

# MOSCOW DISTRICTS ID

“Regional syndrome”  
and participatory  
city index

Maria Romakina

MOSCOW IS AN “ALLIANCE” OF 125  
DISTRICTS, WHICH ARE GROUPED INTO  
BIGGER SPATIAL-ADMINISTRATIVE  
UNITS - OKRUGS. WHAT IF WE WILL  
DEFINE URBAN CHARACTER OF EACH  
DISTRICT WITH MACRODATA AND  
SOCIAL DATA? WILL WE DISCOVER  
SOMETHING NEW ABOUT THE CITY  
SPACE?

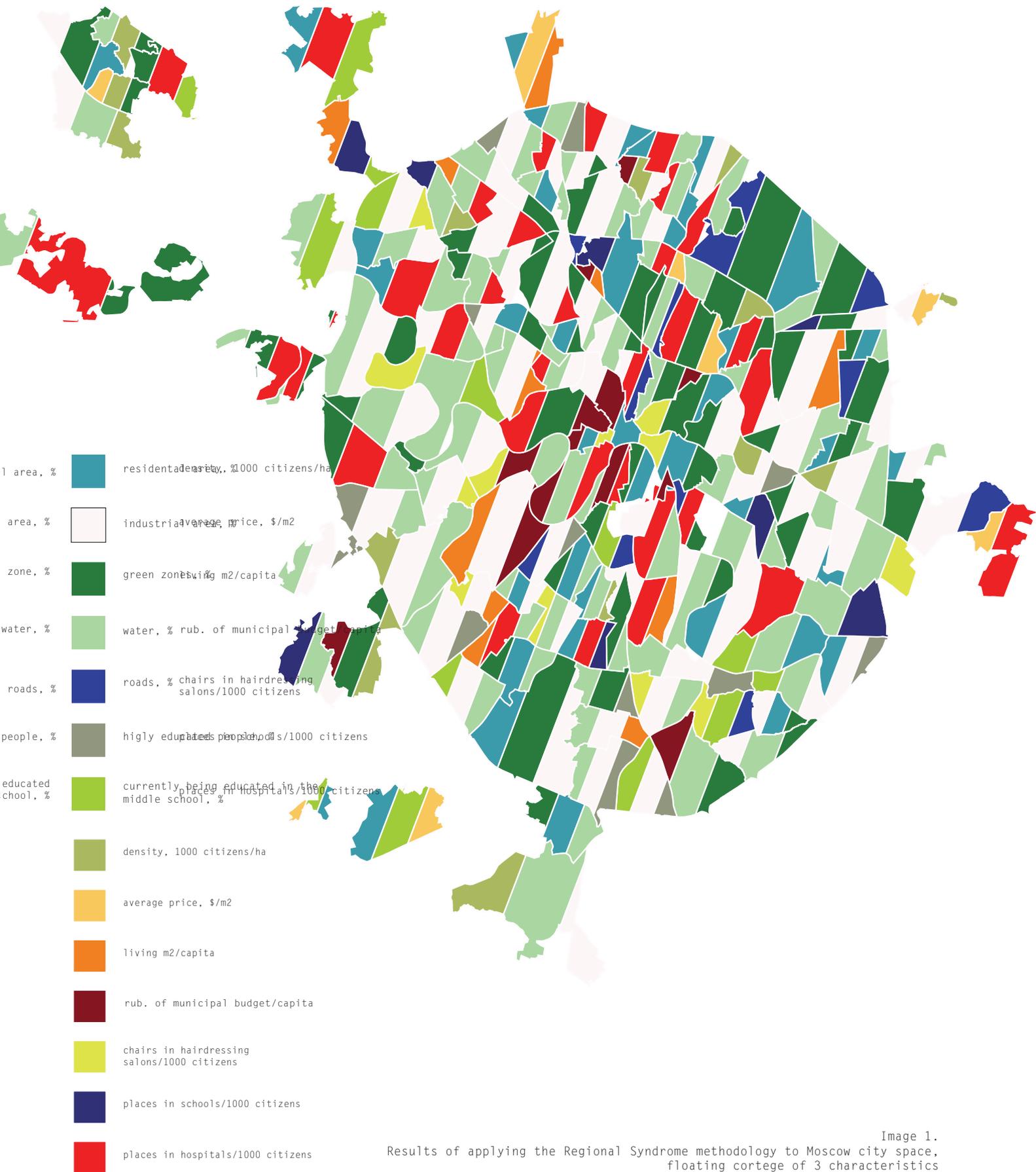


Image 1. Results of applying the Regional Syndrome methodology to Moscow city space, floating cortege of 3 characteristics

# functional zoning of moscow

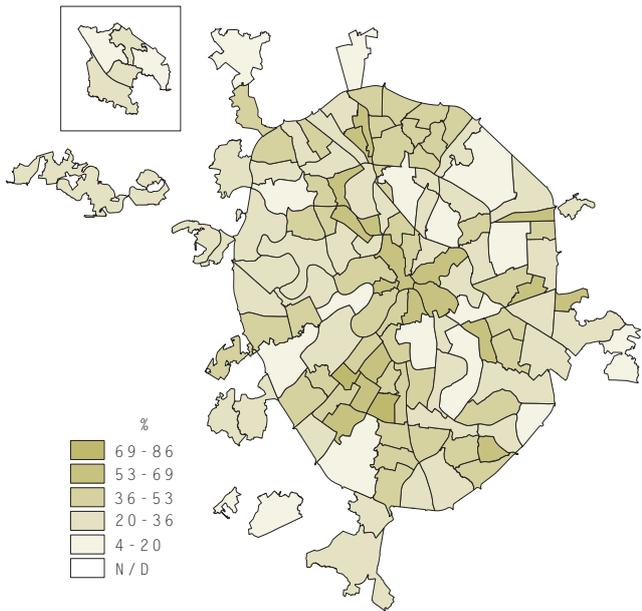


Image 2. Residential zones, %  
The most saturated: Zyuzino, Lomonosovsky, Beskudnikovsky, Arbat

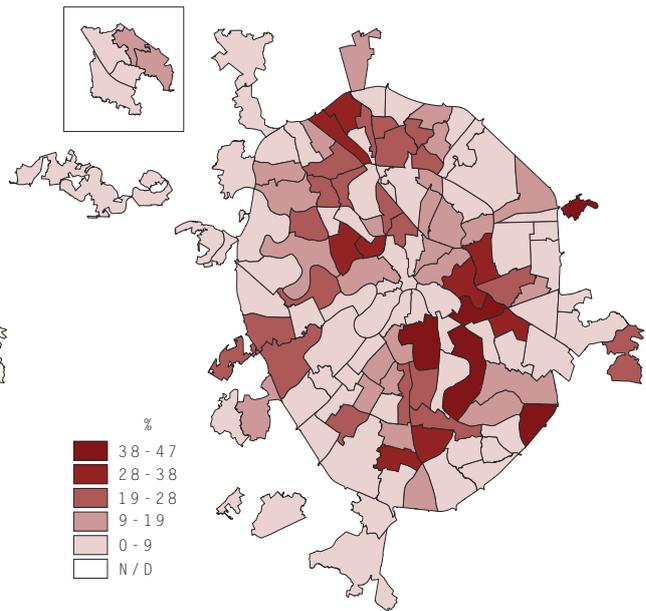


Image 3. Industrial zones, %  
The most industrial ones: Pechatniki, Kapotnya, Vostochny, Nijegorodsky, Danilovsky

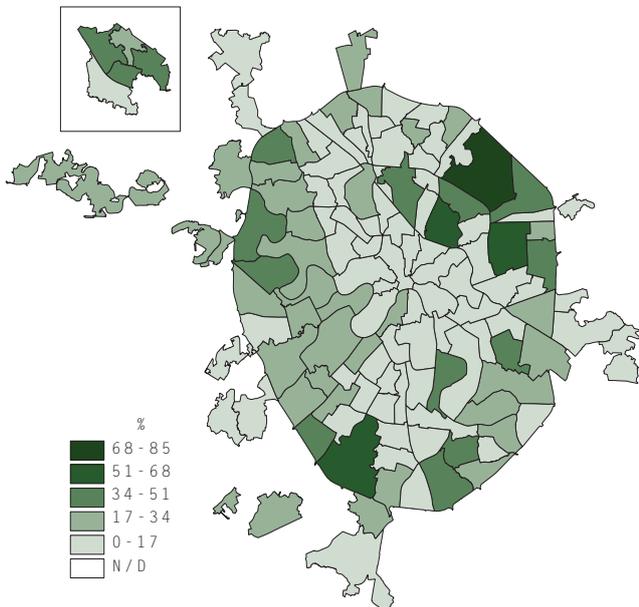


Image 4. Greenery, %  
The most green: Metrogorodok, Yasenevo, Izmailovo, Sokolniki

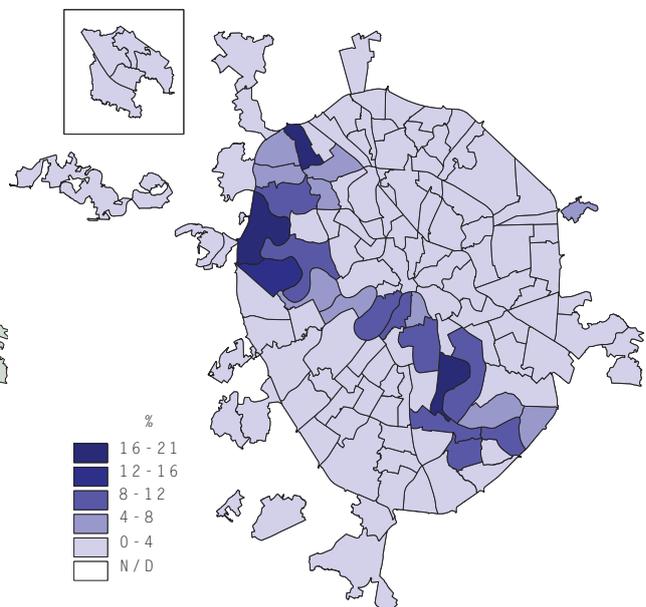


Image 5. Water, %  
Richest by water: Strogino, Pechatniki, Khoroshevo-Mnevniki, Nagatinsky zaton, Krylatskoe

The first open-source attempt to get statistical information about functional zones in Moscow districts. Information has been scrapped from OpenStreetMap by ArcGis. Inaccuracy is minimal, relative to the accuracy of OpenStreetMap. This crowdsourcing map has shown much more precise results than the official generalized Genplan-2025 map.

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# i n t r o d u c t i o n

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This research has been conducted following the changes of recent months: Moscow has started a new period of its existence - an era of open data (symbolically, as a starting point, we might estimate the appearance of a branch of web-sites, opened by Moscow government in January 2013 around [www.data.mos.ru](http://www.data.mos.ru)). At the same time, during the last years and decades we could observe the processes of restructuring the post-soviet territories, as well as observe an increasing sense of spatiality.

During soviet times USSR people were characterized by aspatiality (Smirnyagin). A good illustration for that - a quote from a soviet song: "Moi adres ne dom i ne ulitsa, moi adres - Sovetsky Soyuz (My address is not my house or my street, my address is - USSR)." Socio-economical changes in post-soviet times started up the processes of territorial differentiation: the tendency for unification and reducing the diversity has been replaced by economically driven territorial segregation of population.

The main focus of this research is an attempt to read the territorial differentiation of modern Moscow by the use of different types of data: 1) official and commercial statistics, provided by Mosgorstat, Municipal Councils, [www.data.mos.ru](http://www.data.mos.ru), Census Institute and IRN.RU 2) map information from Genplan-2025 map, Kadastr map, OpenStreetMap 3) results of the survey, made by the author of this research in May 2013, 4) social media data (Twitter).

The initial idea is to combine macroscale and microscale level of reading and analyzing the city for a branch of purposes: defining urban characters of all districts and building a typology of them (as a first step for building an index), verifying "common opinions" by means of data (it is obvious that the liveability status of Zamoskvorechie is higher than of Golyanovo, but can we prove that by unemotional numbers?), getting the subjective picture of popularity of districts between citizens and a picture of mobility within the districts.

An indexing system of districts might be useful from different perspectives. It might help citizens to navigate the city environment in everyday practices or at the moment of the "big decision" (choosing a place to live or to work). It might help commercial companies to run their businesses and fulfill lacunes in different districts and other stakeholders as well. For example: can urban planners ascertain the local identity and use this knowledge for planning? Or: might cultural policy based on the territorial differentiation be more local and how? City index might be helpful for authorities as an information instrument which indicates socio-economical and other processes in the city.

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# m e t h o d o l o g y

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Territorial identity is a complex category which includes different components or subcategories - landscape-ecological, architectural, infrastructural, socio-economical, cognitive. The question of territorial identity can be, and has been, researched from different perspectives by specialists of different professions - geographers, ethnographers, ecologists, architects, economists, sociologists, folklorists and others. In case of urban research, only a multidisciplinary approach allows one to cover such a complex organism or machine - whichever metaphor you use - as the city is. That's why I use a package of methodologies - statistical analysis of data (applying to regional syndrome methodology), interviewing and running a survey, field monitoring, mapping and map analysis, semantic-statistical analysis of media and social media.

As a basic unit of territorial differentiation I have taken a district (rayon)- the ultimate formal spatio-administrative element. The district's division with local administration is the main principle of running governing processes in modern metropolises such as London, New York and others. And Moscow, as well, with this exception that heads of the councils are not elected, but appointed by the mayor, and have very limited decision authority, focused mostly around provision of urban amenities. The modern territorial structure of the capital of Russia has been established by the law 13-47 "About the territorial division of Moscow city" (5 July of 1995), which has been several times edited (in 2002, 2007, 2010) and was updated in 2012 according to the spatial extension of the Big Moscow project.

It has taken into account previous research about Moscow districts, concerning different sides of the topic, that has been done before by Genplan Institute, socio-economical and electoral geographers, and the attempts to build the city index, made by A.Popov in 2008 in his dissertation and SLON.RU in 2010.

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# m a c r o s c a l e a n a l y s i s

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Macroscale analysis was done by using the "Regional syndrome" methodology, that has been developed by two Russian geographers (V. Kagansky and A. Novikov). It aims to characterize outlined territories. V. Kagansky and A. Novikov have applied it to USA-states and USA-counties. In this research I am building a Moscow district's typology based on this methodology.

The term "syndrome" by itself was taken from medicine and psychology. Its idea is that there is an association of characters that usually "come together". If we meet one



#### “PASSPORT” OF KUNTSEVO

29,7% residential area  
 8,6% industrial area  
 31,5% greenery  
 1,8% water  
 20,1 m<sup>2</sup>/capita  
 5153 \$/m<sup>2</sup>  
 299 citizens/ha  
 highly-educated people: 39%  
 studying at middle-school: 6,5%  
 69,4 places in schools/1000citizens  
 17,1 hospital beds/1000citizens  
 1,8 chairs in hairsressing salons/1000citizens  
 municipal budget: 445rub/capita

of them in some situation (in the case of medicine it's a disease, in case of geography and urbanism it's a territory within some borders, a state or a district) we more or less credibly may apologize for the presence of the other characteristics from the group of “coming together”. According to Kagansky&Novikov it is not so important to look at all characteristics of any territory to define and understand it, but it's much more important to look at these particular ones (so-called “regional cortege of characters”) that distinguish a state or a district from others ultimately. From one district to another the cortege differs, or floats, - that's why we can talk about “a floating character” or “a floating cortege of characters”.

All accounts were done within the spatial-administrative deviation of Moscow before 1 July 2012 and will not include new territories of Big Moscow, as there is no available statistics about that part of the city's territory yet.

The model of the typology is built on 15 parameters, grouped into 5 clusters:  
 1) Land use distribution (% of residential area, % of industrial area, % of green zone, % of water, % of roads);  
 2) Demography (population density, % currently being educated in middle school, % of highly educated people)  
 3) Housing (average price \$/m<sup>2</sup>, living m<sup>2</sup>/capita)  
 4) Social infrastructure (places in schools/per 1000 citizens, places in hospitals/per 1000 citizens, chairs in hairdressing salons/per 1000 citizens)  
 5) Budget (rub. of municipal budget/capita).

The choice of data-sets for analysis and interpretation directly depends on the accessibility of statistics. Unfortunately, some important categories are missed, such as crime, ecology or architectural morphology, for obvious reasons - lack of data. Petrovka38.ru, for example, has not opened statistics about crime yet - concerning Moscow districts, but promised to do that in nearest future, and there is no a unified source of ecological information, although

some interesting projects exist (made by Faculty of Geography MSU or commercial companies).

It is individually worse to mention that one of the results of this research is an extracted data about functional zoning. I worked with 2 sources (Genplan 2025 map and OpenStreetMap), inspecting the scrapped statistics in comparison to the Genplan Institute statistics of several selected districts (maps of them were kindly given for the author of the research by Genplan Institute for researching purposes). It turned out that OpenStreetMap gives more precise information with a minimal % of inaccuracy. The received statistics allow one to count density in a more appropriate way than it is usually given in open sources: density/residential area vs density/total area of a district.

Data has been analyzed according to such a procedure: for every parameter the average value has been taken. After that, for all parameters, normalized dispersion has been taken and then the 3 the most remote from the average value characters have been selected. 3 is enough to demonstrate the model of the typology, but is not an obligatory number. It can be 5 or 7 characters, or even more, depending on the amount of parameters that have been analyzed.

These are examples of “floating corteges”:  
 Lomonosovsky - high % of residential area, low % of industrial, low % of water (0%).  
 Kapotnya - high % of industrial area, low % of residential, low % of highly educated people.  
 Kurkino - low % of density (counted in application to residential zone), high amount of living m<sup>2</sup>/capita, high amount of places in schools/1000 people.  
 Yakimanka - high property prices, high amount places in hospitals/per 1000 citizens, high % of water area.  
 The choice of the 3 most distinct points (both in positive and negative sense) give us an opportunity to read the urban character of each district, based only on numbers. These 3 characteristics are signals - they manifest big potential in using green territory in the

# mapping the statistics

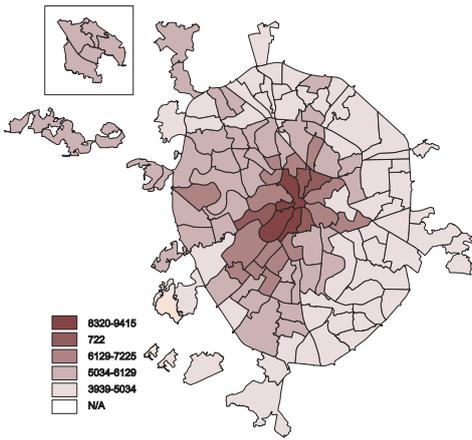


Image 6. Property prices, average, \$/m2 (IRN.RU)

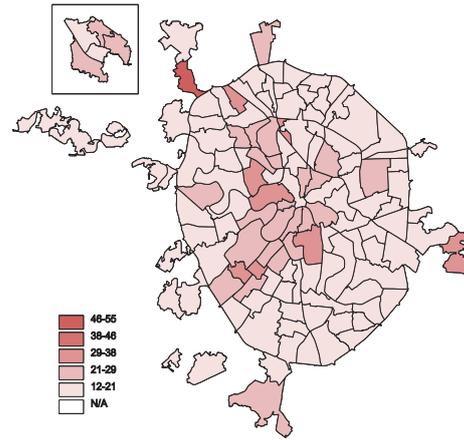


Image 7. Housing, m2 of living area/capita, in average (Mosgorstat)

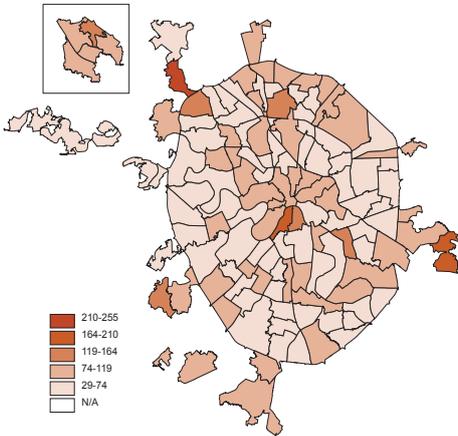


Image 8. Places in schools/1000 people (Mosgorstat)

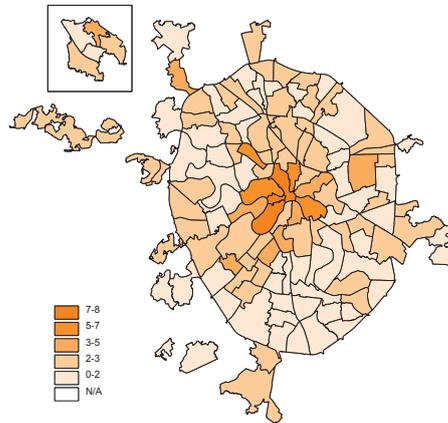


Image 9. Places in hairdressing salons/1000 people (Mosgorstat)

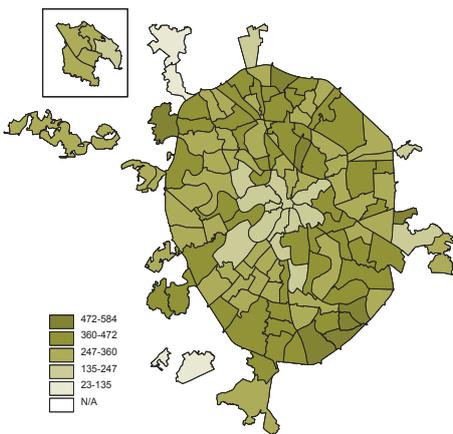


Image 10. Density, people/ha of residential area (Mosgorstat, OpenStreetMap analysis, see Image 2)

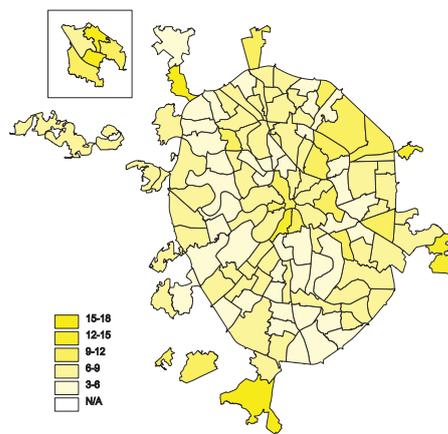


Image 11. People, studing at the middle school, % (Census, RIA Novosti)

The central districts demonstrate their elite status: the highest property prices (Image 6), the lowest density (Image 10), good satiation of social infrastructure (Image 8,9).

The more precise way of reading the maps - comparing district to district.

district or a cluster of hospitals, which means a high social value of this territory within the city. For sure, the cortege by itself and each chosen characteristic needs a more precise look. In general the results are manifestations of the particularness of the districts, proven by statistics.

The final results of the choice of a “floating cortege” of 3 for all districts are presented on a “psychedelic” map (Image 1).

The “regional syndrome” methodology allows, as well, to single out the most archetypical Moscow districts - those ones that demonstrate the closest position to the average set of parameters. For the combination of selected characteristics these are Kuntsevo, Losinoostrovsky, Alexeevsky, Timiryazevsky. For functional zoning’s set - Kuntsevo, Ramenki, Losinoostrovsky, South Tushino. So, we might choose two of them which are present in both groups - Kuntsevo and Losinoostrovsky - as the most typical ones for Moscow, the ‘most Moscow Moscow’.

## m i c r o s c a l e a n a l y s i s

Macrodata ignores the microscale level of looking at the city, the subjective component of perceiving and living the city space (Jacobs) - that’s why I decided to organize a survey and collect opinions about districts from citizens. The survey had about 30 questions and was spread on the Internet through social networks and networks of professional organizations (such as the Institute of the Economy of the City, *Big City magazine* and activists networks such as Mosgorchat and Open Arbat). Also, the survey was partly done in paper form, aiming to cover the audience that is not represented through the Internet (old-aged people). From 9 may to 20 may 2013 about 600 people have participated in the survey. Here I’ll give an overview of the results only partially.

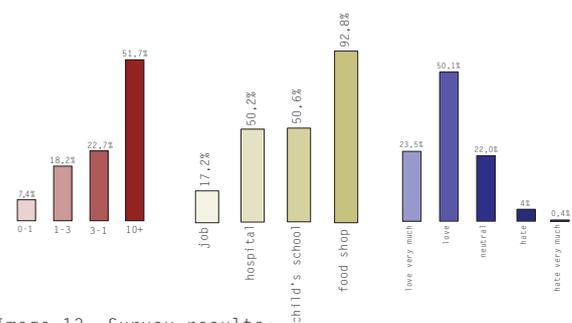


Image 13. Survey results:  
a - mobility within the city: how long people live in their districts b - from home go by foot to..., c - do moscovites love their district?

One of the most interesting questions in this context is: “Which district will you choose if you will have an opportunity to choose any one?” It supposed a free thinking-imagining, and the answers show the popularity of different districts, and the “desirability” of them. Through analyzing the answers, we observed some tendencies:

1) peripheral people would like to move to the center of the city (Khamovniki and Basmanny are the leaders), 2) the majority are dreaming to live near a park (Vorobiev Gori, Kolomenskoe, Tsaritsino, Lefortovo, Botanichesky sad, Serebryany Bor), 3) people demonstrate the desire to move to one of the neighbour-districts - familiar neighbouring territories are attractive. It’s possible to single out several clusters of territories that sympathise with each other: the first one is Shchukino + Strogino + Krylatskoe + Kuntsevo, the second one - Severnoy Tushino + Yuzhnoye Tushino + Pokrovskoye-Streshnevo + Sokol, the third one - Arbat + Khamovniki + Yakimanka + Presnensky + Tverskoy. About 25.5 % of respondents prefer to live at their own district and about one third of them are very categorical in their desire and are not ready even to dream about changing the territory. The most devoted citizens live in Sokol and Arbat. By the way, one of the strongest motives for changing the district is nostalgia (have lived there in childhood, great grandfather has lived there and father has grown up, enjoy the atmosphere of the district), but not the commercial issues.

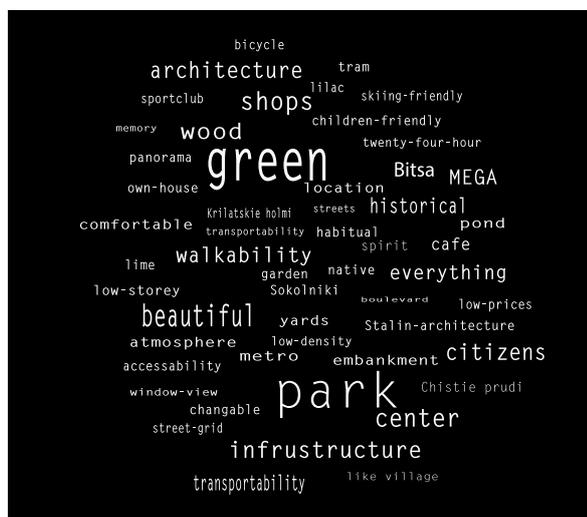


Image 12. What citizens LIKE and DO NOT LIKE in their districts according to the survey result. The “sygnal in the noise” here is a radically negative attitude towards the construction of north-west chord, which was announced by all respondents from Koptevo: they believe this road will “kill” their district. Should the authorities take into account opinions of citizens while solving transport problems of the city?

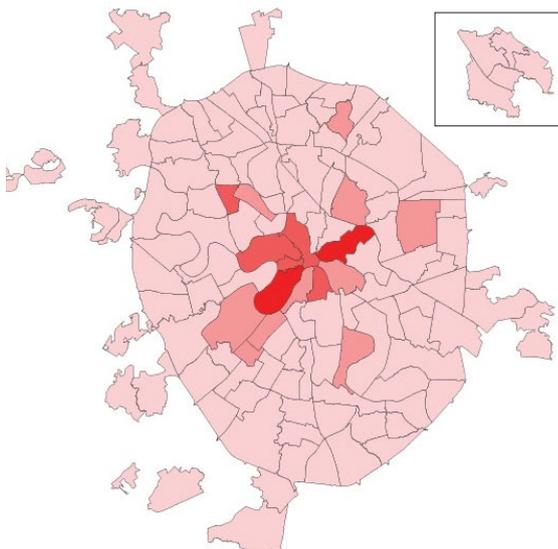


Image 14. The most desired districts to live in, according to the survey: Khamovniki, Basmanny, Zamoskvorechie, Presnensky, Tagansky, Sokol, Gagarinky, Ramenki, Izmailovo, Aeroport, etc

## i n v i s i b l e d i s t r i c t s

The survey's responses has sorted out the whole group into, lets call them so, pseudo-districts, that are not official ones, but are recognized by citizens as districts: Patriarshie prudy, Chistie prudy, Kitai-gorod, Ivanovskaya gorka, Frunzenskaya naberejnaya, Dinamo, etc... This phenomenon is not something unexpected. While the

government propose and outline official borders of territories, which are formal, important in administration and budget assessment processes, citizens unconsciously, instinctively and spontaneously single out their own districts, which are not formal but socially - very powerful - these are vernacular districts. It's people's response to official division and the evidence of people's perception of the city space. It's the spatial expression of the territorial identity of citizens and the marks of the borders of one or another city's community. Citizens feel something very specific towards these kind of territories - local patriotism - and are ready to unite, to mobilize in case of emergency first of all within these types of districts (Puzanov K.). In the USA some cities (San Francisco, for example) demonstrate a very strong vernacular division of the territory, while Moscow is much more spatially chaotic. In this report I am figuring out only some cases (see the table), that show different types of vernaculars being present in Moscow. I'll describe one of them - Arbat - in more detail.

Arbat is an official district within the central administrative okrug. At the same time it is the name of the street which is one of the symbols of Moscow. And at the same time it is the name of a vernacular district which has the same name as the administrative one, but not the same borders. If we focus on the answers to one of the questions of the survey ("What are the borders of your district in your particular perception?") we will see an iterative "mistake" in defining the borders. Even two: one official border is almost always moving from Povarskaya street to Novy Arbat and another, from time to time in the answers, is moving from Sivcev Vrajek to Prechistenka street or even

moscow vernacular: study-cases				
Name of a vernacular district	Map	Description, type of borders	Location	Principle of formation
Arbat		The name duplicates the names of the official district and the name of an old pedestrian street. The borders are movable, penetrable.	Between Novy Arbat, Ostojenka, Gogolevsky bulvar, Sadovoe koltso. Partly overlays an official district Arbat, partly moves to Khamovniki district territory.	Highways (Novy Arbat, Sadovoe koltso, Ostojenka) extrude the smaller streets, which are the borders of a formal district (red on a map), and shape the vernacular (yellow).
Kitai-Gorod		Was singled out around the historically valuable area with the same name (red on a map). The borders are movable, penetrable	Around Kitai-gorod metro-station. Includes the next streets: Iliinka, Varvarka, Maroseika, some people even include Pokrovka.	Adaptation of a historical toponym.
Block of Red Houses		Vernacular combines 2 blocks of houses (7 buildings for each block). The borders are immovable, penetrable.	Stroiteley street 4, 6. Within Lomonosovsky official district.	Socio-architectural principle of formation. The block is an architectural experiment from 1950e: the facade is decorated with red tiles (A.Melii tiles). Majotiry of inhabitants - professors of MSU and their offsprings.
"Grey City"		An informal settlement of migrants, which already exists for several years. The borders are immovable, impenetrable.	Close to the metro-station Universitet. Within Lomonosovsky official district.	Ethnical settlement of migrants.

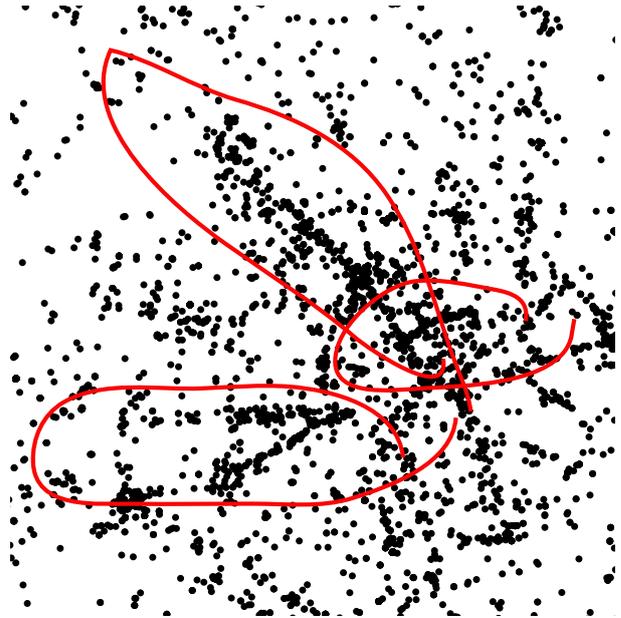


Image 15. "Special days" on Twitter: Victory Day, 9 may 2013, and Meeting-on-Bolotnaya Day, 6 may 2013.

Analysis of social media (for examples, geo-located twitts) make it possible to observe patterns of mobility of citizens and their involvement in public events. On 9 may there were registered intensive crowds on Tverskaya street and Kuznetsky street, Arbat and Novy Arbat - these streets were the most occupied by public holiday programme. On "usual" weekends twitt analysis does not show this kind of crowdedness on the same streets. Map of 6 may shows the meeting footsteps: the Bolotnaya Square was more heavily attended than on "usual" days.

Ostojenka. So we may conclude that it is not a "mistake", but a manifestation of existence of vernacular district. It's apperance has roots in historical transformations of this area and cannot be "recovered" by an official territorial devision by a wave of a magic wand.

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## conclusions

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As a conclusion I might estimate several statements. Official and commercial statistics might be considered as a basement for defining territorial differentiations - even being not 100% reliable this data allows one to identify urban characters of Moscow districts and specify their peculiarities. Intendment of the territorial differentiation within official borders is not enough if we want to understand Moscow. Vernacular districts manifestate the bottom-up processes of "appropriation" of the city space. Information about vernacular districts and inner borders in the city (it might be imagined like a new layer on OpenStreetMap, for example) show heterogeneity within official districts.

Creation of an information system (city index) is a necessity nowadays - interests of stakeholders and citizens are on hand.

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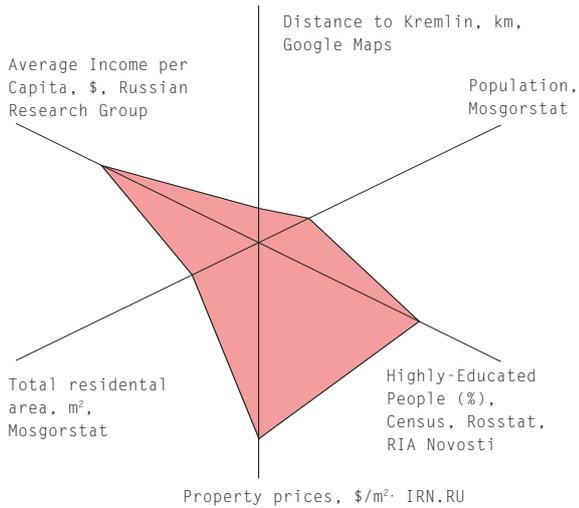
## proposal

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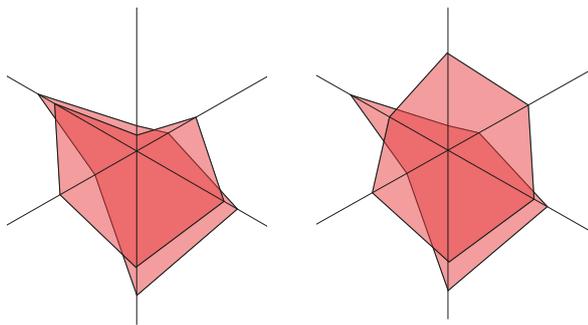
My proposal is: participatory city index.

Traditional indexing systems (for example, the index done by SLON.RU in 2010) operate with "objective" data and do not take into account citizens' opinions. I propose to build a modified model of the index that will include participation of people who live in the city and have a personal idea about the city space and their districts. Collecting "perceptions" (through the appraisal plan towards official numbers) will help to build a vivid, dynamic information system that doesn't only "spit out" the information, but also has a space for reaction on official statistics, and space for transformations according to gathered reactions. Personal citizens' opinions are subjective, but when there is a mass of such subjective opinions they have the power to highlight some patterns or tendencies. The index model needs a more detailed development. Here I am announcing the basic principles of the participatory index: dynamic structure and sensitiveness to voices of citizens. In a schematic way it looks like this: data → reaction → citizens' sensitive data.

## District Profile Arbat

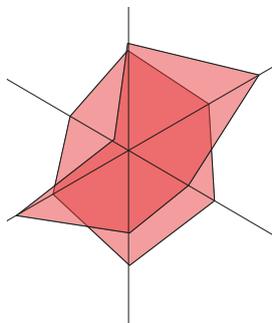


## Profiles Comparison



Arbat - Zamoskvorechye  
(Center- Center)

Arbat - Krylatskoe  
(Center- Periphery)



Krylatskoe - Golyanovo  
(Periphery-Periphery)

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- <http://www.city-data.com/>
- <http://citydashboard.org/london/>