents, returning to Komi loaded with home-made preserves and compotes.

Soon after relocating, Larisa met Tamara, her first crafts teacher, and, as she defines it, "fell in love" with her. As Larisa explains, it was thanks to Tamara's patience and perseverance that she acquired basic skills such as dressmaking, knitting, appliqué pattern and other garment-making crafts.

While youth clubs in large cities were typically concentrated in the so-called Houses of Pioneers, in small towns children spent most of their time at school: they would attend classes in the morning, and were welcome to return in the evening for extra-curriculum clubs and sport sections. Larisa explains,

> […] the town was small, and naturally, there was a lot for children. We had possibilities to attend different clubs. And in our school there were a lot of needlework clubs, and I learned everything there.

These activities were free of charge, but students were encouraged to bring materials with them. The network of parents was typically asked to help clubs with tools and raw materials. In some interviews, I was told about parents who negotiated at their work to provide clubs with machines and materials, typically those deemed non-standard or somehow deficient or old and thus discharged.

Although today crafts classes are sometimes remembered as something typically "Soviet," they were in fact introduced into the curriculum relatively late, in the late 1950s and early 1960s as a part of Khrushchev's program to connect school and industry. In different schools and regions classes took different forms depending on local opportunities to hire teachers and provide schools with necessary equipment (Interviews with Stoliarov, Galina, Elena, Larisa). Finally, the subject was introduced under the course name "service labor" (*obsluzhivaiushchii trud*), which offered an anachronistic allusion toward the "bourgeois" gender division of labor and hierarchical relations in which one would "serve" somebody else. Perhaps because of this awkward rhetoric, this school subject was always referred to in short as "labor" (*trud*), and some of my subjects expressed clear surprise to hear the full name of the class. Nevertheless, the class indeed reproduced the "traditional" distribution of gendered skills. Boys and girls were taught separately: boys had to master industry-related skills, such as working with a turning lathe or the basic operations of metal and timber processing, while girls focused on cooking and sewing (Golubev and Smolyak 2013, 3; Reid 2005, 299-301). In some cases, especially in new

cities and districts where schools were built from scratch, these classes enjoyed large working spaces equipped with machinery and sewing machines.

In addition to school classes, Larisa learned from one of her neighbors, who noticed Larisa's interest in garment crafts and decided to pass on her knowledge and skills:

> There were two women who lived on our block, they were from the purges, they had been repressed (*iz repressirovannykh*). Because this was in the North, there were a lot of such people. They had no grandchildren, no children, and they were perhaps well over 60 years old, and they looked very ancient to me. And, so one of them just pronounced (*prosto v prinuditel'nom poriadke*) that she would come to my place, in our apartment, and would teach me. Yes. And she taught me to embroider napkins and collars, and lace which is called *viunok* (lit. Eng 'twiner'). Now this technique is already forgotten, but when I saw it at a flea market by chance, I realized that I knew how to make it. And I remembered her with gratitude. I don't remember her name any more, I was about 10-11 years old back then, around there.

As Larisa's case reveals, the acquisition of skills that are usually imagined as "traditional," passed down within families, was in fact often "relearned" and "reinvented" anew (Hobsbawm and Ranger 1983) through specialized courses and/or with the assistance of experts "from the old Russia." Larisa's experience is not unique in this sense. Nadezhda mentions that sewing and other garment-making skills were a part of home education for girls from "good families" at the turn of the century – as opposed to peasant women who, according to her, were not skilled in textile crafts. Another subject, Tatiana, says she attended special courses to learn sewing and knitting and regrets that she didn't have enough talent to do it well. Finally, the youngest subject of my sample Olesya told me with a great deal of irony that she had attended home-based private embroidery classes in Leningrad in the 1980s, but didn't learn much.

As Larisa explains, her mother "was not a needlewoman; she took it easy, she was not even able to knit a sock," her grandmother from Ukraine "needled a bit," and only her great grandmother was remembered in the family as a "great *rukotvornitsa*," an unusual poetic term to speak of a someone with "creative hands." Although Larisa did not get to know her great grandmother "in an active state," as she put it, some of her crafts pieces remained in the family and probably made an impression on Larisa as a child. Still, Larisa emphasizes that she did not have a practical model in the family:

> You know, when someone sits with you and says, "Make like I do," I did not have that in my family.

Nevertheless, Larisa's parents welcomed their daughter's passion and encouraged her to continue. They bought specialized books and tools for her.[40] At the age of ten, Larisa already had her first real single needle sewing machine, and at the age of fifteen she received a professional pedal-operated *Chaika* (Eng. 'seagull') from her parents. The *Chaika* makes it possible to sew several different stitches and still enjoys the reputation of an extremely durable and low-maintenance machine. Its efficiency increased even more when Larisa's dad supplemented it with an engine, thus rendering the good standard machine ultra-modern. Indeed, upgrading and "improving" ready-made technologies (for instance, by supplementing a mechanical tool with an electric engine) was a common phenomenon in Soviet society, understood as "improvement" and the performance of technical ingenuity. As I argue in the first chapter, an object was never considered "finished" in Soviet everyday life, and was always subject to eventual modification and transformation.

The purchase of a sewing machine was an investment: it was "hard to get" and expensive, but her parents were happy to invest in such a hobby practiced by their daughter:

> At that time it was in demand, because there was nothing in the shops, and I think that my mom was very happy, because when I was nine years old my sister was born. That same year I had already sewn a dress for her, and it [the dress] was met with appreciation among the adult women. Because… it was like the right approach: it was considered that when there is a girl in the family who knows how to sew, it's good [...] And since I was fifteen years old I made clothes, if not for the whole family, then certainly for myself and for my sister.

Having a sewing machine at home was a sign of luck and wealth in the 1950s and 1960s and a sign of resourcefulness in the 1970s and 1980s. Having skills that enabled one to produce fashionable items was crucial. As some of my other interlocutors emphasized, they regretted not having learnt this or that skill (sewing or knitting, for example) or, on the contrary, were glad and even proud that they could do this or that by themselves. During the late Soviet period, most urban families had machines or access to them at their relatives' or friends' places, yet the art of dressmaking was of particular importance. This art was not considered something natural that went without saying, but rather something that embodied the "right approach" in terms of education, and as something useful for one's future life. Importantly, such skills were seen as

[40] Indeed, for the period of late Socialism, historians document a significant increase in "the number of good housekeeping books, which devoted large sections to the making of clothes in home conditions: while in 1956 only one such book was published in the USSR, in 1958 their number rose to fifteen titles. In 1959 and 1960, thirty and twenty-nine good housekeeping books, respectively, were published in the USSR" (Golubev and Smolyak 2013, 7).

worthy of familial investment, as they increased the chances being able to successfully maintain the household regardless of the economic situation, goods shortages and other eventual exterior troubles. Moreover, in addition to practical considerations, "the right approach" included the morality and pedagogy of manual labor. As early as the 1920s, Soviet pedagogues argued for the importance of holistic education, which would include productive manual work on the same basis as intellectual education. Anton Makarenko (1888-1939) and Stanislav Shatsky (1878-1934), to name the most famous theorists, also managed to successfully apply their theories in practice – in the youth colonies and the largely self-organized educational communities that they built, where manual work was combined with intellectual education and artistic leisure practices. Makarenko's pedagogical success was particularly spectacular, as he worked with orphans of different ages who often had hefty criminal histories, and achieved tangible results: his students not only formed a stable collective with constructive social attitudes, but his second colony also became an effective economic enterprise. The revenues received through sales of the instruments and other items produced there were sufficient to cover the colony's expenses and even to provide fellowships for former students who went on to begin higher education (Halvorsen 2014).

In my interview with her, Larisa emphasizes that the entire history of her crafts education is the result of her own interest and life choice. Although her parents welcomed such a hobby and encouraged her by buying tools and materials, and although neighboring women considered it to be "the right approach," Larisa's attendance of classes and her further self-education through books and experiences were activities guided by her personal interest and pleasure. Ultimately, it was she who "fell in love" with her craft teacher and with the practice of making. This self-driven motivation is a crucial factor, as it demonstrates that in Larisa's case the acquisition of "traditionally female" garment crafts was, in fact, a "modern" practice, and her parents' support of their daughter's hobby was an effect of a "modern" education with its focus on a child's individual preferences and inclinations. Moreover, the availability of the state sponsored infrastructure of this kind of knowledge and the inculcation of values of manual work into the public discourse rendered it even more "modern," as it was discursively associated with the actual social and political agenda of building a new and a better future. This hobby was, however, never considered by Larisa's family to be her main vocation.

Regardless of the official rhetoric of egalitarianism and the decent economic remuneration of working professions, by the late Soviet period the urban educated population still valorized intellectual labor more than manual. For instance, although Larisa's parents were happy that

one of their children had such a useful practical skill, nobody imagined sewing as her eventual profession:

> It was somehow always imagined in the family that, of course, I must have a university degree […] and I studied well, I had only "good" and "excellent" in my records. […] Entering a vocational school would be a shame for me, because I have always been oriented towards the higher education only.

Such orientation toward higher education was very common not only among the urban population, but also in rural areas. Thus, as another female subject, a professional translator from English, explains:

> You know, take me, for example: my roots, so to say, are peasant, absolutely cotton-picking (*prostetskiie*) roots. But I am graduated from the university. […] and in most cases it was considered… how [could it be possible that] a kid not go somewhere to study? In the majority of cases...

Larisa's case reveals significant distinctions in the social framing of manual skills – in this case garment-making skills: as a part of "tradition," a category in which gendered manual skills are naturalized and therefore are not seen as labor, but rather as a "natural duty"; as an element of the "right approach" to education, where it is understood as a "useful skill" applicable to making-do and fostering self-reliance and practical independence, considered particularly useful for girls; and as a profession, which commodifies "traditional skill" and exchanges it for monetary remuneration. In the last case, the gender does not really matter, although "traditionally" more girls than boys are involved in the textile industry.

These distinctions are important because the framework of the so-called "traditional division of labor" implies the naturalization of particular duties as components of gender. This naturalization leads to the non-recognition of some types of work as significant individual efforts that deserve remuneration and, therefore, prevent this work from becoming a commodity with an exchange value. The professional context, on the other hand, creates an institutional framework that allows the same (or similar) types of work to become commodified labor, even in the absence of a labor market in socialist countries. Martha Lampland demonstrates in her book *The Value of Labor* the ways in which the creation of cooperative farms in Hungary and the introduction of the wage system made crucial changes in the structure of agricultural work, dissociating the natural cycle of the seasons from the meanings of peasant labor. The introduction of the scientifically designed wage system on the cooperative farms created a structural change in the understanding of work on the land as paid labor rather than the "natural

work" of the peasants, driven by "tradition" and the necessity of providing the essentials to carry on living (Lampland 2016).

This reasoning clarifies the dynamics present in the understanding of education and gender. First, as Larisa's and other subjects' experiences reveal, by the 1960s the often imagined analytical continuity of domestic gender education had been interrupted. The significant social and geographical mobility characteristic of the early Soviet decades not only drove entire generations asunder, but also created new values and expectations of different styles of life that were positively received by the population. Education (and higher education in particular) was imagined to be the main way to achieve success for both men and women (Tromly 2014). In many urban families, so-called "traditional" gendered manual skills were, perhaps, expected and desired, as they could help to solve everyday problems, but not necessarily practiced, as individuals often did not have enough education and training. Nevertheless, the lack of training and skills did not greatly challenge traditionally gendered affiliations. Larisa's neighbors still considered garment-making skills to be the "right approach" when it came to a girl's education.

Second, in a setting where the tradition of passing down manual skills was fading away, the state itself took the role of the promoter of manual skills for both girls and boys, and made efforts to put in place infrastructures such as clubs, school classes and published materials that partly (but not always) maintained the traditionally gendered division of labor. On the discursive level, these infrastructures promoted modern values and emphasized concepts such as self-reliance, independence and even "fashion" – framed as proof of "good taste" and the ability of a young individual to create his or her unique style. Broadly, these ideas addressed both women and men, though the intensity of this discourse was particularly tangible in the good housekeeping books and so-called "women's magazines," for instance in *Rabotnitsa* ('Working woman'), *Krest'ianka* ('Peasant Woman'), *Ogonek* ('Spark'), *Sem'ia i Shkola* ('Family and School'), and others (Reid 2005; Smolyak 2011; Widdis 2009). The role of fashion in late Soviet society is of particular interest, as it made young men learn some "feminine" garment-making crafts to complete their own fashionable looks. Thus, in one interview, a male subject reported with great enthusiasm that he and two of his friends had sewn sport T-shirts for themselves: they bought three T-shirts of the same size in three different colors, cut them and sewed them back together to create three tri-colored shirts (Interview with Kirill, b. 1952). The acquisition of sewing, embroidery and other garments crafts by men for the sake of style were typical for the late Soviet period, which was characterized by the growth of youth sub-cultures.

Finally, although "traditional" gender roles were, in fact, reproduced by the structure of school classes and by published materials, they were often framed in terms of professional orientation and/or hobbies, rather than "natural skills." In other words, all Soviet boys and girls were encouraged to develop manual skills that would help them both to be better prepared for the everyday life of adulthood and, at the same time, to fill the positions of technicians and engineers in different branches of the national industry. At the same time, girls were even more expected to be seen, for instance, in textile institutes and in pedagogical universities rather than in the aviation high schools (I will come back to this discussion later in this Chapter).

Unsurprisingly, when the moment to choose a university arrived, Larisa entered the Textile Institute:

> I wanted to become a teacher of craft only; the only thing… I didn't know how to make it. And that's why I entered the Textile Institute [in Leningrad]… I thought this was such a direct way.

Larisa studied at the evening-shift department and successfully combined her classes with a job at a textile mill where she rapidly moved from a worker to a technician's position and received a decent salary of 160 Rub (to comp.: a teacher earned 120 Rub). Yet, it took her another couple of years to realize that the Textile Institute prepared future engineers for the textile industry rather than for teaching; and in order to become a teacher she would have to transfer into the Pedagogical Institute. Regardless of her successful career at the textile mill, and of the surprise and even disappointment of her parents ("my family did not understood my choice") who had hoped to see her become a successful textile engineer, after four years of studies, she decided to switch paths and fulfill her childhood dream. Larisa explains:

> You know, I am part of that generation, well I wouldn't say so about everybody, but in our generation in order to become a creative person (*sostoiat'sia kak tvorcheskaia lichnost'*), one would get work as a street cleaner…

In this passage Larisa refers to a (nowadays legendary) practice of the late Soviet period, when young people who did not want to follow the predictable tracks of Soviet socialization preferred to take marginal jobs in order to pursue a "free" style of life. Thus, young artists, musicians and other individuals who aspired to creative labor outside of officialdom looked for jobs as custodians, coal-heavers and street-cleaners in order to obtain the minimal level of financial

security and thus of necessary social integration, coupled with an abundance of free time and (in some cases) additional space for creative work.[41]

In Larisa's case this analogy is particularly striking, as her own choice was, in fact, perfectly inscribed and standardized within the Soviet institutional system of education and employment. Yet, she makes this parallel in order to emphasize the creative side of her work and the subjectively significant rescue of her own creative self-realization, which she describes as typical of her generation. Thus, her decision to pursue the seemingly very "Soviet" career of craft teacher appears therefore to be an act of emancipation and empowerment which valorizes personal choice and a creative style of life more than the social and economic privileges of a textile engineer profession.

After successfully graduating as a teacher, Larisa got a job in an elite pioneer camp, *Zerkal'nyi*, which hosted school groups all year round and, consequently, had a school for students who attended from September to May. This school was Larisa's choice: good students had a privilege to negotiate their work destinations first and, therefore, had more choice than their less hardworking classmates. Situated in a splendid place on the lakeside in the pine wood region of Karelia, about 100 km north of Leningrad, Zerkal'nyi camp also offered excellent working conditions. Larisa received a one-room flat in the camp dormitory and a well-equipped class.

Larisa remembers:

> I graduated relatively late. I was 25, I had no family, I had nothing, and I worked sometimes until 3.00 in the morning and I realized: this is happiness, here it is. Because I had a wonderful workshop, we had a good choice of sewing machines, we had everything, and I think this was the happiest time in my life, because we could do everything. And the workshop was huge, with four windows, about 80 meters, I think. And the other girls were so nice, and everybody was so motivated…

Larisa's life trajectory is particularly relevant because she deliberately chose a profession which was often taken on out of necessity by others. I know teachers of crafts who chose this professional track due to physical injury (for men) or the inability to find a better job after a

[41] Under socialism, social integration through labor was essential and both legally and institutionally maintained. All members of the population of the working age were supposed to be employed and all educational institutions provided their graduates with jobs in different regions of the country through programs of *raspredelenie*, or 'assignment'. Although the destination was subject to negotiation, it still obliged young individuals to work for at least some years according to their learned professions. Individuals without professional occupations were considered to be *tuneiadtsy* (Eng. 'idlers') and from 1961 to 1991 were subject to legal prosecution. See: Lastovka 2012.

long maternity leave (for women). In contrast to these cases, Larisa, who was overall a good student and was free to choose any profession, decided to become a teacher "because of love" and a subjective rescue of her own creativity and self-fulfillment.

By the time I spoke with Larisa in 2010, she considered her life to be dramatic, if not tragic. After I explained the subject of my research to her, Larisa exclaimed, "Ah, this is my whole life" and then added: "All this turned out to be very tragic for me, though I loved it."

It was she who spoke the words that I cite at the very beginning of this text to describe the emotional ambiguity performed by some of my interlocutors. To make sense of such a strong shift in Larisa's interpretation of her life, I will return to the analysis of the dynamics of different value-regimes towards manual work, and to Herzfeld's concept of cultural intimacy.

5.1.1. The Woman's Home Work as a Place of Russian "Cultural Intimacy"

Larisa's profession became increasingly marginalized in the late 1980s - beginning of 1990s. A few years after Larisa's arrival at Zerkal'nyi, the subject that had previously been called "service labor," and which focused on the acquisition of basic "traditional" skills useful in the everyday life of a household, such as cooking and sewing for girls and carpentry and turnery for boys, was renamed as "publicly useful labor" (*obshchestvenno-poleznyi trud*). This change was directed at reviving the old project of bringing school closer to industry: the very project that had been envisioned under Khrushchev in the late 1950s, but that had remained mainly unrealized. Practically, it implied, for instance, that a number of teaching hours would be devoted to the upkeep of the school, in the form of tasks such as clearing leaves from the school grounds, or sewing costumes for school plays. Moreover, a number of hours were now referred to as "industrial professional training" (*uchebno-promyshlennaia praktika*), which advanced the program of early professional orientation. Henceforth, instead of sewing and making clothes with the girls, Larisa had to accompany students in collecting leaves from and generally cleaning the grounds of the camp.

Soon, following the logic of Perestroika, this reform was directed at making possible for the schools a limited degree of commercialization of those products crafted during classes. Larisa mentions an example of a particular school from Leningrad that managed to successfully organize retail:

> This was an opportunity to earn some money for the school. I know that there was an exemplary school, N308 […], and that they had their own sewing shop floor. Girls could first learn the basics of sewing on regular sewing machines there and then, without changing place, and then switch, in the 6th or 7th grade if I'm right, to the industrial machines and execute some orders for the school. On the one hand, this was right, because the school could earn at least some money there. And students could get some pocket-money, when they had practicum there. […] I think this was quite well thought-out back then.

A similar experience of commercialization was mentioned by Olesya, one my youngest interlocutors (b. 1979), who was a school child back then:

> During Perestroika, a shop was opened in our school; and children were supposed to sell their handmade things there. […] Yes. Maia [her school friend] and I, we went there as sellers. Maia brought her fluffy toys that she made herself. She could really sew those dogs, as many as you want. And these dogs looked like the ones from the shop. Yes. And I brought some dolls sewn by Olga [her sister, b.1976] but I helped her too, I sewed dresses for them. And finally we sold some. As we were sellers, we were selling not only our dogs and dolls, but other things too. Yes, for instance, one musketeer. Olga and I, we made some male dolls and dressed them like musketeers. And some female dolls that we dressed like ladies. And my mom bought one musketeer, I guess, it is still somewhere there. But all this looked a bit false to me, because we wanted to earn money with something we were doing ourselves, but in fact there were again our parents who were giving us money, I mean this was such a fraud (*laughing*). But my mom said, "No, I want to buy this musketeer." As I remember, this shop did not function for a long time. I remember we sat there on several occasions, behind the counter, and then it was over […]. But we still earned some money, And I remember that we divided this money fairly, half-half.

This kind of school professionalization was, however, hard to achieve in a camp, where students typically came for no more than two weeks at a time. The experiments that were taking place in the cities, therefore, were only echoed in Zerkal'nyi, where the hours devoted to "industrial professional training" were mainly used for gardening and refurbishing the grounds.

Within another couple of years, a number of school hours devoted to "labor" were substituted by another new subject entitled "Basics of informatics and computer literacy." This change came as a result of a new way of thinking about work and professionalization that arose during the information age (Tatarchenko 2018). Theoreticians of this new line of thinking urged for the reconfiguration of the school curriculum, with the "labor" course as the first target for replacement. As a result, Larisa first lost her spacious classroom and was relocated into a small room, and then, soon after, also lost some of her working hours.

Ironically, the "modernization" of the school curriculum occurred in parallel with with the very process of "demodernization" of knowledge and skills that some years back had inspired Larisa to choose her profession. Moreover, the transformation of the school program symbolically pushed these manual skills back to the realm of "tradition" and house economy, where they constituted useful (female) practical skills, rather than knowledge that one could relate to the "modern profession." Contrary to Larisa's expectations, the school subject known as "labor" (*trud*) was less about particular crafts than it was about public conceptualizations of "work" that changed over time.

At the same time, the metamorphosis of "labor" as a school subject informs complex negotiations about the development of the national economy in the late Soviet period. First, the transformation of "service labor" into "publicly useful labor" signified a return to the long-standing Soviet agenda: to abolish borders between the "private" and the "common" household, and to foster the continuum between "working for yourself" (*byt*) and "working for the community" (*kommunal'nyi byt*). Second, the substitution of hours originally designated for crafts by informatics and computer literacy classes is indicative of a more broad reconceptualization of "work" in the national economy of the information age.

Yet, for Larisa these transformations meant a crises of professional identity. The experiments with the school curriculum were soon aggravated by the general underfunding of schools in the beginning of the 1990s, which pushed the issue of everyday survival to the foreground. Larisa remembers,

> And then the 1990s came, I remember, in 1991 my daughter was born, and I had a dilemma: to put the whole onion in the soup or only a half; to leave the gas on, because I had no more matches, or to turn it off. Yes, I lived through all of this.

"Socialism lasted longer" in Zerkal'nyi, as Larisa put it. The administration made an effort to keep the personnel employed and to help them. Larisa, for instance, was presented with the possibility of substituting some of her diminished hours by working in the camp's library. Moreover, all employees were given lots of land on which they could grow vegetables, something that became an important support for the family household, yet increased the amount of work (on the role of dachas in the post-Soviet system of provision see: Caldwell 2004; Clarke 2002; Hervouet 2009).

Larisa's narrative is particularly illustrative of how the "traditionally female" domestic effort – the role of the mother, the responsibility for the household and the house economy – are combined to create the everyday burden of physical work. This assemblage of duties, necessities and physical (manual) work constitutes precisely that pole of the Russian realm of self-made culture which is associated with pain and sorrow in post-Soviet narratives. Although this pole is shared by men and women, its expression is particularly articulated by women, as socially they remain responsible for the successful administration of the household and, therefore, "guilty" when unable to fulfill this expectation. And yet, as Larisa's narrative demonstrates, the work and effort that embody this burden is, nevertheless, (at least potentially) impregnated with associations of pleasure and self-realization. In the passage, Larisa continues:

> I simply lived through such a long period in which I was a breadwinner, and I am in such a state of a workhorse, that is why there is neither strength nor time enough left in me to fly.

Or in a different moment of the interview:

> But I am not quite indicative of an average being, because I always work to make ends meet. But, on the other hand, when I forget that I need it to survive, I still do it with pleasure, and I am usually pleased with the result.

The idea of flight and pleasure are still present. And while Larisa considers herself as not "an average being," the thread of her narrative is very recognizable for those who know Russian culture well. The mixture of pleasure and pain is precisely what Herzfeld calls "cultural intimacy." Its intimacy comes, particularly, from the fact that in Russia the experience of the 1990s is a shared knowledge. As Herzfeld notes, cultural intimacy often corresponds to behaviors that fall into the narrative of "common sense" for insiders, but look marginal to, and therefore should be hidden from, outsiders (Herzfeld 1996). I was an insider for Larisa, and she shared her story without signs of shame or embarrassment. Yet these emotions are detectable as well. In a different moment of the interview, Larisa remembers,

> I remember, there were so many old women on the streets [in St. Petersburg] who obviously tried to sell everything they had at home. [I had] such a feeling of sorrow. And, at the same time, I saw these were sometimes very beautiful things, and I wanted them so much. Rather, not so much beautiful, but useful.

While the dynamics of the school curriculum destabilized Larisa's professional identity, the socio-economic change of larger historical scale rendered her professional skills an "archaic atavism," perhaps useful in the household, but ultimately considered unworthy of pay. In other

words, the labor she had chosen once again became de-commodified. While it retained its use-value in terms of everyday struggle, it increasingly lost its exchange value. When Larisa saw elderly women selling "beautiful and useful things" very cheaply, she could easily identify with them: just as the labor embodied by the sophisticated and time-consuming embroideries she saw for sale did not cost much, her own labor and skills belonged, at that moment, to the same "price category." Though able to appreciate the level of craftsmanship, the amount of work and beauty of these items, she could not buy them, as she was not payed herself. Although Larisa belonged to a much younger generation than these women, symbolically she remained in the past: her profession, which she consciously chose and acquired and which promised her a stable and independent existence in a prestigious location, pushed her back in the symbolical scale of time. In her 50s, she concluded that her professional choices were a failure: "all this turned out to be very tragic to me, though I loved it."

After the disbandment of the Communist Party and its youth divisions, the camp no longer received children from the so called "pioneer leadership" (*pionerskii aktiv*) and was fully handed over to the collectives of the St. Petersburg Palace of Youth Creativity, the former Palace of Pioneers, which increasingly brought children with a different social background who were rather disinterested in acquiring manual skills. The moral value of the subject also changed:

> First of all, the attitude in families is very different. Rather, in the Palace not everybody is motivated to do manual work. […] When the school received children from the leadership reserve, these were mainly students from good families, and often from workers and peasants' families, that's why the motivation to learn some skills, some basics of crafts… it was ingrained. There were no questions. Of course, there always were some girls who did not want to, but it wasn't a mass phenomenon, like now. […] Now they cannot and they don't want. Hands are underdeveloped now, there is no capacity to sit diligently, no attention. When it comes to handwork, now it's just… Very significant changes.

Larisa did not teach her daughter any garment-making skills. Instead, she prompted her to learn English and to move away from Zerkal'nyi as soon as the chance presented itself. As a student, her daughter still learned to make macramé lace, perhaps the only technique that her mother did not practice. Yet, today it is nothing more than a hobby in her life.

5.1.2. THE PLACE OF WOMAN IN SOVIET MODERNITY

While Larisa's case reveals how "traditional female" work was first commodified and, therefore, modernized, in the Soviet period, and then once again de-commodified after Perestroika, Larisa's case is also very suitable to a discussion of how the Soviet modern project imagined gender roles in socialist society.

The "female question" was central for Soviet ideologists, because the woman was seen as the keystone in the struggle for the transformation of the "backward population" into a "modern Socialist society." As I explain in Chapter 3, thinkers of the Russian revolution aspired to revolutionize and transform *byt*, theorizing it as an immediate material context of life that dialectically determined social values and political views.

Immediately after the revolution, the Soviet constitution of 1918 proclaimed the full legal equality of women and men. The next step would be to educate the Soviet woman, as everyday practice ("habit and custom") remained more conservative than politics and the legal framework:

> Custom is accumulated through the elemental experience of men; it is transformed in the same elemental way under the pressure of technical progress or the occasional stimulus of revolutionary struggle. But in the main, it reflects more of the past of human society than of its present. (Trotsky 1923)

From this perspective the woman, traditionally imagined as responsible for the household (*byt*) and the education of the next generation, was the key agent for transformation. Yet, in order to become the political driving force from the household and beyond, the woman was to be liberated and to join the agenda of the Revolution.

Lenin, Trotsky, Kollontai, Bebel' and other early Soviet ideologists theorized domestic "female slavery" as an effect of private property, which rendered Woman a property-like object. Following this logic, they believed that in addition to the introduction of legal rights, it was the abolition of the institute of private property that would achieve economic and social emancipation. As Lenin formulated in his article published on International Woman's Day, March 8th 1921,

> …the main step – is the abolishment of the private property of land, manufacturers and fabrics. By these means, and by these means only, [can] a way to the full and real liberation of the woman [be] opened; liberation from

> "domestic slavery" by means of the transition from a small single family household to the big public [economy]. (Lenin 1921)

Thus, the transition from work carried in support of a single family to labor realized for the sake of the whole of society was seen as a crucial step on the way to the political emancipation and empowerment of women. As Larisa's case reveals, both of her professions – of textile engineer and of "labor" teacher – realized this ambition, as in both cases she was able to pursue her personal drive for self-realization while being economically independent and socially valorized. In other words, while it essentially remained a "traditionally female" occupation, her career was built according to fundamentally Socialist modern imaginaries.

As a key figure for accessing family-level relations, the woman embodied the potential of both a danger, if she purported "bourgeois values" such as religion and home-centrism (the petty-bourgeoisness, *meshchanstvo*) (Paert 2004; Vihavainen 2006), and a faithful ally, if she aligned herself with the morality of the state. For instance, popular literature constructed the woman as responsible for promoting values of "culturedness" in the family (Reid 2004). As a result, in the official Soviet discourse, the woman became an important target for socialist reeducation in many different ways.[42]

The attraction of girls to male-dominated work sectors remained in the early Soviet agenda for both ideological and practical reasons: one result of the years of war, revolution and civil war was a clear demographic imbalance and an actual lack of labor force; the female population was thus seen as a strategically important resource to compensate for this lack. This factor became even more prominent after the Second World War, when "the number of women vastly outstripped the number of men. The sex (and age) imbalance of the population was not fully rectified even by the end of the Khrushchev era in 1964" (Ilič 2004, 6).

Another factor that made woman-oriented politics central to the Soviet project was also related to the demographic concern. Historians who analyze the dynamics between women and the Soviet state emphasize the way in which politics in the Soviet Union changed depending on the demographic situation (Ilič 2004; Haynes 2004). While the revolutionary momentum officially offered Soviet women all at once the rights to education, professionalization, political participation, divorce, and abortion, some of these rights were restricted again later on. For instance, after Stalin's totalitarian turn of the 1930s, the state pursued the politics of women's education and professionalization but once again restricted the institution of marriage and the

[42] This does not mean, however, that women were only "receivers" of the revolutionary change. Indeed, women were active participants of the revolutionary process (McDermid and Hillyar 1999).

right to have an abortion; the imagined ideal woman of the Stalinist period a professional, cultivated and loyal citizen, yet also a careful mother and fateful wife. The institution of marriage and family politics was again liberalized under Khrushchev, who promoted the destigmatization of single mothers and implemented institutional policy in support of health and childcare. Apart from the liberal rhetoric of the Khrushchev era, this politics was clearly targeted at improving the demographic situation after World War II and promoting motherhood as an essential female mission (Haynes 2004; Rivkin-Fish 2006). Larisa's case, in which an educated professional woman had her child out of wedlock and raised her alone, was not uncommon for the late Soviet period.

Figure 28. The widespread unfolding of the network of nurseries, kindergartens, canteens and laundries will assure the participation of Woman in the socialist construction. Artist: Ekaterina Zernova. 1931
Source: http://redavantgarde.com/collection/show-collection/1137-wide-network-of-kindergartens-day-nurseries-canteens-and-laundries-will-ensure-women-s-participation-in-socialist-development-.html
Accessed December 10, 2018

Figure 29. Poster "GLORY to the heroic Soviet woman!"
Artist: Nina Vatolina. 1946
Source: https://softsalo.com/sovet_45_soci/soci_71.html
Accessed December 10, 2018

As the posters in figures 28 and 29 demonstrate, the official discourse always emphasized the professionalization of women and their responsibility as mothers and as educators as two sides of the same coin. The Soviet woman was to become integrated into economic and industrial processes, yet remained responsible for her primary "natural mission," that of becoming a mother. Moreover, this mission was not necessarily linked to the institution of marriage. The establishment of public childcare services and the relaxation of sexual morality (with the exception of Stalin's rule) were to liberate the institution of marriage "from elements of the household's compulsion" (*ot elementov hoziaistvennoi prinuditel'nosti*) (Trotsky 1927). In other words, the modern Soviet project imagined the woman first and foremost as a worker and mother, and promised her assistance meant to "substitute" economic provision on the part of the husband. Thus, while the Soviet project was aimed at the radical transformation of those institutions considered fundamentally "traditional," such as the family, the female reproductive function was (perhaps uniquely) "naturalized" under the Soviet order.

The two posters allow for an appreciation of the dynamic of visual language that arose between the early 1930s, when the revolutionary aesthetic was still dominant, and the late Stalinist period

(probably end of the 1940s-early 1950s), when the canon of Socialist Realism achieved its acme. Along with the visual language of the era, symbolism also followed the conservative agenda. If the early poster placed the working professional woman in its center and promoted the development of institutions of care, the later poster emphasizes the duty of motherhood and represents professional and social engagements as important but secondary.

My final example comes from the Khruschchev era. After Valentina Tereshkova, the first female cosmonaut, flew into in space on 16th June 1963, she became an important symbol employed in discourse about the Soviet achievements on the emancipation front.

The poster shown in Figure 30 is of particular interest, as it unites elements of what we can call "tradition" and "modernity" within the same image. Tereshkova's face, recognizable behind a cosmonaut helmet, is crowned with a *kokoshnik*, the Russian national female headwear. Yet, instead of the traditional decoration of beads and stones, this *kokoshnik* is covered with symbols of science, agriculture and art – symbols of the modern Soviet project.

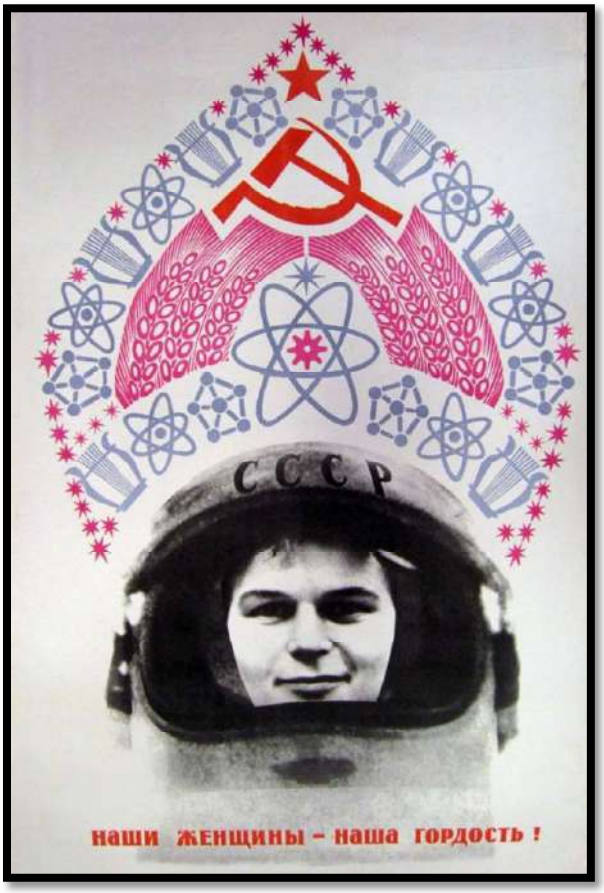

Figure 30. Poster "Our women – our pride!"
Artist: Valentin Viktorov. 1963
Source: https://bigpicture.ru/?p=592403
Accessed December 10, 2018

This poster allows for a reading of a new dynamic, characteristic of the 1960s: that of the revival of interest in national cultures. On the public scene, this revival was initiated by Khrushchev himself, who started wearing a *vyshivanka*, the traditional Ukranian male shirt. Yet, this turn was not a "return to the roots," but rather a symbolical reminder of times past and, simultaneously, of the explicit pursuit of progress and modernity. While Tereshkova's face and her cosmonaut's helmet are visually represented by photographic means, that is, a medium signifying realism ("the historical truth") and the present, the *kokoshnik* in the image is nothing but a schematic silhouette. By the same token, the curriculum of Larisa's studies at the Pedagogical University didn't include much about "traditional crafts," but rather focused on skills having to do with child development and child psychology, and conceptualized the school subject of "labor" as an element of future professional and social integration.

Early Soviet propaganda fought against tradition (often represented with images of elderly religious females), as the traditional custom was synonymous with "backwardness" and prevented society from being modernized from within. By the 1960s, however, the clear cultural rupture was already there, and Soviet subjects could once again recollect their pasts without risk of becoming "backward." Thus, unlike contemporary western societies, in which female images circulate to bear witness to "authenticity" and "tradition" (Hertz 2011), Soviet female faces and bodies were mobilized to exemplify modern socialist achievements. Tereshkova could wear the *kokoshnik*, because she had already become a woman-engineer and a woman-cosmonaut.

While the female-targeted body-politics was rather nonlinear, the politics of access to education and professionalization remained a priority during the entirety of the Soviet period and was more likely to be a matter of negotiation with the population. While early Soviet posters explicitly encouraged women to master "male professions" (*muzhskie professii*), such as train conductor, builder or technician, late Soviet posters celebrate women as architects, engineers, chemists, physicists, not to mention "traditional female" jobs, such as teacher or medical practitioner, as an actual social reality. "In 1956, women constituted 45 percent of the Soviet labor force and were essential workers in education, healthcare, trade, public service, and light industry" (Kolchevska 2005, 115).

An important aspect of the Soviet politics of emancipation was that is was very much top-down. While the history of Russia's pre-revolutionary feminist bottom-up movement is indeed rich (Yukina 2007), it relates more to the population that, after the Revolution, was considered "bourgeois"; while some activists stayed in Russia, many emigrated. The Bolshevik government, on the other hand, initiated top-down policies they were to bring more equality.

After the adoption of the Constitution in 1918, women were officially recognized as equal citizens and, at the same time, were assigned to become equal workers and participants of industrialization (Goldman 2002). Yet, as historians have documented, female participation in the industry was not always welcome by other male workers, who felt it would corrupt their masculine working identity (Goldman 1993; Koenker 1995). At the same time, not all women from more popular milieus were eager to take advantage of their liberation. Early Soviet agitation literature provides examples of resistance to the involvement of girls in polytechnic classes and clubs: parents would prefer that their daughters help with the household than attend "boy's activities."

Regardless of the intensity of the agitation literature, in the early 1920s and 1930s, the mostly peasant population was not ready to accept modern egalitarian ideas. Although female students were formally admitted to most branches of education and industry,[43] their actual presence was more visible in those spheres that many would recognize as adherent to the "traditional" lines of the division of labor. According to statistics, in 1929-30, female students constituted 68,7% of the student body in pedagogical universities, 48,2% in medicine, 38,8 in classical universities (general education), 33,8% in the arts, 21,9 % in economics, 16,9% in agriculture and 8,1% in technical universities (Kurganov 1968).

Thus, contrary to western women, who had to fight for their legal rights throughout the whole of the 20th century, many Russian women experienced involvement in education and professional and political life as an "external impulse" and a life-opportunity in the context of limited life chances rather than an achievement of the fight for their rights.

Some of my elderly female interlocutors in Obnisnk born in the late 1930s (one generation older than Larisa), high profile scientists and professionals, explained that the original motivation behind the pursuit of their studies was to make-do, to help themselves and their family to survive, rather than a conscious career choice. The access to state-sponsored fellowships and dormitories acted as an additional impetus, successfully supplementing Soviet techno-politics and discourses of modernization. These motivations were then transformed and re-articulated in terms of "interesting work," meeting "remarkable people" (*zamechatel'nyh liudei*) and acquiring new lifestyles that would be unimaginable for their parents and siblings who perished during the war or remained in their villages of origin. The access to the university opened up a new universe to these women – a universe in which knowledge, social status and economic

[43] The exception here being military and navy high schools.

independence combined to imbue their engagements with new meaning and offer them a sense of participation in grandiose national projects, be it the development of ultra-solid glass for spaceships or fundamental scientific research in other areas. Moreover, the very experience of personal transformation and progress – as my interlocutors understand these dynamics of their life as an evolution for the better – from a "village girl" to a recognized (sometimes internationally) professional, helped these female subjects to identify themselves with the state project and created a deep feeling of loyalty, which did not, nevertheless, prevent them from criticizing particular elements of the Soviet system.

Moreover, regardless of the official politics of liberation in regards to marriage, and despite the propaganda aiming to involve women in education, professionalization and political participation, the actual implementation of these ideas varied significantly depending on social strata, geographies and the actual individuals responsible for decision-making. For instance, building on the memoirs of professionals involved into the Soviet space program, Sue Bridger (2004) has analyzed Tereshkova's case to demonstrate how uneasy and controversial the reception and the implementation of space training for women actually was on the ground. Yet, in spite of the many constraints that historians continue to document, the overall position of the woman in Soviet society looks rather impressive in comparison with the situation in many western countries at the time. Thus, Bridger exemplifies, for instance, the reception of Tereshkova's flight in Great Britain:

> Five hours after Tereshkova descended by parachute onto the steppes of Kazakhstan, Edith Summerskill, doctor, former chair of the Labour Party and relentless fighter for women's rights for over 25 years, rose to open a House of Lords debate:
>
> "Thousands of miles away, she said, the Russian woman cosmonaut had returned to earth with her male colleague. The relevance of this to the subject of the debate was that both would be equally feted and would be equally paid the rate for the job. If Valentina had still been in orbit and could have glimpsed into the Chamber she would have been amazed to learn that British women in the second half of the twentieth century still had to plead for the simplest justice. […] Valentina's father was a tractor driver and her mother was a textile worker. But the Soviet Union had a system whereby they recognized intelligence in individuals whether they were men or women, and did not judge them just by their reproductive glands. In Britain a girl in the same position as Valentina had no opportunity of having a scientific training." (Bridger 2004, 233)

That day, Lady Summerskill fight for the financial rights of British women "who were not employed outside the home" and, indeed, was quite successful: "a reforming bill would be

introduced to allow non-employed married women to keep some of the savings they made from their housekeeping allowance" (Bridger 2004, 233).

The situation of the woman in the Soviet Union seemed unbelievable to the UK citizens of the 1960s. Today, the Soviet system of social services, childcare and assistance for mothers looks equally impressive to contemporary young mothers in post-Soviet Russia (where, indeed, some of its elements have been retained), much as in other post-socialist regions, Eastern Germany and former Yugoslavia, for instance (Hann 2012, 1126).

The state's withdrawal of many social support services and the experience of social abandonment that many faced in the early 1990s remobilized practices of making-do and reactivated old narratives of poverty and survival as particularly relevant for the female fate. The weakness of social service and childcare institutions immediately reinforced the importance and symbolical meaning of the traditional paternalist family, which is promoted today by the Russian state and the church. Larisa's decision to have a child alone would be a nightmare for many a contemporary young woman in Russia. Her experiences of planting vegetables, splitting one onion between two soups and deciding whether or not to switch off the gas are but the performance of the realm of cultural intimacy in its specific female articulation.

5.2. YURII

Like Larisa, Yurii (b. 1951) grew up in a relatively wealthy Soviet family in one of the "closed" industrial Soviet cities (ZATO)[44] associated with the nuclear industry in the Ural region. His parents, both from Ukraine, were young and promising specialists in the field of physics and engineering. After being graduated in Kiev, they received a short-term promotion in Moscow and then in the Ural region. Yurii's father was a well-known engineer in the branch and his mother was responsible for a physics laboratory and later worked as a teacher of physics. In his early childhood, the young Yurii already demonstrated an interest in technology, and the family memory conserved stories about how 3-4 year-old Yurii played with cables and vessels in his mother's laboratory and tried to connect them. Another early sign of this interest was a

[44] ZATO (*zakrytye administrativno-territorial'nye obrazovaniia*), literally meaning "closed administrative-territorial formations", is a settlement with travel and residency restrictions in the Soviet Union and in modern Russia. These places, also known as "closed cities" or "closed towns", were founded in the Soviet Union for the military industry and research goals.

fascination with the huge life-sized machines plowing snow. He remembers spending time observing them as a child.

As early as in the 4th grade, Yurii started to build aircraft models; he assembled them from kits and built them from scratch with the other boys of the club. This fascination with aviation would become his lifelong passion. His another passion for Yurii was amateur radio.

> Apart from model aircraft construction, since my childhood, I dealt with ham radio too. I mean, when I was in the 5th grade, I built my own radio, transistor-based, which worked. I mean I had been building them earlier too (*laughing*), but in the 5th grade this was the first one which actually functioned.
>
> […] I took a wooden box, took my father's soldering tool, turned it on, and then burned such a hole in that wooden box. This was a mailing box. I put a dynamic/loudspeaker inside the box, bolted it somehow, then fastened it with two cables and plugged it in – and it started speaking!

Figure 31. Photos from the Yurii's home archive. Photo: Zinaida Vasilyeva

Yet, the severe climate of the Ural region was unfavorable to the Yurii's health: he fell ill every year after he returned from spending the summer in Ukraine, and his parents soon requested a relocation to central Russia. When Yurii was about 13 years old, his family moved to Obninsk,

a small research town situated 100 km west of Moscow. Obninsk, "the city of science," as it was called, offered him an excellent new environment in which to develop both of his hobbies – model aircraft construction and ham radio. First, he joined the model aircraft construction club at the local House of Culture, which was equipped with a very good workshop (*modelka*). At the club Yurii not only learned extensively about aviation, but also acquired manual skills such as woodworking and milling.

Beyond the club Yurii worked to develop his skills as a radio amateur. Contrary to aircraft modeling, which in his case had always been associated with socialization in clubs, Yurii developed his interest in radio at home. He acquired this interest in part due to his father: while Yurii's father could always answer, and explain his answers to, Yurii's questions, he was very busy at work and did not spend much time with the children. What had perhaps a larger impact, therefore, than his scarce presence in Yurii's childhood, was his longtime subscription to the specialized magazine *Radio*, which was always available at home. Thus, Yurii learned radio physics reading this magazine and spending time over the graphics and schemas that it published; it was very early on that he started trying to implement this theoretical knowledge in practice. Although at home his experiments sometimes resulted in breakdowns of the technical (his father's tools) and the emotional sort (the emotional well-being of his mother, ever-anxious about the risks involved) at school Yurii was well ahead of his classmates in physics and mathematics. His school teachers supported his interests: when he was in the 8th grade, the school administration proposed that he and a mate of his organize a school radio station, which transmitted school news, information and music during school events. This occupation put him and his peer in a privileged position and, at times, served as a pretext for them to miss other classes. Moreover, as Yurii explains, at times he was asked by teachers of physics and chemistry to assist them with their more advanced lessons in order to demonstrate physical phenomena that demanded technically sophisticated installations:

> [in these cases I would] go to the preparation room, close myself in there, [prepare] some devices, oscilloscopes, all these coils, I would connect all of this together, I mean, according to a particular scheme in the school book for … [When they] need show a particular physical effect, because teachers cannot do it themselves, they are all women, they call me and I assemble this scheme, regulate it, connect it. […] Then during a class [they call me]: "Come and show, demonstrate" – and I go there, all this [installation] is loaded on the table. I reassemble it again, check it out and… demonstrate the effect. (laughing) I mean she, the teacher, she explains everything and I silently stay behind the table and connect all this and show…

In high school Yurii and his mate decided to build a battery-powered play telephone. The two receivers were connected by cables and one spoke into an improvised tube.

> And we were [climbing] across the roofs, [because] we lived not in the neighboring houses but across the yard from each other, so we were pulling these cables from one roof to another. And my mother was running around and screaming, "Yurii, Yurii…"

What stands out in the interview with Yurii is a very favorable environment that appears to be a consistently happy combination of his passions and social and institutional surroundings, ever ready to welcome his interests. When he was a child, his hobbies always met the interested audience and positive social attention of adults and, as a result, he enjoyed benefits that were not directly part of his occupations, but rather side effects.

After finishing school, Yurii entered the Obninsk branch of the Moscow Physics and Engineering Institute, a sector of the prestigious Moscow Nuclear University. Despite his successful career as a student, his father's professional influence in the local community and the reliable preconditions for a career at a research institute, Yurii would choose aero-modeling and other activities of "technical creativity" to become his lifetime project.

Figure 32. Photos from the Yurii's home archive. Photo: Zinaida Vasilyeva

During Yurii's University studies, his passion for constructing model aircrafts evolved into an interest in control line model aircrafts. Unlike the flying of simple model aircrafts, the control line hobby usually involves combats and, therefore, significantly encourages competitiveness among its participants. Moreover, the control line model is operated by at least two people: a pilot and a mechanic – and therefor requires a high level of teamwork. Finally, as combat usually results in the crash of one of the aircrafts, the participants need to have a constant, and extensive, reserve of models, which means a practically non-stop production of the aircrafts. Thus, contrary to radio amateurism and simple model aircraft construction, the control line model sport is hard without material support. In Yurii's case this support was offered by the DOSAAF, [45] a public association under the auspices of the Ministry of Defense, which promoted sports and knowledge involved in potentially military specializations, such as radio, parachuting, aircraft, navy, auto- and moto- model crafting, shooting, and so on – with aviation related hobbies being highly prioritized. [46]

DOSAAF did not participate in children's clubs but provided support for and organized adults. It was through DOSAAF that Yurii and other control line aircraft sportsmen were provided with the methyl alcohol that fueled their models, and balsa, a rare and extra-light wood, which was apparently imported from Latin America. In response to my skepticism concerning the possibility that the USSR imported rare wood exclusively for the amateurs' purpose, Yurii suggested that the wood could be used as a filling material in the space industry, although, he emphasized, he had never heard of it actually being put to use in this way.

Although the institutional frame of his hobby changed once he was a DOSAAF line control model sportsman, in Yurii's own perspective this was just a logical step in his activities within the "Young Technician" club. Moreover, in order to spend even more time in the *modelka*, or

[45] DOSAAF (*Dobrovol'noe obshchestvo sodeistviia armii, aviatsii i flotu*), meaning Volunteer Society for Aid to the Army, Aviation, and Fleet. The society was established in 1927 as OSOAVIAKhIM and from 1951 to 1991 was known as DOSAAF. It was reinstitutionalized in 1991 under the name of ROSTO, 'the Russian Defense Sports-Technical Organization' with a much limited material basis and authority to make decisions. Since 2009, when ROSTO was renamed again and received its old entitlement, it has once again been known as DOSAAF.

[46] The support of military-related hobbies and activities should not be seen as a particularly Soviet feature, but rather as a normative practice within modern societies. Most of European countries provide national sportsmen with support though special programs hosted by military ministries. By the same token, the Swiss army invests heavily in the promotion of helicopter piloting and in the recruitment of potential pilots amongst early teens. This said, it appears that an outstanding support of technical hobbies on the mass scale was a rather unique feature of Soviet society.

workshop, he agreed to teach in the club three times a week, a change that increased his basic monthly salary of 120 Rubles by 30. As Yurii explains with a smile,

> I taught in the model aircraft club three times per week and I attended classes in the institute four times a week (*laughing*). This itself is unbelievable.

Yet, the financial incentive was a small motivation in comparison with the possibility of having unlimited time in the workshop. As Yurii explains:

> Model aircraft absorbed [us] without reserve… I mean we stayed [in the workshop] overnight on a sofa. Yes, we were preparing for the competitions, because we were always short of time, were always doing things at the last minute…

Yurii's teaching activity also allowed him to foster his craftsmanship in making models. In order to increase productivity, Yurii and a friend developed a simple model which could be assembled by children within 3 days. This was advantageous as kids could see the results very quickly and it made for prompt compensation, essential for financing the repairs of crashed competition models. Yet, models for the competitions were of a different scale of complexity, and adult sportsmen constructed them with care and patience. As Yurii explains, a good model required about 3 months, so he usually had five aircrafts by competition time each year.

Figure 33. A plane model made by Yurii for the competitions
Photo: Zinaida Vasilyeva

While Yurii switched, in his second year of university studies, to an evening shift department, because he got married and started working in the research Institute for Physics and Engineering, it was nevertheless the control line model aircraft that occupied his mind during his free time. There is not enough space here to cite the long narratives in which Yurii describes his experiences of combat, the spirit of competition and the technical details of model construction. To say just a little, by the mid-1980s Yurii was the six-time champion of the region and two-time champion of Central Russia. The *modelka* became Yurii's true laboratory, where he designed and developed his projects, and where he lived intellectually and creatively. Moreover, the *modelka* and the sport made up the main hub of his networking and socialization. All of the friends he mentioned during our five-hour-long interview were somehow related to aircraft construction and competitions or to his school time occupations of technical creativity. The *modelka* was also the place where Yurii realized his first business project: he built radio equipment for another sportsman who needed radio controlled models and received 80 Rubles per set, that is half of his regular monthly salary. Thus, as early as in the 1970s, Yurii was well aware not only of the quality of his production, but also of its market cost. While remaining well within the state-sponsored system and relying on state-sponsored infrastructure, he created his own world, or *vne* (Yurchak 2005), which seemingly functioned according to rules that were invented by its participants and invisible to others.

Yurii's passion for aircraft modeling and his first commercial experiences developed in parallel with his professional career: after graduating from University in the mid 1970s, he managed to change his workplace at least 4 times, which was highly unusual and negatively regarded during the Soviet period. Yet, as his narrative shows, Yurii was not afraid of changing workplace in the pursuit of his own interest; furthermore, it is probably that he was socially protected by the high position and impeccable reputation of his father, the main engineer of the cyclotron in Obninsk. At the same time, in the context of the "city of science," with its extremely dense concentration of research centers and rapid technologization, good engineers were always in demand. Engineers in the "science city" were, however, limited in their career chances: professional growth within research institutes was subject to the logic of academic hierarchy, requiring public confirmation through degrees and publications. Thus, Yurii recalls:

> When I returned to the FEI[47] as an engineer […], an old acquaintance of mine, or rather a friend of my father, who worked there, he said: "you need to defend a [PhD] dissertation, otherwise, you'll not succeed."

Still, Yurii's varied work experience allowed him to further develop his professional competences. Thus, along with the development of microprocessors and computation technologies, Yurii learned this new field and even built his own microcomputer *(EVM)*. However, Yurii was not interested in science; his ambitions were located rather in the realm of practical knowledge, where he could put his "material consciousness" (Sennett 2008) to good use. As he put it, "I wanted to make something, not to open new worlds." Moreover, Yurii did not like the strict schedule that was enforced at some of his workplaces. Finally, being quite ambitious and a strong personality, he had problems showing respect for hierarchies and his superiors, who, according to him, did not always deserve their high status. In short, by the middle of the 1980s, the beginning of Perestroika, Yurii was quite dissatisfied with his professional career and, at the same time, knew that his practical knowledge and skills were in demand and could be commodified. In other words, Yurii was amongst those who had awaited economic change and felt themselves ready to enter the market. As I have explained in Chapter 2, using the example of the Nenashev character from the movie *Genii*, among professional engineers, or individuals trained in systemic analysis and economic thinking, many believed they were well prepared for the arrival of capitalism.

In 1987, at the beginning of the so called "cooperative movement" (*kooperativnoe dvizhenie*), Yurii quit his last job and co-founded a cooperative (the 3rd one in Obninsk) with a former student of his and became what one would today call a technological entrepreneur.

> We started to do quite serious things, we were busy with the implementation of the microprocessor, the microcomputer that I have developed into the industry. [...] I can say that almost all of this was done in this very room.[…] We had to work a lot. Sometimes we did not sleep for three days at a time.[…] in the beginning we did not have any computers, everything was self-made.

For almost 4 years they worked hard on the computerization of concrete batching plants and successfully implemented their processors at five of them. This enterprise was both intellectually challenging and economically successful. Yurii says he has never lived so well as during these years. He bought a three-room flat, which was the best of what Obninsk had to offer, and felt himself in tune with the times.

[47] *Fiziko-energeticheskii institut* – the Institute for Physics and Power Engineering in Obninsk.

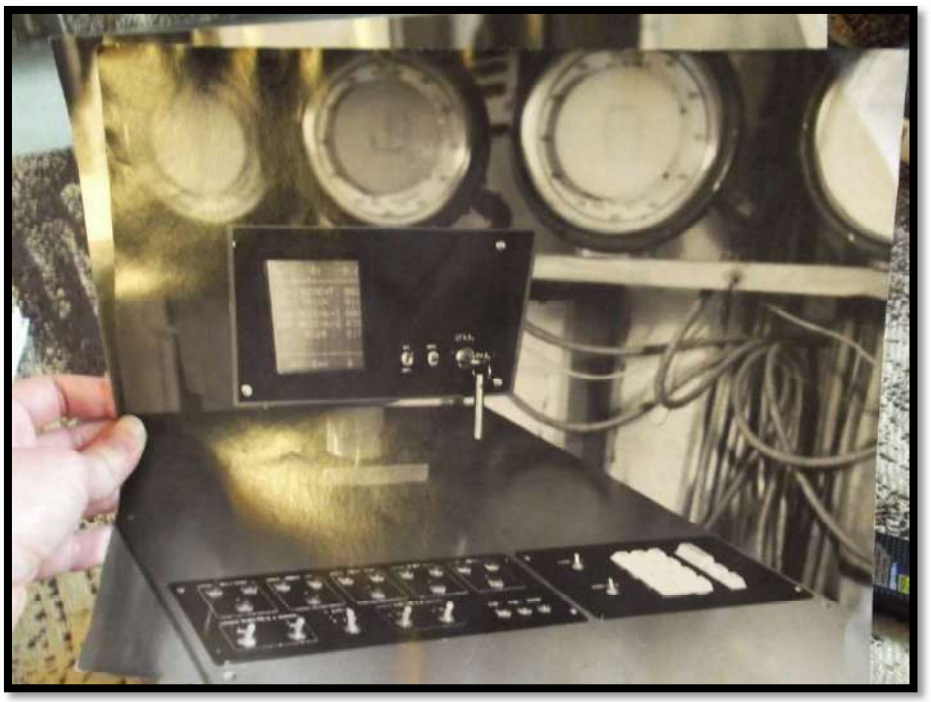

Figure 34. Photo of a self-made computer installed in the workshop of a concrete batching plant From Yurii's home archive. Photo: Zinaida Vasilyeva

Yet, as Yurii puts it retrospectively, this was the "period of capitalist romanticism," which ended in the early 1990s with the collapse of the planned economy. In fact, the computerization of the plants and significant honorariums were possible because of the state-sponsored program of "automatization of industry," which meant that the state provided plants with so called "targeted budgets" (*tselevye biudzhety*), which could only be spent on computerization. At the same time, with such a lack of technologies and specialists on the scene, interested enterprises had the freedom to look for the eventual executors themselves. Thus, cooperatives like Yurii's were in high demand and could easily obtain significant contracts. These economic schemes were, however, suddenly no longer functional when enterprises stopped receiving state money prescribed specifically for this task.

> All of this was over in the 1990s, because nobody wanted to pay from their own sweet money. Because it was much cheaper… There were mostly women working at these plants. They were very badly paid, yes, and this was very cost-effective…

Moreover, business transactions required not only technical skills, but also good communicational and organizational skills. As soon as the good days were over, the cooperative's team entered into hard times. Yurii's partner wanted to enter into the old computer

trade, which implied risks and the use of illegal schemes but could eventually bring fear profit. Yurii, meanwhile, hesitated to engage in such activity, which was strictly speaking criminal. Finally, the cooperative soon found itself deep in debt, and former partners separated with each other on rather bad terms. To recover from his debt, Yurii decided to invest in shares; although this proved to be lucrative in its early stages, a few years later the young entrepreneur was once again in debt, and this time much more significantly so. The fake company MMM in which Yurii had invested, happened to be nothing but a countrywide pyramid scheme, nowadays legendary and the most "successful" of its kind, having "defrauded consumers by the millions" in 1994 (Borenstein 1999, 50; Ries 2002, 287).

While in the first part of the interview, in which Yurii talks about his passion for aviation modeling and his participation in various amateur activities, is long and detailed, the final part is rather short and schematic. Basically, the story of the computerization of the concrete plants is the last developed narrative of the recorded interview. Yurii accepted to talk more about the cooperative and his MMM experience only when we had relocated to the kitchen and spoke with the recorder off.

If Larisa's narrative of cultural intimacy concerns the devaluation of her skills and professional identity within the public sphere, Yurii's sorrow and humiliation are related to his early business enterprise. With all his knowledge, expertise and both practical and analytical skills, he could never have imagined the developments that would come to pass. After the MMM affair, he decided to stop his experiments with the free market and returned to the *modelka* style small-scale business.

In the following years, to recover economically and pay his debts off, Yurii worked as an auto mechanic, accepting any available job. His good reputation as a skillful technician helped him acquire clients, and he even received private orders to construct machines for small businesses. Still, the transition from entrepreneur to mechanic working from his own garage was not easy. Personal disappointment was reinforced by the moral condemnation of his father, who never accepted that his son "traded" his respectable profession (of engineer) to become first a *spekuliant*, or illegal trader, and ultimately a mechanic.

Nevertheless, even though Yurii failed to develop his highly technological business on the complex engineering level as he had aspired to do, overall he did well. While many post-Soviet engineers employed within former state organizations remained unpaid for months or even lost their jobs, Yurii always had clients. Indeed, as Soviet popular journals explained, theoretical knowledge is not sufficient without manual technical skills. In the post-Soviet context, skillful

mechanics were, in a way, in higher demand and better off than the most talented theoreticians (Bogatyr 2013). Moreover, Yurii still managed to stay within a niche in which he could apply both his manual skills and an his engineering imagination, that is, the niche of "technical creativity." Finally, in the beginning of the 2000s he became involved in the community of ultra-light airplanes and became a pensioned pilot and constructor of his own models, thus re-creating for himself yet another community of amateurs and yet another virtual *modelka*.

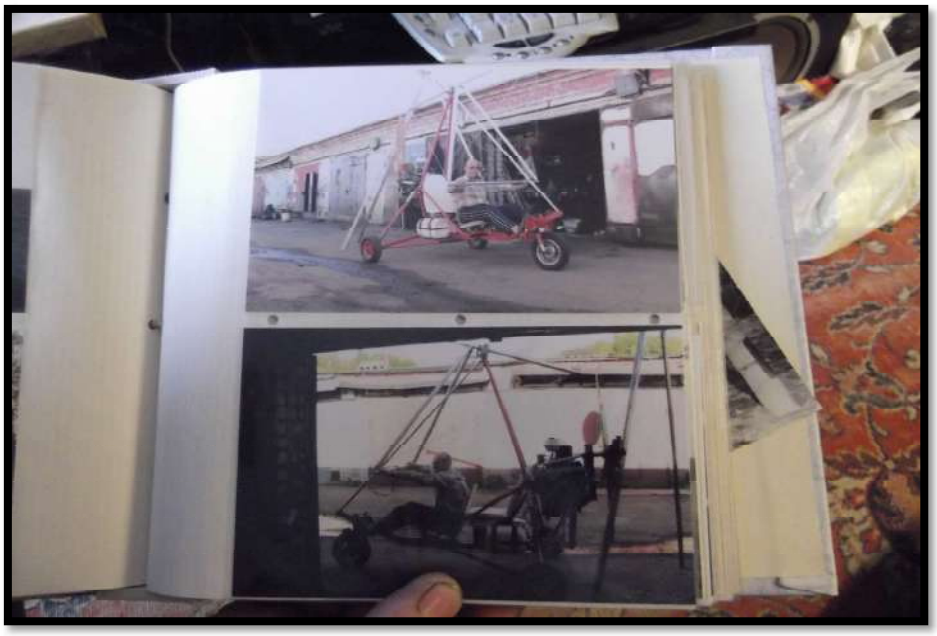

Figure 35. Photos from the Yurii's home archive. Photo: Zinaida Vasilyeva

5.3. CONCLUSION

The two cases that I address in this chapter demonstrate that manual DIY skills acquired during the late Soviet period underwent a shift in meaning and status during the era of transformation that began in the late 1980s. Both Larisa and Yurii have similarly favorable social backgrounds, and both pursued their personal inclinations while making career choices, thus demonstrating their subjective valorization of the DIY practices and their belonging to the modern realm of *samodeiatel'nost'*. Yet, while Larisa managed to merge her profession with her passion for crafts and, therefore, remained a citizen of the rather strictly defined Soviet institutional landscape, Yurii's main spaces for self-realization were located outside of his professional engagements and the "big structures" of the state. Instead, Yurii largely benefited from the Soviet infrastructure of technical creativity, situated in the "in-between" public spaces. This experience of socialization within amateurism (as opposed to within big institutions) not only allowed him to form networks and access resources, but it also helped him to develop both

technical knowledge and skills, and a subjective understanding of security, self-reliance, and seeming "independence" from the state, all of which contributed to his successful beginning in entrepreneurial activity.

Although Larisa and Yurii had different expectations from the period of marketization, both of them experienced disappointment. In the context of social and economic uncertainty, DIY skills proved to offer a safe haven, a way to make ends meet. Still, this safe space connoted isolation and self-reliance, thus, actualizing sensibilities of cultural intimacy, which is particularly articualated in Larisa's case.

On a more abstract level, Larisa's case demonstrates more continuities with post-Soviet subjectivity, in which individuals drew parallels between themselves and imagined collectives (e.g. the state), while Yurii's case exemplifies the emergence of a neoliberal subjectivity, in which an atomized individual continues to make decisions that are rationalized through his subjective desires and intentions.

CHAPTER 6
GLOBAL GEOGRAPHIES OF RUSSIAN DIY AESTHETICS

In this chapter I continue to disentangle the realm of DIY culture in the post-Soviet Russian context. Here I address two cases from the Russian "art worlds" (Becker 1982) of the 1990s and 2000s to show how the post-Soviet art scene mobilized DIY aesthetics, and the meanings of "poverty" and "backwardness" associated with them, to connote "Sovietness" and "Russianness." While I do address particular art projects, it is not my intention to analyze them as examples of a particular modern art tradition (such as "ready-made" or "objet trouvé," for example), as might an art historian. Instead, following Howard Becker, I approach them as material and symbolic artefacts that inform the transformation of various "conventions" regulating art worlds – that is, networks of cooperation and assistance through which artwork is made, distributed, evaluated and recognized as "art." Yet, contrary to Becker, I am not so much interested in the sociological analysis of the art worlds as separate social units, but rather in the analysis of powers that these networks perform. In other words, I am interested how art worlds create powerful institutional and interpretational frameworks, which enable the production and distribution of social meanings. I argue that, in the 1990s and 2000s, the transformation of art worlds' conventions was very much due to the process of marketization of Russian art that marked these decades. Moreover, this very process of marketization coincided with the rapid development of the global contemporary art market. In this context, the notions of "poverty" and "backwardness," two stereotypes connoting national belonging, were mobilized in order make Russian art relevant on the global art scene.

In the first part of this chapter, I address the exhibition *Russian Povera/Russkoe Bednoe* (2008), a top-down commercial project, which mobilized the "aesthetics of poverty" to reintroduce Russian contemporary artists on the global art scene in the late 2000s. In the second part of the chapter, I return to the artistic project of Vladimir Arkhipov, and describe the development of Arkhipov's project through the lens of his personal trajectory and of his integration into the networks of the national and international art worlds. I am interested in understanding and articulating how broad historical and social change informed his individual path and his understanding of his own project on conceptual and aesthetic levels.

6.1. *RUSSIAN POVERA*: MARKETIZING "POVERTY" ON THE CONTEMPORARY ART MARKET

One of the major events of the Russian contemporary art scene as it existed in 2008 was the exhibition *Russian Povera*, held in the city of Perm in the Ural region. This exhibition, organized by the famous Muscovite gallery owner and curator Marat Guelman, brought together contemporary Russian artists working with simple and/or recycled materials. The bilingual name of the exhibition – *Russian Povera/Russkoe Bednoe* – openly alluded to the Italian contemporary art movement Arte Povera, which emerged in the late 1960s in response to the globalization and industrialization of Italy. This allusion, as well as the very decision to hold the event in the middle of the country more than one thousand kilometers from the Russian capital, was meant to emphasize the contrast between, on the one hand, the wealth and glaze of the Russian capital typical of the first decade of the 2000s, and, on the other hand, the sensibilities and geographies of a "deep Russia" with its everyday poverty, reliance on the essentials and aesthetics of the poor.

Moreover, the exhibition was organized within the walls of a "Soviet ruin" – a former Riverside station (*rechnoi vokzal*), situated on the Kama river in the historical center of Perm. The building was erected in 1940, placed directly in front of the train station in order to connect railway and waterway as, throughout the Soviet period, the Kama was a crucial waterway for both cargo and passenger transport. In the early 1990s, because of the decrease in cargo transport, the waterway was considered to be functioning at a loss; consequently, within a very short time water-traffic on the Kama was greatly decreased, leaving hundreds of settlements without any convenient connection. This had particularly dramatic consequences for rural areas that were now separated by a large waterway that had, for centuries, been perceived by locals as a geographic feature that connected, rather than divided, the landscape. For some years the Riverside station was sub-letted to private trading facilities, such as kiosks and small merchants' booths, until it was completely closed in 2004 due to the critical condition of the building.

Figure 36. The building of a former Riverside station in Perm
Photo: Rustem Adagamov. Courtesy of the author

Russian Povera was much more than just an exhibition. Like the Italian Arte Povera before it, the exhibition was in dialogue with different processes of globalization. This large and ambitious art project was meant to re-articulate and reaffirm the place of Russian artists on the global contemporary art scene and market; the Russian art presented at the exhibition was to incarnate both the "authenticity" of the product and the "contemporaneity" of its conceptualization. The bilingual catalogue of the exhibition – a heavy folio printed in the USA on high-quality paper – and its online twin explained the agenda as follows:

> This approach reveals and demonstrates all of the qualities of contemporary Russian art – an art that is authentic, deep, an art that goes away from surface beauty towards a real miracle. These queries have form, a dialogue with the history of art, social responsibility, as well as the desire to find beauty in the simplest of things. Among objects on display are unique pieces made of cardboard, old wood planks, rubber, iron, coal, ceramic tile, plastic, and even soap. (Russian Povera 2008)

Interestingly, *Russian Povera* as a concept was thought to address two very different audiences: the global contemporary art market on the one hand, and the national art-community on the other. Marat Guelman, at the time a successful curator, businessman and political consultant well integrated in both national and global networks, made it his aim to promote Russian contemporary art on the global art market and to show that Russia had something to offer. By so doing, he endeavored, in a way, to make up for the "failure" that Russian artists had experienced on the Western market in the early 1990s. To contextualize Gelman's project, I

would like to briefly touch upon the transformations that the Russian art worlds experienced during the 1990s.

6.1.1. Russian Art Worlds in the Late Soviet Period

During the Soviet period, the main body of publicly available Soviet art constituted works produced by "professional artists," that is, the individuals who completed their formal education in the state art schools and were officially employed as artists and decorators in multiple state-sponsored institutions. Their artistic activity was sometimes limited to the execution of routine tasks at their workplace, but it could also include further creative and professional development through participation in exhibitions and/or professional associations, such as the Union of the Artists. What I mean to point out here is that under socialism the term "artists" commonly referred to a particular professional group of experts identified by their education and professional occupation rather than by their self-identification as creatives. In this context, creative individuals practicing art (for example, painting, singing, theater) but having no formal artistic training and respective professional affiliation were considered to be "amateur artists." Such amateur practices generally enjoyed official and public appreciation and often took place within the framework of the state-run program of *samodeiatel'nost'*, which I described in the Chapter 3. Yet, contrary to the work of professional artists, amateur artistic practices were not considered to be "labor" and, therefore, were not subject for financial remuneration; instead, they were seen as a form of creativity and individual self-realization in the realm of "culture."

In contrast, professional artists were state-sponsored employees and, therefore, were paid for their artistic work, which was interpreted mainly as a public duty. Typically, artists executed tasks commissioned by their respective enterprises or municipal authorities, ranging from creating decorations for a holiday to the execution of highly individualized project.[48] During the whole of the Soviet period, the artistic field was not homogeneous and had its own palette of schools, styles and approaches, the Soviet community of artists generally followed the official aesthetic doctrine, known as Socialist Realism, which represented the socialist way of life as it was imagined by ideologists and artists. Although Socialist Realism is often presented in the scholarship as a rigid canon, it has, in fact, never become a consensual framework (Reid 2007). Instead, it remained a realm explicitely participating in the production of social reality.

[48] This description is, of course, very schematic and does not allow to draw differences between different types of visual arts, such as monumentalist art, sculpture, painting, and so on.

If the post-war Western art consciously developed a critical and, in this sense, a "deconstructive" analytical optic, Soviet art never ruptured with the early constructivist idea that arts have a social mission of "producing new world" and, therefore, be "useful" for the society in a rather material sense.

During the Cold War years, Western collectors and historians of art were basically disinterested in Soviet art, considering it to be "propaganda" rather than "art." As an important historian and critic of Soviet art, Boris Groys put it,

> The slogan of "socialist realism" has been regarded by independent historiography both within the Soviet Union and elsewhere as merely a bugaboo used by the censorship to persecute and destroy "genuine art" and its creators. (Groys 1992, 5-6)

The only exception was the early Soviet revolutionary vanguard, that is the "genuine art" destroyed by the Stalinist order and the so called "underground art," imagined as an off-spring of early Soviet formalism and critical political art. It is beyond the framework of my work to explain, why it would be incorrect to reduce all Socialist Realism to political propaganda. Nevertheless, it is true that the freedom of artistic expression remained within the confines of the realist style of representation and, at times, within the strict visual conventions, for example when it comes to the representations of the communist leaders, such as Vladimir Lenin (Yurchak 2005, 54-59).

In short, although the Soviet art emerged from the same tradition of modernism, as it is defined within the European art history, its development in the 1930-1980, that is the period after the Russian avant-guard, was considered to be "non-true-art" and, therefore interpreted in moral terms. Though, ironically, such an approach was in contradiction with the dominant Western conception of art, in which the very possibility of "view[ing] any absolute conception of aesthetic value" has been intellectually problematic since the 1960s, it prevailed in Western accounts of cultural life under socialism (Faraday 2000, 4-5). Yet, regardless such evaluation by the "independent historiography," the name, which was long used in Soviet/Russian Studies to refer to the Western scholarship, the theoreticians of the Socialism Realism never ruptured with common aesthetic roots and,

> …embraced design precedents that were global as well as local. Stalinist urbanism praised and emulated Haussmann's Paris. Socialist realist architectural texts emphasized movement's debt to ancient Greece and Rome, a heritage previously claimed by 19th-century Beaux-Arts neoclassicists. Cultural authorities in East Germany promoted Chippendale furniture as a

> paradigm for proletarian homemaking in the "Battle for a German Interior Design" fomented by the Sozialistische Einheitspartei Deutschlands (SED [Socialist Unity Party of Germany]). In short, Socialist Realism established as its mission not the creation of an alternative to Western bourgeois culture but the distillation and arrogation of its progressive essence. Seen from the Eastern Bloc perspective, communism was to be not simply the capitalist West's executioner but also its cultural savior. (Castillo 2008, 749)

Moreover, despite the official refutation of early revolutionary art in the late 1920s, the ideas of constructivism and early Soviet formalism remained within professional networks and saw their Renaissance in the 1960s (Cubbin 2016). Since the late 1950s, well in line with the politics of de-Stalinization and post-war social developments, the community of the Soviet artists rediscovered its revolutionary origins and sources of inspiration and inquired into new artistic possibilities to make art "useful" and constructive for the society.

My main point here is that, while the Western community deciding about the "history of contemporary art" basically erased the Soviet art world from its records, Soviet artists actually never ceased to imagine themselves as part of the global artistic community, although they realized they were isolated and lacked information about the recent developments. Moreover, Soviet artists aspired for more contacts and struggled to get access to recent literature on contemporary art. This context is, however, important to understand the dynamics of the late-Soviet art worlds in the late Soviet period.

While addressing the art world of the late Soviet filmmakers in the late Soviet period, George Faraday convincingly demonstrates that the main struggle of the Soviet artists was the that for artistic autonomy, which, they believed, was absolute in the Western world and lacking in the Soviet Union because of censorship (Faraday 2000). The artistic struggle for "creative freedom" can be used as a productive framework to describe the dynamics in most, if not all, Soviet art worlds in the 1970s-1980s. One way to obtain imagined artistic freedom was to practice so called "unofficial," "underground" or "nonconformist" art, that is, art that did not quite fit the aesthetic and moral expectations of Socialist Realism. Although this method was rather impossible for filmmakers and other creatives working within those arts that require costly materials and technologies, it was accessible, for instance, to painters and musicians. Indeed, the emergence of unofficial art became a phenomenon on the late Soviet art scene.

While some "unofficial" creatives were still trained and employed within the state-run art institutions, others joined artistic communities as amateurs and friends, experimenting with the