

THE CARTOGRAPHICAL TRANSITION OF THE FORMER SOVIET UNION

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One winter afternoon, a few years ago, I took part in a compulsory discussion at the regional office of the Kazakh customs authority in the industrial city of Ust'-Kamenogorsk, in the northeastern part of the country. The head of the customs station and two agents from the Kazakh national security agency were present. The discussion concerned a parcel that I, thanks to the honorable intervention of the customs authority (or security service), had not succeeded in sending to Sweden. Primarily, what was discussed was an object. The object was a tourist map of said city of Ust'-Kamenogorsk. The map was drawn in accordance with the principles that characterized the Soviet tourist map¹: it lacked scale (or rather used highly variable scales), the angles weren't correct, and it was extremely selective in its selection of streets; in practice, it could not be used to get around the city because the amount of falsification and misrepresentation was simply too great.

The only difference now was that the Communist paraphernalia that previously might have had macroscopic proportions on the map – the Lenin Statue, the “Eternal Flame”, and so on – was replaced by more market-oriented items (since the map

was funded by advertising, the locations of certain companies were shown quite clearly). Despite these drawbacks, the tourist map was the first openly accessible map of the city available since the October Revolution – at least. Moreover, it showed the bus and streetcar network of the city, although the actual number of bus routes proved to be slightly fewer in reality than what the map suggested, something that I noted directly on the map to make it more usable for my purposes, as I did in the case of some other deficiencies. Here lies the core of the discussion at the customs office/security service: when the authorities have approved and permitted the release of a map of the city, it is supposed to appear as it does regardless of what it may show – any handwritten corrections of course constitute complementary (or rather replacement) information that no one ever sanctioned. In other words, society, or rather the regime was still marked by the information terror passed down by the Soviet Union, something that was manifest by the need felt by the authorities to check both the quality and the quantity of the discrepancy between reality and the way it was described on paper. The year was 2001.

What follows is a brief account of the transition from a Soviet to a post-Soviet representation of spatial knowledge. The main argument is that maps of the former Soviet sphere have not kept pace with the region's information revolution.

THE INFORMATION REVOLUTION

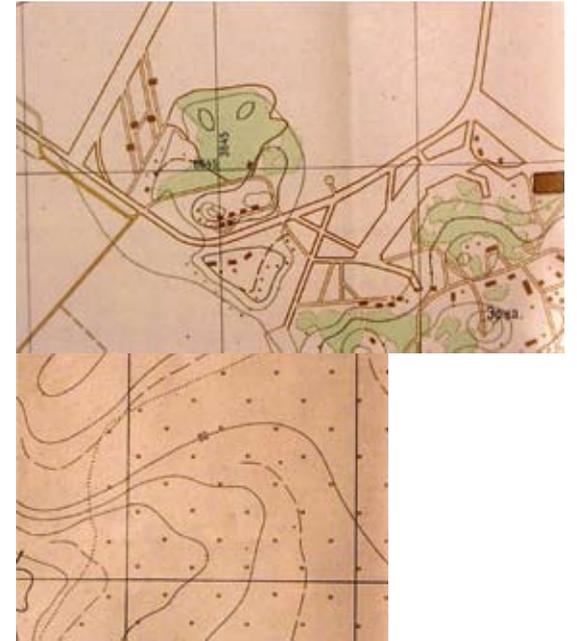
The “Information Revolution” is a relatively neglected aspect of the post-Soviet transition period, but it is of great importance. In the late 1980s, photocopying was still associated with enormous bureaucratic obstacles – mostly bans – in most socialist countries. Within just a few years, the region was inundated by information from all sources imaginable (satellite TV, newspapers, foreign visitors, the Internet, etc.), even if the media's economic problems often forced them to subordinate themselves to the demands of private or governmental financiers, while, as far as the sources of information were concerned, the range of choices the population had was limited by their declining purchasing power. In plain language, this meant that television, at least in the 1990s, bore the greatest



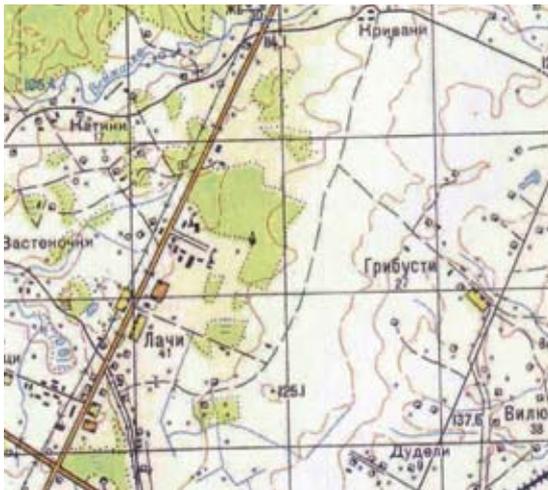
Figure 1. Fragment of a tourist map of Semipalatinsk, Kazakh SSR. Source: GUGK, 1982.



Figure 2. Hand-drawn copy of a fragment of the master plan for Daugavpils, Latvian SSR, in preparation for the allocation of land to the furniture trust for the construction of a summer guest house. Source: archival material from Daugavpils zonālais valst arhīvs (copy can be obtained from the author on request).



Figures 4a and 4b. Part of the ordnance survey maps (scale 1:10,000) of Air Force Bases in the two similar cities of Tartu (the Raadi Air Base), bottom, and Uppsala (Ärna Airfield), at the top. As in the case of Daugavpils, the air base in Tartu was replaced with an unusually empty steppe landscape. Source: General'nyi shtab, 1974 (Tartu) and 1976 (Uppsala, Sweden).



Figures 3a and 3b. Lociki Air Force Base and the heavily populated area associated with it, outside Daugavpils, Latvia, was "forgotten" in the classified ordnance survey map with the scale of 1:50,000. Note the absence of landscape features in the airfield area, and that the north-south main road marks the border between correct and falsified representation of the landscape. Sources: Satellite image from Google Earth (accessed 2008-06-28) and General'nyi shtab (1975).



responsibility for the legacy of the information revolution from the earliest years of the transformation.

THE SILENCE OF THE MAPS

During the Soviet period, spatial information was scanty, if not nonexistent. As Thomas Borén² pointed out in his dissertation, the lack of maps meant that people were forced instead to acquire the corresponding knowledge by accumulating and mentally structuring their everyday "spatial experiences". Moreover, because the landscape of the city changed only sluggishly – since the relations of supply and demand in urban areas were not dictated by the market, but

by a constellation of different state actors – this learning process was relatively easy.

That the maps that were actually published withheld much information is, of course, hardly surprising in view of the Soviet "information terror" described above. Among the most important manipulations is undoubtedly the deletion of the secret cities from all maps. That secret cities were kept secret in this way is of course not itself surprising – after all, one of the cities used for the American atomic bomb project, Oak Ridge Tennessee, also belongs to this group of temporarily non-existent places – but what makes the Soviet case extreme is the size of these cities, along with the time horizon.

North of the large West Siberian city of Tomsk, for example, a satellite city known as Seversk (or Tomsk-7 as it had previously been known) has existed since the late 1940s, which, since the dissolution of the Soviet Union, contained many more than 100,000 inhabitants. In total, several millions of Soviet citizens lived in the "non-existent" cities, usually with a far better standard of living than was customary. The common denominator for most of these places, or rather for one or more of the factories that were located at these places, was that they were administered by the so-called Ministry for Medium Machinery, which was the authority responsible for the nuclear industry.



Figure 5. Fragment of map of Ulan-Ude in 1998 with original scale of 1:25 000. Source: Federal'naya, 1998.



Figure 7. Fragment of map of Almaty, Kazakhstan, from 1998 with original scale of 1:30,000. Source: Komitet, 1998.



Figure 8. Fragment of Russian-language map of Kiev from 2006 with original scale of 1:35,000. Source: Geosvit, 2006.

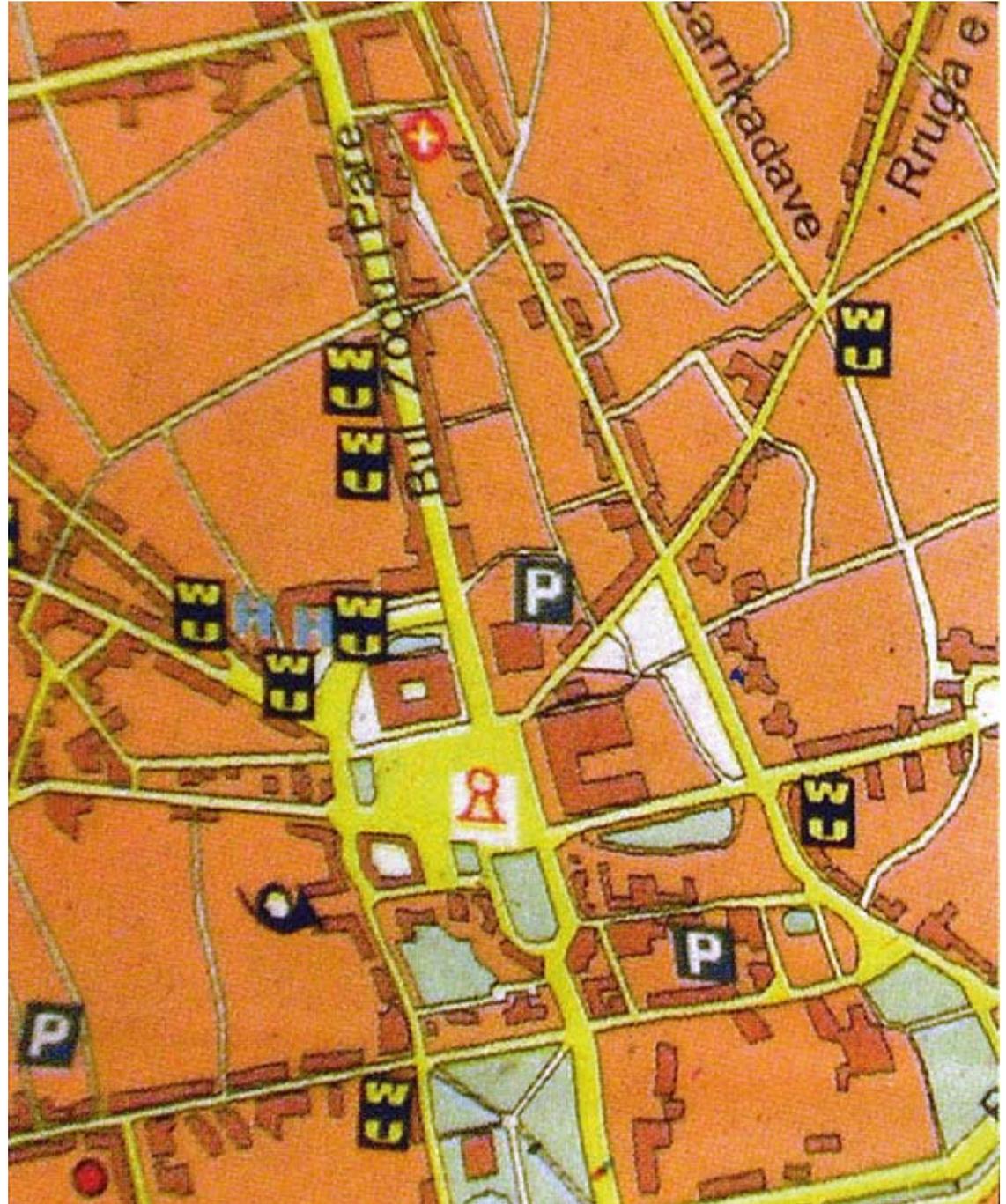


Figure 6. Fragment of map of Tirana in 2000, with unknown initial scale. Note the buildings that line the main streets and the lack of information about what lies between them. According to the legend they are public buildings, but this is not the case. In general, the legend is over-ambitious since it even includes the item “metros”, even though the nearest subway is in Bulgaria. Source: Aksion, 2000.

Despite the silence of the maps in society at large, the Soviet Union produced maps prolifically. Ordnance survey maps were printed in only a few cities – among them Riga – and nearly all maps with a scale of 1:200,000 or larger were classified. Maps with smaller scales approved for publication were heavily retouched yet nonetheless relatively inaccessible to the public, except the so-called tourist maps (Figure 1). Ordnance survey maps formed the basis of all the more or less detailed and accurate cartographic material of the Soviet Union. Large parts of the Soviet Union were covered by secret topographical maps using a scale of 1:200,000 or 1:100,000, but some of the more densely populated regions were also rendered

at a scale of 1:50,000. The classification, *sekretno* (secret), of these middle-scale maps was changed towards the end of the 1980s to the softer wording *dlya sluzhebnogo pol'zovaniya* (for official use). Very large parts of the rest of the world were mapped in the same series, including many Third World countries, where the Soviet maps are still considered to be the best source of spatial information.

The cities are mapped at a scale of 1:10,000 and sometimes 1:25,000. With maps of Soviet cities there is an area of text describing the city's most important military-strategic aspects and objects, but without further details. The same map series covers a wide range of military-strategically interesting locations in

other countries. In the case of Sweden, for example, all significant port cities were mapped in a scale of 1:10,000. The amount of place information contained in the maps, however, was much greater than in the Soviet maps. For example on the map of Uppsala (surveyed and mapped in 1976) we find, among other things, the various scientific institutions of the university (except the Department of Geography!) and all known major locations or objects connected with defense.

For the master plans of the cities, which were also classified as top secret, maps at a scale of 1:10,000 were used. The master plan, whose function was approximately the same as the Swedish *översiktsplan*

(literally: overview plan, or scheme) except that it had the same juridical force in relation to the population as the detailed maps, rarely existed in more than one or two copies. Every time the construction of an object had to be approved by the *gorispolkom*, the city's steering committee, the planners/architects involved had to copy (by hand) the relevant fragment of the master plan (Figure 2). Even though the master plan map was the most important tool of the city planners, it was constructed upon the more or less censored versions of the original ordinance survey map, whose classified status, in contrast to that of the maps done at a scale somewhere in the middle, was never lowered.

There were of course other governmental authorities that needed to have access to cartographic information. One example is the Goskomstat, the Soviet Union's equivalent of Statistics Sweden (Sweden's central statistical office). Without maps, it would have been impossible to conduct population censuses, since it would not have been possible to divide urban areas into census units, nor to distribute them among those collecting the information. The solution was specially designed (and, of course, classified) maps that only furnished the user with information on the configuration of the street network along with the house number. The map I've seen, which was used for the census in Kazakhstan as late as 1999, was hand-drawn – probably with the ordinance survey map as a basis – and there was only one copy.

NOT EVEN THE MILITARY MAPS...

Ordinance survey maps may well have been secret, or intended for official use, but that did not mean that they were not subject to manipulation. This suggests that there may have been an additional level of security in the publication of the maps, though there is no trace of this. On the medium-scale military maps of the Soviet Union, it is not uncommon for military facilities or objects in particular not to be included (Figure 3), which may have been part of a deliberate strategy designed to confuse the capitalist enemies. Nor, moreover, is the secret Russian city of Seversk (Tomsk-7) included in 1991 in the ordinance survey map with a scale of 1:200,000

On the large-scale maps (1:10,000) of the domestic towns the same tendency can be seen (Figure 4), in addition, it can happen that a significant number of details that are included are not correctly represented. That the latter is the case is something I experienced on-site in the Georgian steel mill town of Rustavi – here the power lines run somewhat differently in reality, and the buildings of the nearby prison colony don't correspond to those on the map either.

THE CARTOGRAPHIC TRANSITION

With the dissolution of the Soviet Union, most of the former Soviet republics experienced somewhat of an information revolution, but, with the exception of the Baltic countries and to some extent Georgia, the improvement in the availability of good cartographic

material can be described as a gradual transition at best. In most of the countries, including Russia, the availability of topographical maps at a scale of 1:100,000 or larger is extremely limited, while the quality of the published maps is constantly being improved (except in Uzbekistan and Turkmenistan, where the regimes still cling to the Soviet approach to maps).

In the early 1990s, the situation in Russia was temporarily a bit brighter, and it was also at that time that the Library of Congress in Washington acquired a very large stock of Soviet maps, including city plans in a scale of 1:10,000. However, this collection did not cover the Russian Federation, though it did cover most of the other former republics. The maps also became commercially available in the West around the same time through a number of companies based in the US and Britain, and even in Russia it was possible to purchase lightly censored map-sheets in 1993 with a scale of 1:200,000 that covered nothing other than the secret and mysterious Kola Peninsula. As late as 2000, there was also the theoretical possibility of buying somewhat censored versions of the ordinance survey maps of Russia's Cartographic Corporation, which is the name of the business arm of the Russian maps authority, but in reality this possibility was subjected to the FSB's (the federal security service's) erratic assessments of both the customer and the item requested.

With regard to the published maps, the quality has constantly, albeit slowly, improved since the early 1990s. The pace of change has however varied greatly among the former republics. As early as 1992 a relatively accurate map of Riga was released³ while developments in Russia outside Moscow and St. Petersburg had not gone further than in Figure 5, which shows a fragment of a map from 1998 of the Siberian city of Ulan-Ude.

In Tashkent, no map had been released to the locals as late as the end of the 1990s, but for visitors, a greatly improved variant of the Soviet tourist map was made, which now was afforded with both a scale and accurate angles, while the selectivity surrounding the street network outside the city center remained⁴. Sometimes the zeal to highlight the main streets can result in strange cartographic effects, as in the case of the map of the Albanian capital, Tirana (Figure 6). Here, the user knows nothing about what is hiding between these streets, while a large number of buildings along the main streets is described in the legend as public buildings, but this is not the case – in some cases it might be shops on the ground floor.

A similar, if slightly better map of Almaty, the former capital of Kazakhstan, was released around the same time (Figure 7). The amount of information included about areas outside the city center is still quite limited, but the map is nonetheless useable. At around the same time, the Kazakh cartographic authority released an excellent map of Astana, the then new capital, at a scale of 1:10,000, based on the old ordnance survey map. Why similar maps of the country's other cities did not in time come to be released is not clear, and the "silence of the maps" still remains in the country, despite Google Earth's watchful eye. Further evidence of this is that geography

students at the East Kazakhstan State University were still using fictional maps in cartography instruction in the early 2000s. During the 2000s, the overall quality of the maps approved for publication increased in most places in the former Soviet Union. In general, the major cities have been in the forefront (and of these there are also maps made abroad, in particular in Germany) with the regional capitals trailing behind, if they are present at all.⁵

A recent map of Kiev (Figure 8) is an example of this. One explanation for the accelerating increase in quality among the commercially available maps is of course likely due to external factors for which the local mapping authorities are not responsible – after all, as early as the 1990s anyone could buy almost any Soviet general survey map (not including some of the 1:10,000 urban maps), and with the advent of Google Earth, anyone can peer into many of the secret cities of the former Soviet Union completely free of charge. Eventually, even the old ordnance survey maps will probably be released, but so far, only a small number of countries has actually released these maps – along with a few others where the ban is not taken as seriously as it once was.

In conclusion, I would like to emphasize that, generally speaking, the post-Soviet map has not kept pace with other aspects of the information revolution in the region since the glasnost years of the late 1980s. The changes have been gradual, but they are in the right direction. Fortunately, the maps do not seem to be experiencing the "information recoil" that, according to a growing number of observers is manifesting itself in a number of countries in the region, including Russia. The commercial maps are improving while the rest of the information landscape is cooling down. This was the situation in 2008. ≈

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REFERENCES

- 1 See Tommy Book, "Kartmanipulation i öst" [Manipulation of Maps in the East], in *Kartan och verkligheten* [Maps and Reality], *Ymer* 2008, vol. 128, Svenska Sällskapet för Antropologi och Geografi.
- 2 Thomas Borén, *Meeting-places of Transformation: Urban Identity, Spatial Representations, and Local Politics in St Petersburg, Russia*, Meddelande 133, Stockholm 2005 (Kulturgeografiska Institutionen).
- 3 Jāņa sēta, *Rīga M 1:25000, Jaunākais Pilsētas Plāns*, Riga 1992.
- 4 *Uzgeodezcadastre, Tashkent Tourist Plan*, Tashkent 1997.
- 5 A very rare exception is the city of Khabarovsk in eastern Siberia, which recently released a city atlas, the maps of which come from updated but of course also somewhat censored fragments of the old ordnance survey map at a scale of 1:10,000.