# Heteroglossia and polyphony of voices in digital dialogue: Russian case

Iosif Dzyaloshinsky & Maria Pilgun

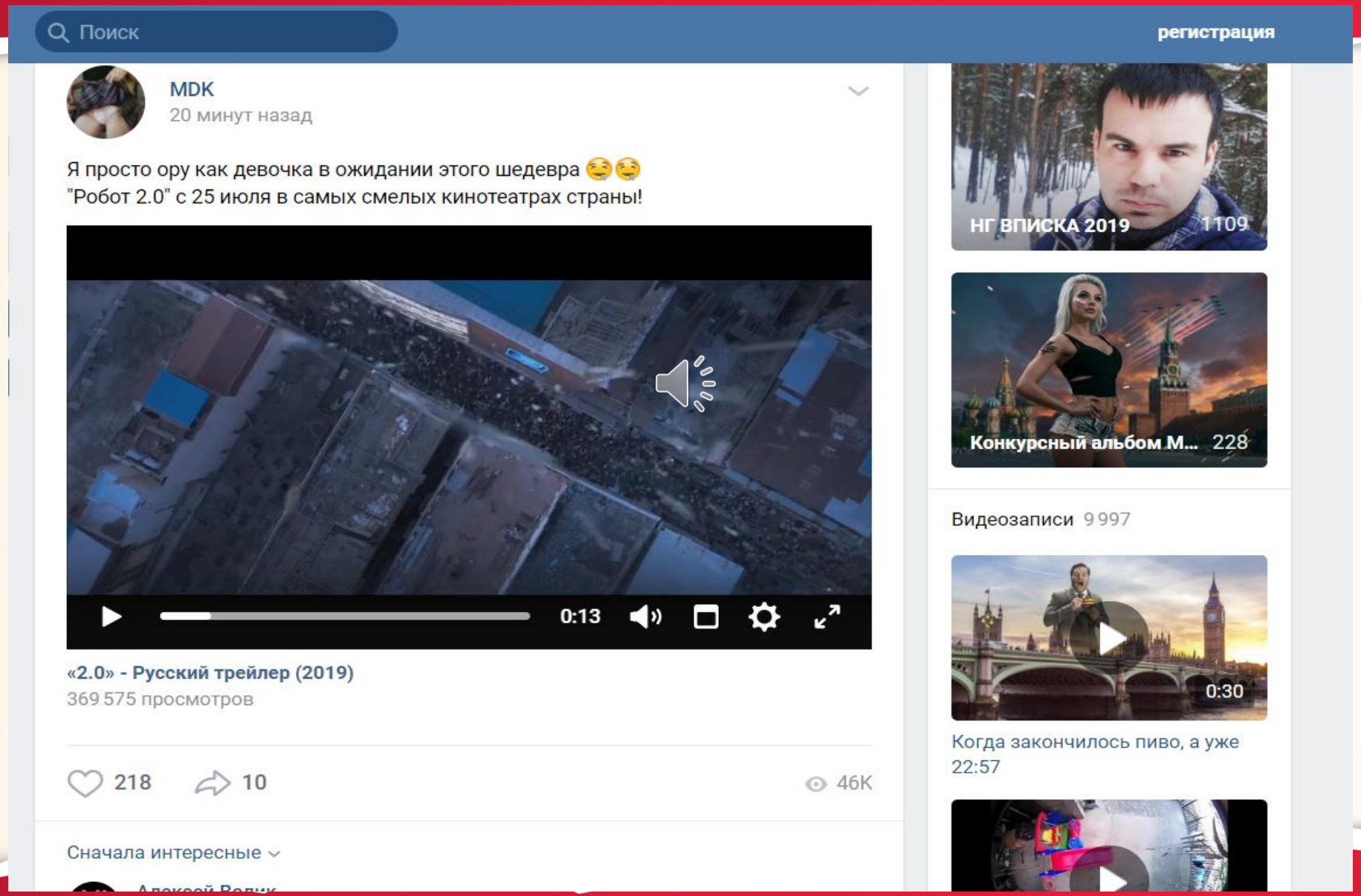
# Main indicators of Runet sites traff (January, 2020)

| Social network | Authors | Authors | Messages |
|---|---|---|---|
| Browsing | 2 277 233 933 | 2 334 978 477 | 2 334 523 814 |
| Sessions | 424 100 001 | 411 191 791 | 407 634 892 |
| Visitors | 149 451 614 | 149 936 458 | 147 830 604 |
| Average online | 1 194 984 | 881 392 | 1 194 555 |
| Average active online | 573 665 | 633 563 | 710 352 |
| Average duration (min.) | 5.6 | 5.9 | 5.9 |
| Views per visitor | 15 | 16 | 16 |

# The statistics of social networks: Russian case (January, 2020)

| The name of the social network | Authors | Messages |
|---|---|---|
| **Vkontakte** | 26 633 778 | 410 168 754 |
| Instagram | 10 396 161 | 89 995 624 |
| Facebook | 1 824 256 | 53 266 232 |
| Twitter | 1 010 690 | 41 184 629 |
| LiveJournal | 59 523 | 3 387 579 |
| | | |

# VKontakte (VK) (ВКонтакте)



Our mission is to connect people, services and companies by creating simple and convenient communication tools.

**97M**
monthly active users

**10B**
messages daily

**1B**
likes daily

**9B**
daily post views

**650M**
daily video views

**89**
supported languages

**140**
developers

**11**
designers

## Headquarters

VK's headquarters is located in the Singer House, one of Saint Petersburg's historical landmarks. The top five floors of the building are occupied by VK with the bottom two containing the famous "House of Books" bookstore. The

Search

sign up

**VK for iPhone**
Official application

**VK for Android**
Official application

**Mobile version**
m.vk.com

**VK Live**
Live Streams

**VK Admin**
Community Management

**Clever**
Daily Game

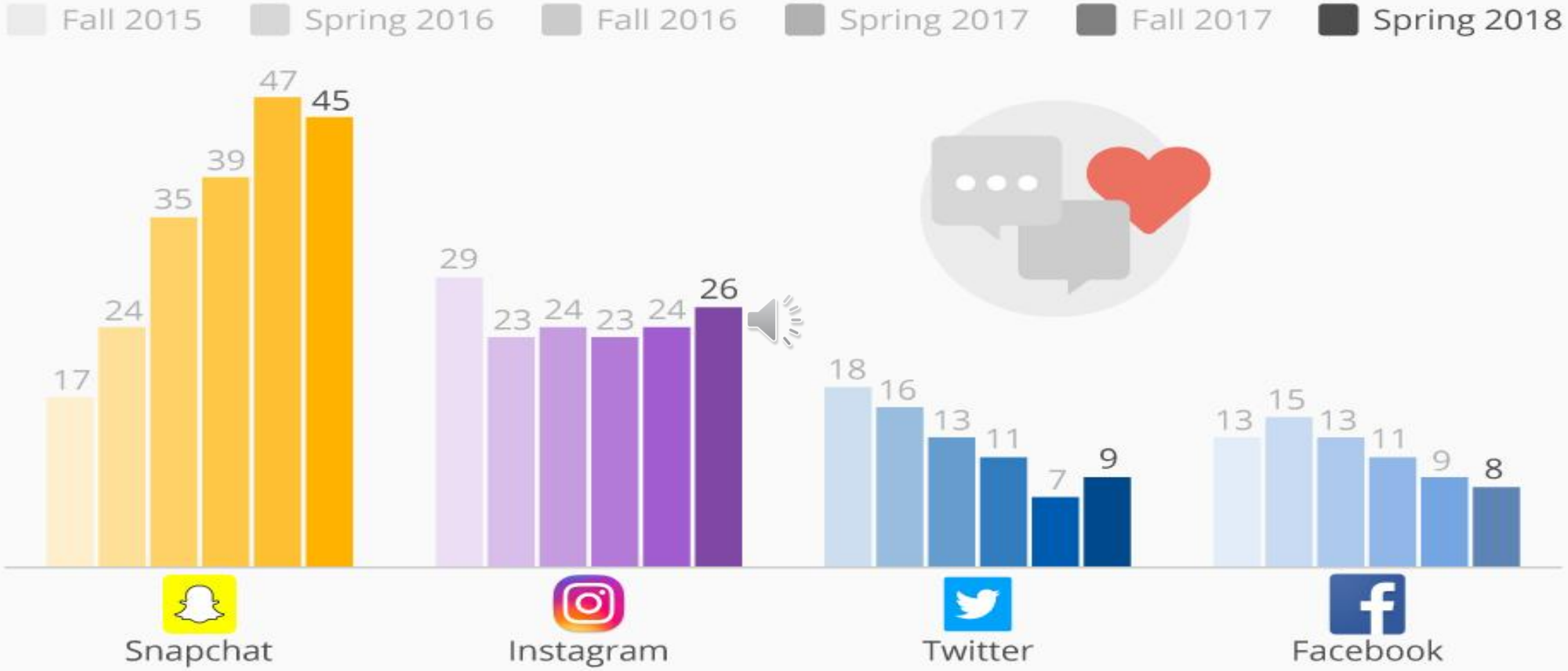
**Desktop Messenger**
Messaging

**VK API**
Platform for developers

**Ads**
Tools for business

# Facebook and Twitter Are Old News to Young People

% of U.S. teens who consider the following social networks their favorite




All results based on a bi-annual survey of ~6,000 U.S. teens with an average age of ~16 years

Source: PiperJaffray

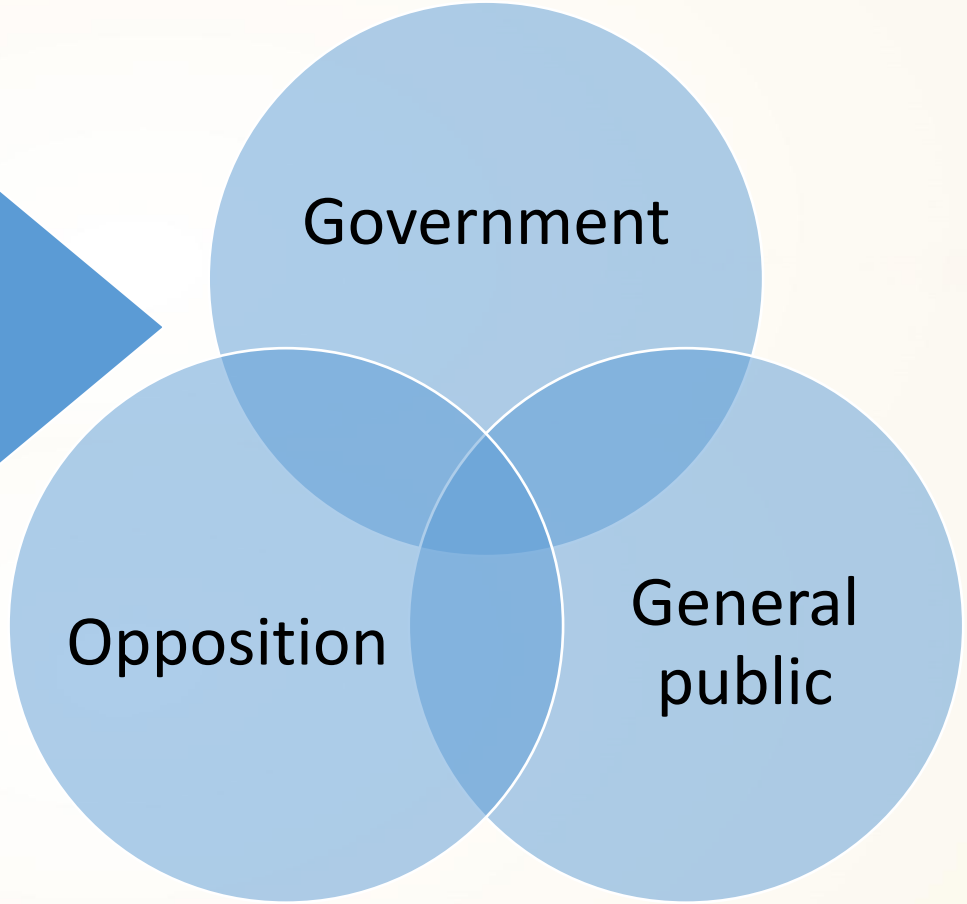
@StatistaCharts

statista

# Problem statement

Internet is just a mean of communication

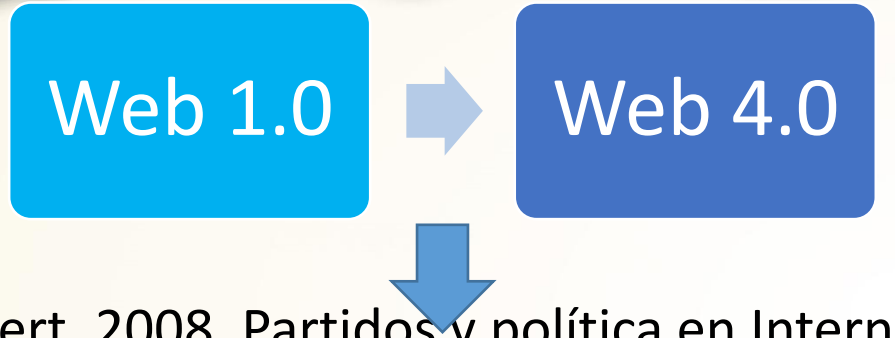
Internet would become the communication platform that enables effective dialogues



# Communication matrices in the political stage

1. Technocratic matrixes
2. Scientist matrixes
3. Humanitarian matrixes

# Background





- Padró-Solanet, Albert. 2008. Partidos y política en Internet. un análisis de los websites de los partidos políticos catalanes. IDP. Revista de Internet, Derecho y Política 6: 46-65.
- Lilleker, D. G, & Jackson, N.A. (2010). Towards a More Participatory Style of Election Campaigning. The Impact of Web 2.0 on the UK 2010 General Election. Policy & Internet, 2(3), 69-98.
- Simón P. F., Orge C., & Ainara L.U. (2018). Online communication spaces and their impact on Basque politics: strategies for a dialogue 2.0. Los espacios de comunicación online y su impacto en la política vasca: estrategias para el diálogo 2.0., 457 – 470.

# *Analysis of network interactions*


- Tufekci, Zeynep and Christopher Wilson. 2012 “Social Media and the Decision to Participate in Political Protest: Observations from Tahrir Square.” *Journal of Communication* 62:363–79. http://dx.doi.org/10.1111/j.1460-2466.2012.01629.x
- Kruikemeier, Sanne, Guda van Noort, Rens Vliegenthart, and Claes H de Vreese. 2014. “Unraveling the effects of active and passive forms of political Internet use: Does it affect citizens’ political involvement?” *New media & Society* 16 (6); 903–920
- Ledbetter, Andrew, and Joseph P. Mazer. (2014). “Do online communication attitudes mitigate the association between Facebook use and relational interdependence? An extension of media multiplexity theory.” *New Media and Society* 16 (5): 806-822.
- Chan, Michael. 2016. “Social network sites and political engagement: exploring the impact of Facebook connections and uses on political protest and participation.” *Mass Communication and Society* 19(4): 430–451

# *Interdisciplinary approach*


- Fuchs, Christian. 2014. *Digital Labour and Karl Marx*. New York: Routledge
- Lipschultz, *Jeremy Harris*. 2014. *Social Media Communication: Concepts, Practices, Data, Law and Ethics.* New York and London: Routledge
- Sauter, T (2014).'What's on your mind?' Writing on Facebook as a tool for self-formation. *New Media & Society*, August 2014, 16, 823-839
- Weigand, Edda. 2019. "Dialogue and Artificial Intelligence." *Language and Dialogue* 9(2): 294–315.

# *Political dialogue  in the social media*

McCullagh 2002; Choi, Lee. 2015; Chan 2016; Lu & Lee 2020

Castells 2001; Putnam 2000; Sustein, 2007

# *The goal of the study*

- Analysis of the specificity of digital dialogue between the government and opposition representatives with users of the network

# *The theoretical framework*

- *Multimodality*

Kress, Gunther. 2002. "The multimodal landscape of communication." *Medien Journal* 4: 4 – 19.

Kress, Gunther. 2003. *Literacy in the New Media Age*. London: Routledge.

Kress, Gunther. 2010. *Multimodality. A Social Semiotic Approach to Contemporary Communication*. London: Routledge.

Mondada, Lorenza. 2014. "Bodies in action: Multimodal analysis of walking and talking." Language and Dialogue 4 (3): 357 – 403.

# *The theoretical framework*

- *Pycholinguistic analysis of Big Data*

Lerique, Sébastien, and Camille Roth. 2018. The Semantic Drift of Quotations in Blogspace: A Case Study in Short-Term Cultural Evolution. *Cognitive Science* 42: 188–219.

- *Social network analy*sis

Murata, T. (2010). Detecting communities from tripartite networks. In: Proceedings of the 19th International Conference on World Wide Web, WWW 2010, Raleigh, North Carolina, USA, April 26-30, 1159-1160.

Opsahl, T. (2013). Triadic closure in two-mode networks: Redefining the global and local clustering coefficients. Social Networks, 35 (2).

Roth, C. & Cointet, J.-P.. (2010). Social and semantic coevolution in knowledge networks. Social Networks, 32, 16-29. doi.10.1016/j.socnet.2009.04.005.

# *Method*

- neural network approach (Kharlamov &  Pilgun,  2020);
- psychолinguistic analysis of social media content (*Lerique & Roth,* 2018);
- analysis of communicative behavior (Courtright, 2014).

# *Procedures*

1. Content selection and purification (filtering).
   1.1. Isolation and extraction of bots.
   1.2. Identification and analysis of digital footprint (VKontakte, Facebook, Odnoklassniki, Live Journal, Twitter, Instagram, blogs).
   1.3. Selection of posts (VKontakte).
   1.Selection and analysis of influencers' posts.
      1.3.1. Selection of comments (VKontakte, Odnoklassniki, Live Journal, Twitter, blogs**).**
2. Identification of the topic structure of the selected network content.
3. Identification of key topics.
4. Content ranking (messages, authors, loyalty, involvement, audience).
5. Extraction of the semantic core.
6. Text analysis of the semantic core.
7. Constructing a semantic network.
8. Performing an associative search, analysis of word association, constructing an associative network.
9. Carrying out content analysis
10. Detection of social stress (for the method of detecting social stress, see Kharlamov, and Pilgun 2020).

# Tools

- TextAnalyst 2.0

.

- Automap

- Tableau

# *Data*

- Social media, microblogs, blogs, instant messengers, video resources, forums and reviews.
- August 5, 2019 to September 22, 2019.
- Posts: n 1 302  (1 980 249 characters),
- Comments: n 5 807 (137 857 characters).

Так живёт хозяин России
Смотреть ...
Поделиться
Так живёт
хозяин России

# *Result and discussion*

The summarization algorithm → main topics:

- allegations of corruption:

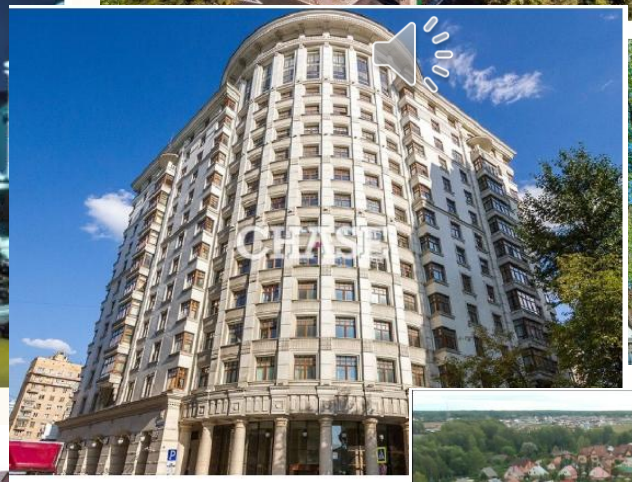
  *The master of Russia is Pyotr Pavlovich Biryukov, a typical official of the 'experienced manager' type.*

  *Mayors, presidents and countries changed, but he always worked for the state.*

# *Main topics*

High-end real estate assets of the Biryukov's family members:

- *Back then, Medusa wrote about giant penthouses in the city center that belong to the Biryukov's family.*
- *The most elite district of Moscow; the cost per square meter of 1 million 100 thousand rubles; in this house, there is an apartment of journalist Dmitry Kiselyov, just like that.*
- *This apartment belongs to his daughter Irina and grandson Nikita.*
- *The same grandson of Peter Biryukov, Nikita, at the age of 19 bought a 307-meter apartment in the super-elite residential complex 'Sytinsky'.*



# *Main topics*

- Number and cost of cars in the Biryukov's family:

  *Daughter Irina – TOYOTA LAND CRUISER, RANGE ROVER, BMW 750.*

  *Grandson Nikita – LEXUS LX570 and MERCEDES-BENZ GLE450 for14.3 million.*

  *Niece Anzhelika – LEXUS LX 570, TOYOTA LAND CRUISER and BMW X6 for 17 million rubles*

# *Main topics*

- Calculations and assessments of the Biryukovs' general fortune, which significantly exceeds the legal income of family members, could not be acquired for the salary of the Deputy Mayor:

  *According to open sources, we found that the family of the official Biryukov have apartments and offices for 4.3 billion rubles, cars for 176 million and a summer cottage for a billion.*

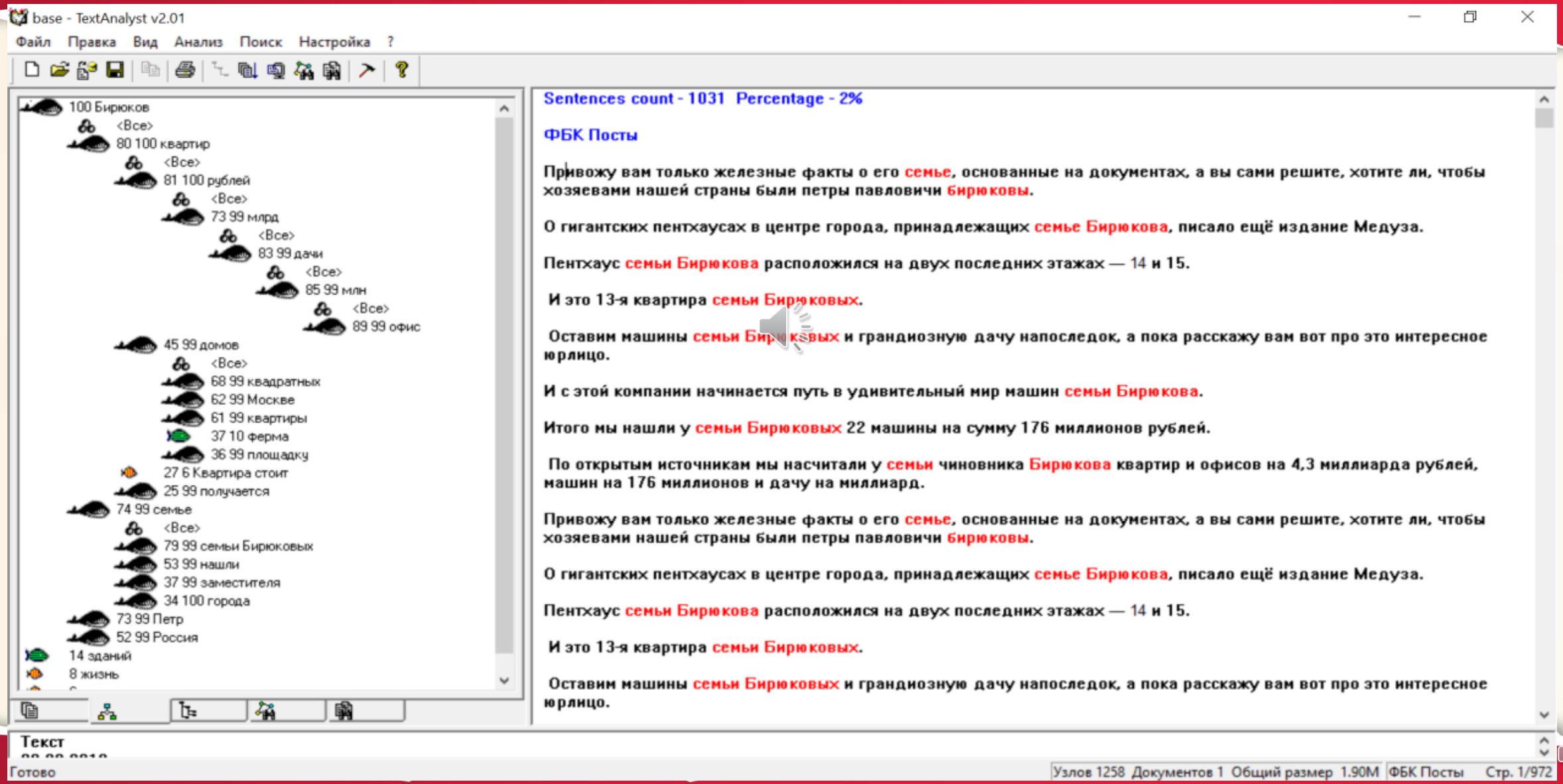
  *The children's slide at the cottage of Sobyanin's Deputy costs 3.5 million rubles.*

# *The topic structure of the post content*

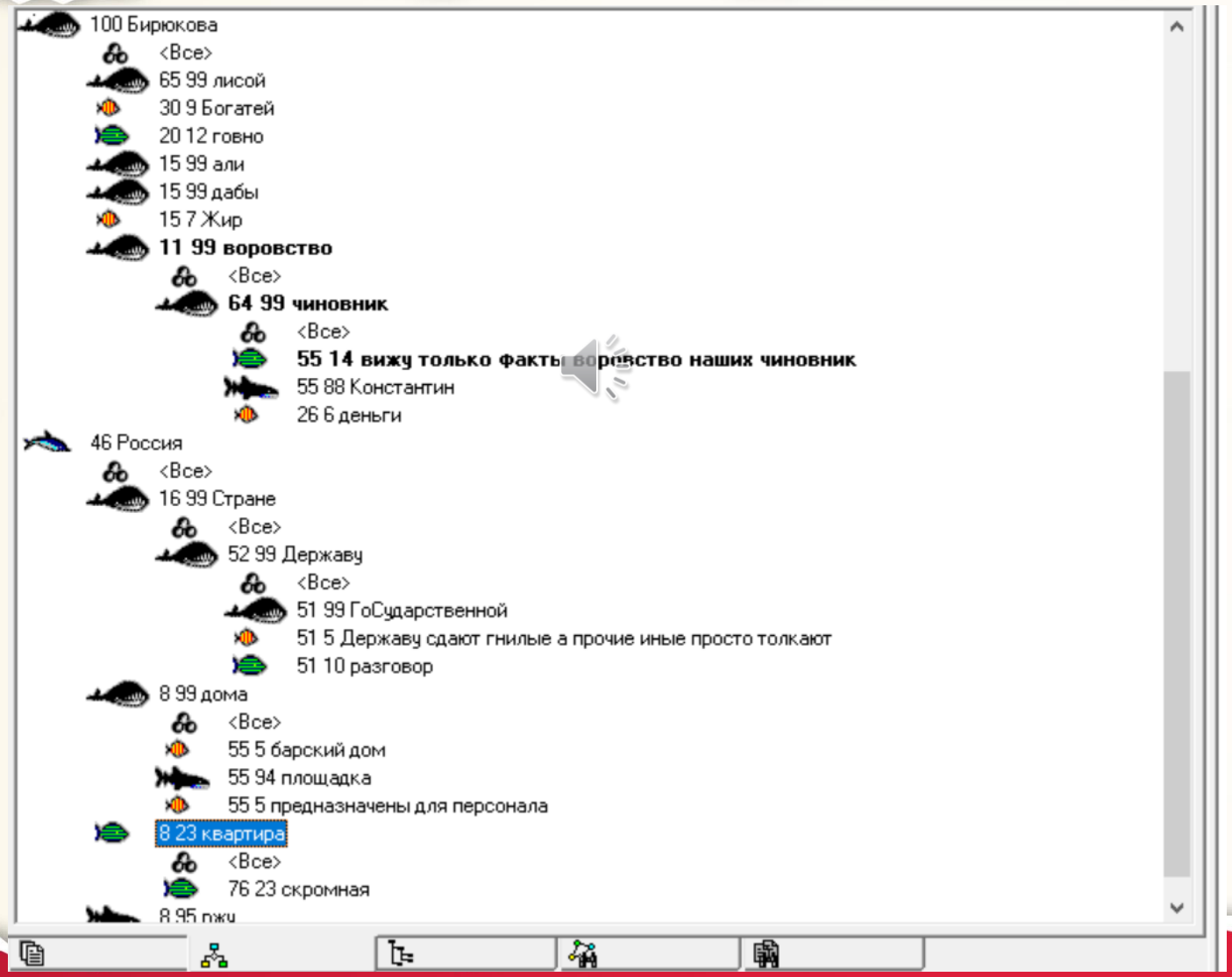
- *. The family of Sobyanin's Deputy for issues of housing maintenance and utilities and amenities owns assets costing 5.5 billion. VIDEO*

- *The relatives of the vice mayor own luxury apartments and cars. They also have an extensive land plot in the Moscow suburbs with their own farm.*

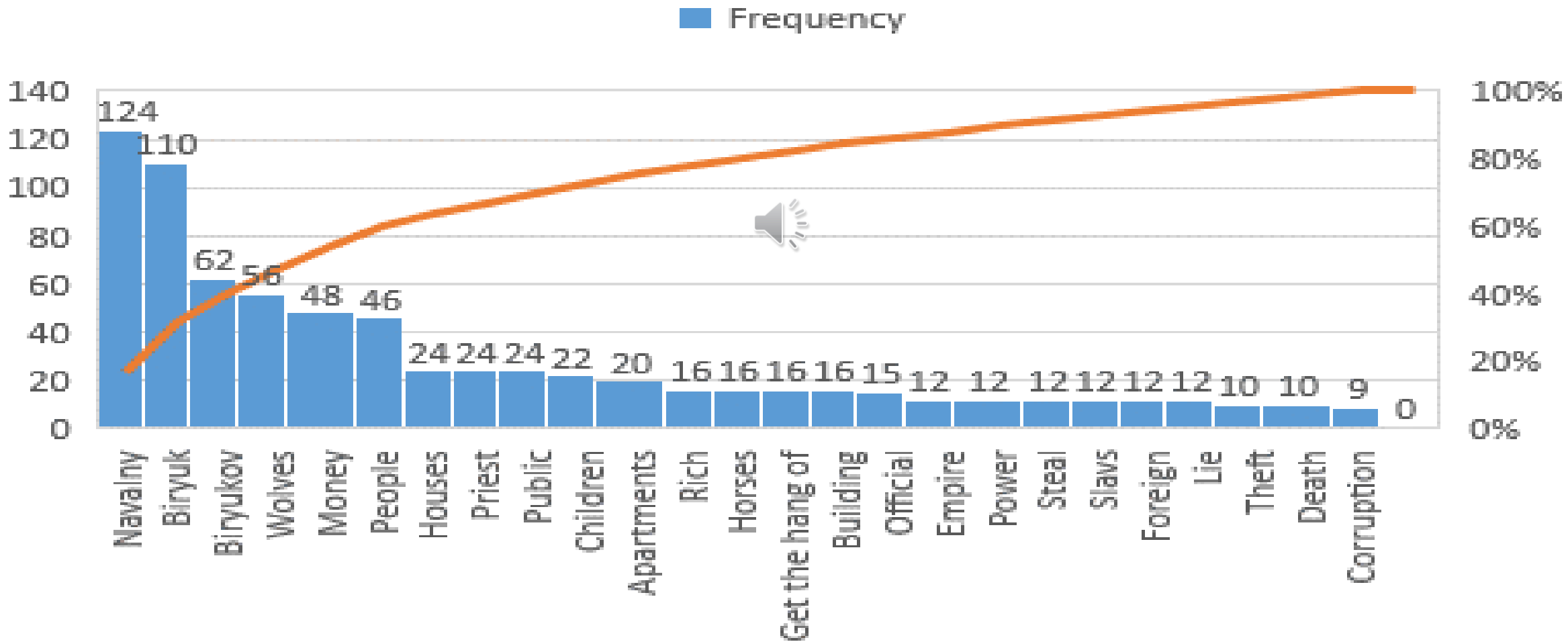
# The topic structure of the post content



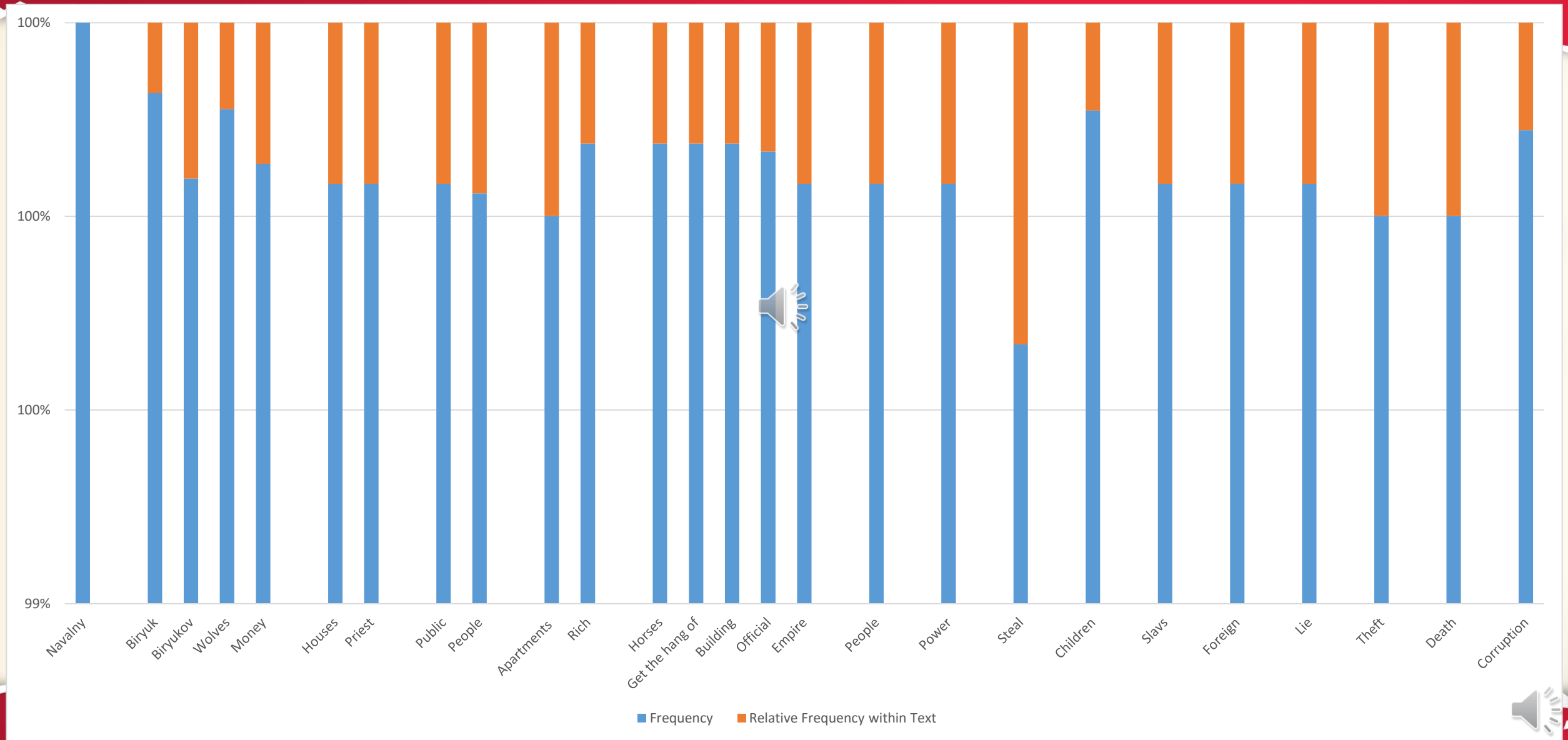
# Topic structure of user's comments



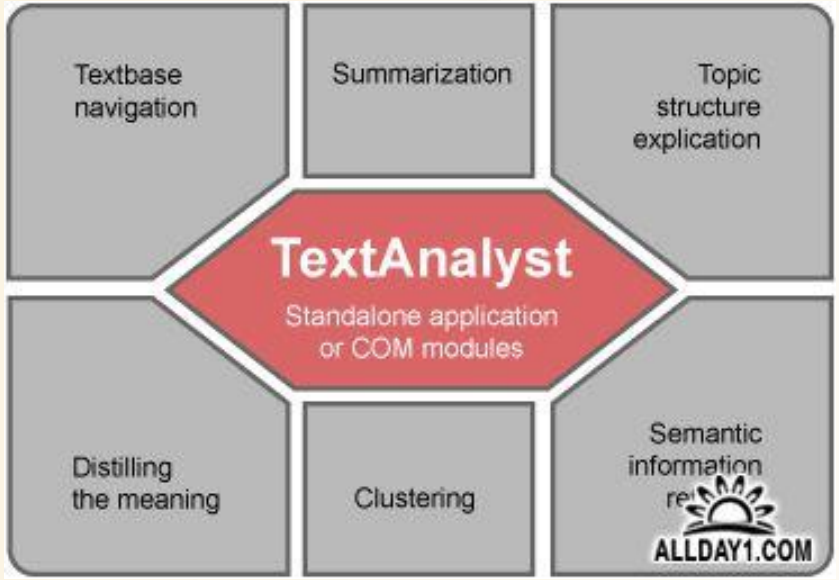
# Most frequent concepts in users' comments



# *Relative frequency of concepts in users' comments*



# *The users' perception*




- Word associations

  P. Biryukov is a symbol of a corrupt official.

- Associative network ('Biryukov' - index of (10/193):

  *All that is said about Biryuk is pure truth, high-level officials of big cities make corruptively crazy money using their power, but in small cities they steal no less.*

  *And how many of such Biryukovs are in Moscow, St. Petersburg and other cities!*

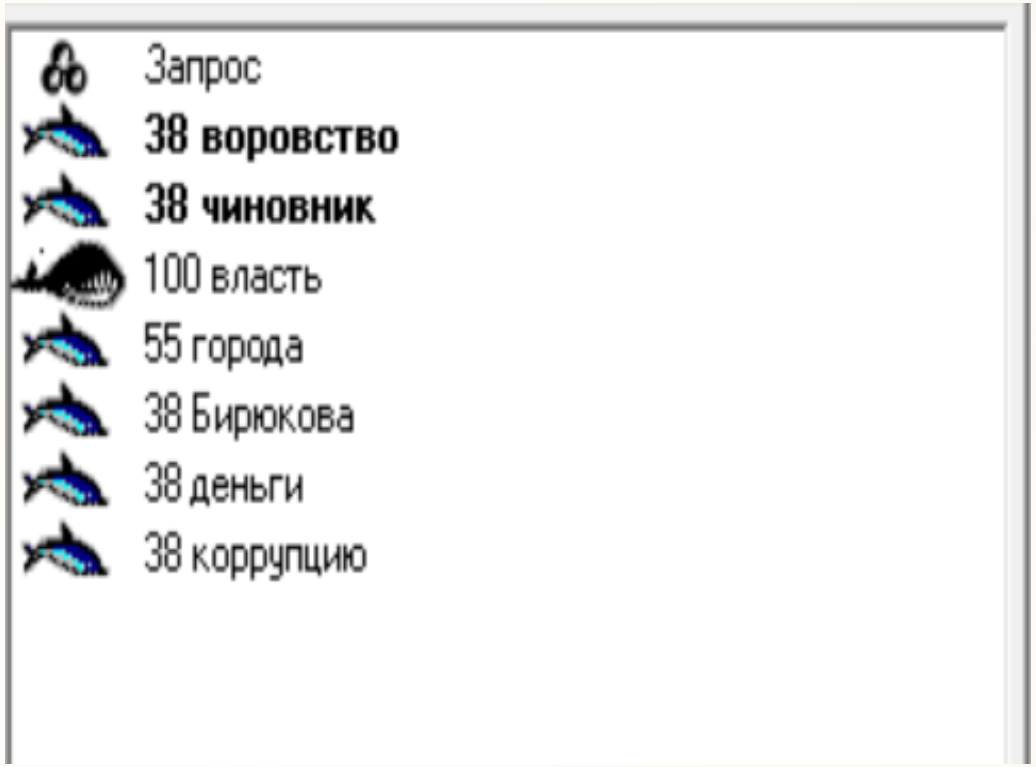
  *I see only the facts of theft committed by our officials.*

# *The users' perception. The semantic associates*

- 'Government' (10/46)

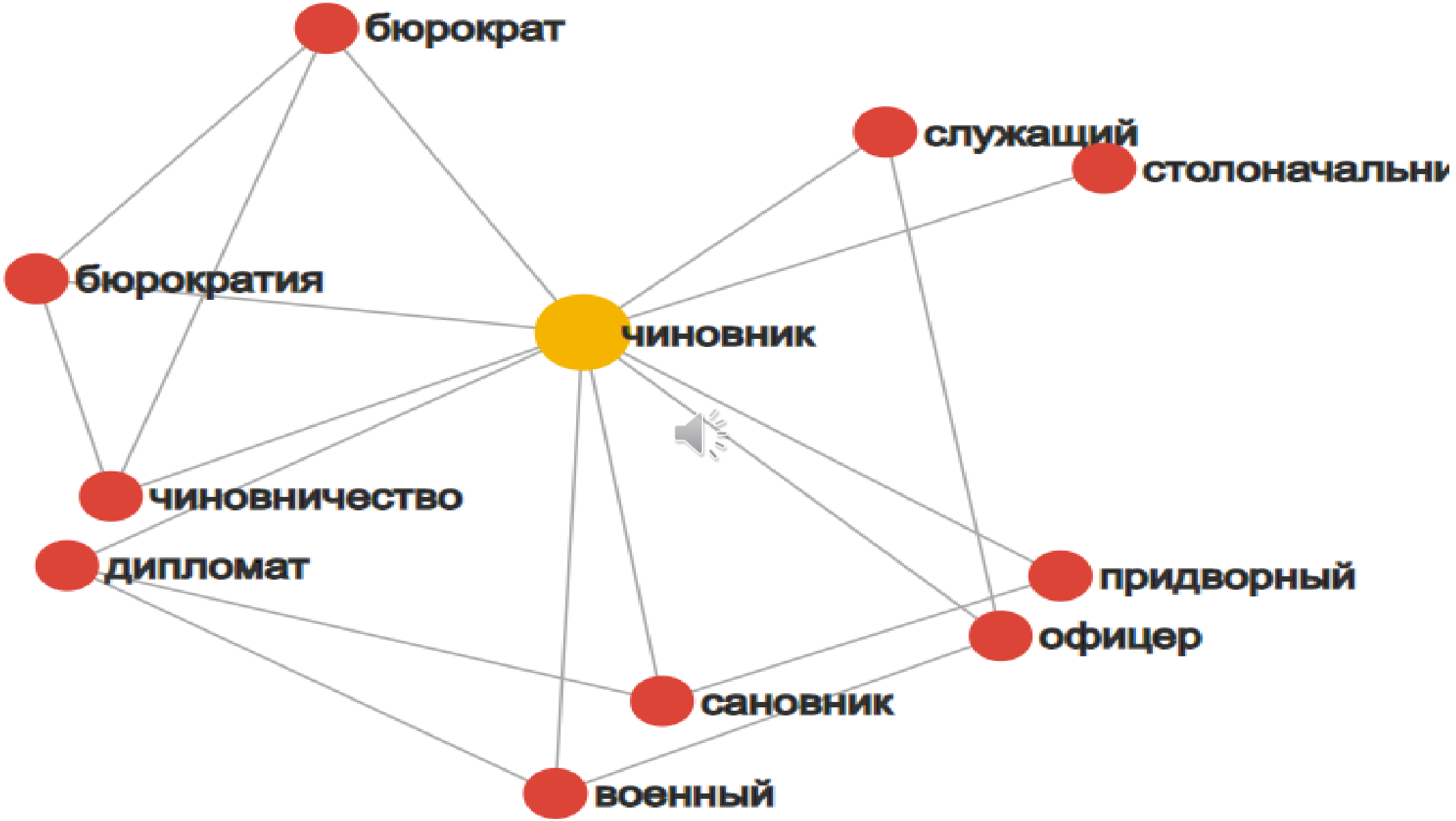
*theft of officials* (38)

*corruption* (38)



# The semantic associates for the word ‘official’ (National Corpus of the Russian Language and Wikipedia)

| Word | Cosine proximity |
|---|---|
| Public servant | 0.660 |
| Bureaucrat | 0.610 |
| High official | 0.609 |
| Bureaucracy | 0.570 |
| Officialdom | 0.569 |
| Military | 0.553 |
| Officer | 0.551 |
| Head of a ‘desk’ | 0.551 |
| Courtier | 0.545 |


бюрократ
служащий
столоначальни
бюрократия
чиновник
чиновничество
дипломат
придворный
офицер
сановник
военный

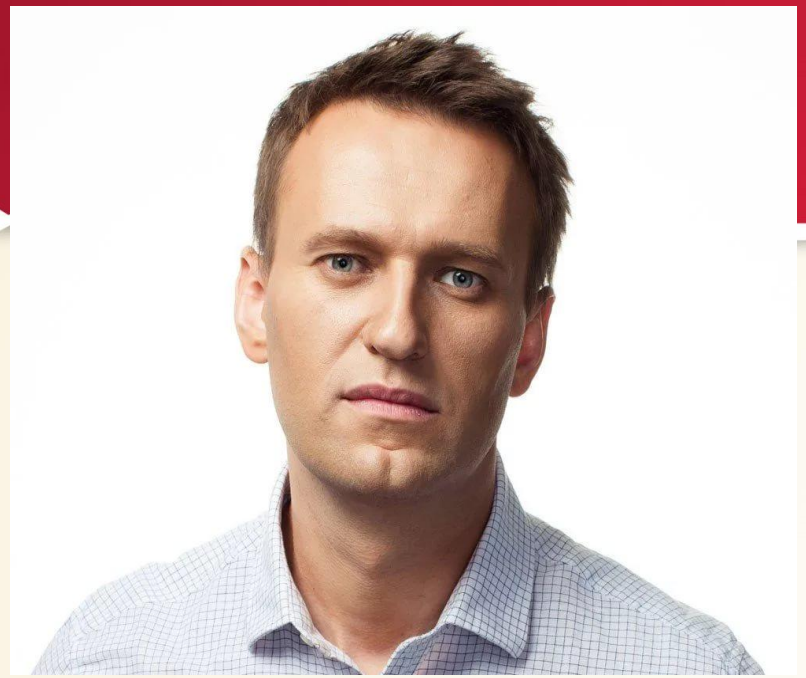
# *The users' perception.*
# *Associative search with the incentive word 'official'*

- *I see only the facts of theft committed by our officials* (23),
- *snotty official* (19),
- *the snotty* (17),
- *invaders* (17),
- *blood* (17),
- *court* (17),
- *money (5),*
- *corruption* (5).

# *The users' perception*

- *Russia is a modest government official Igor Ivanovich Shuvalov, who has 13 luxury apartments in Moscow, a summer residence in Moscow, an apartment in London, a castle in Austria, a garage full of luxury cars and a private plane (his little dogs fly on it).*

- *Do not tear up my values; better pool some money in SMSs for the treatment of children.*



# *The users' perception*

- *Well done, navalny ... have a straight talk with the people*

# *The users' perception*

- *Alex himself lives darn well, while not working at all*

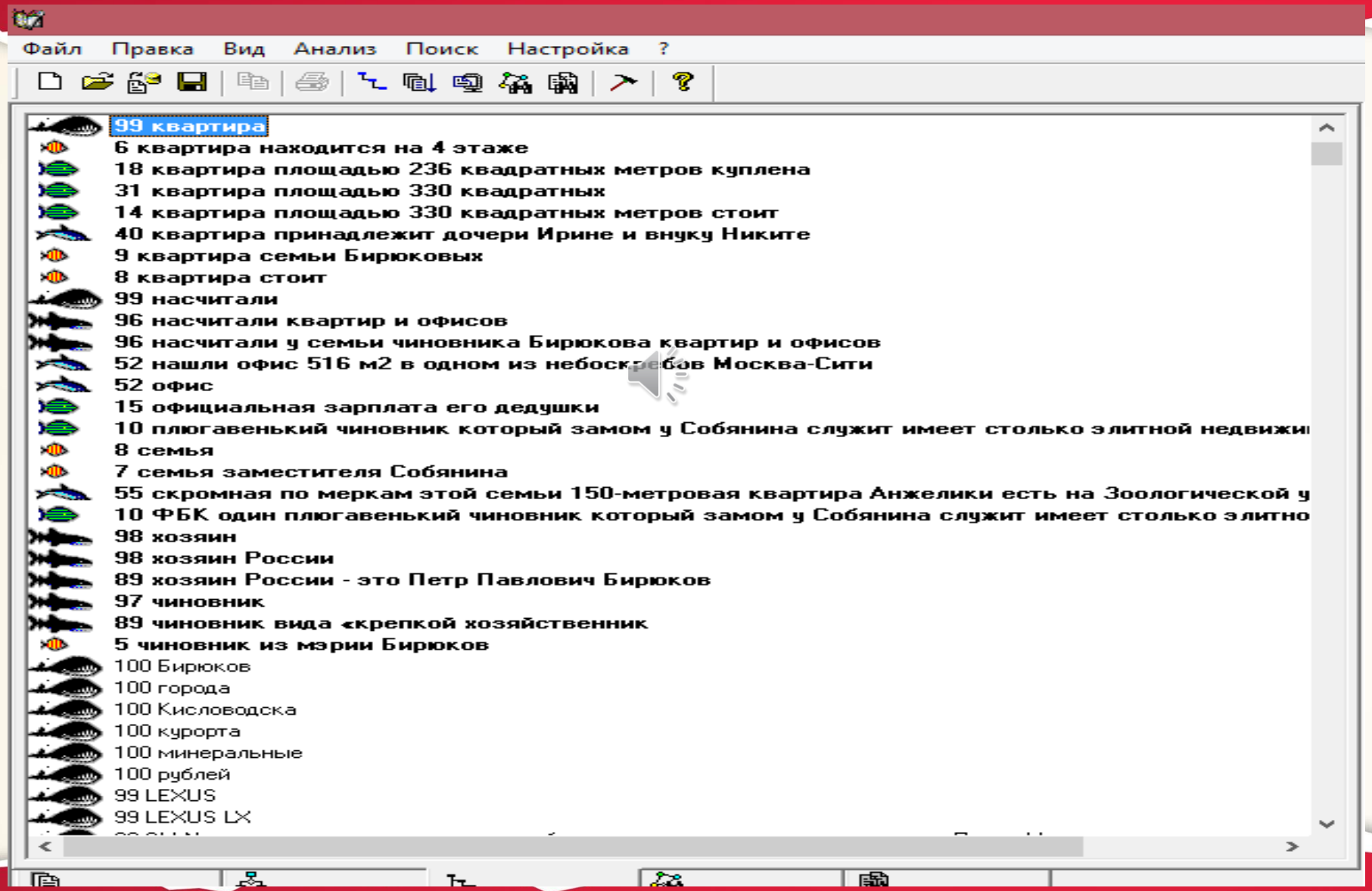
# *The users' perception*

*Nobody makes a hero of Navalny, but he shows the source of information about the snotty official, and this is not a one-off case in our time.*

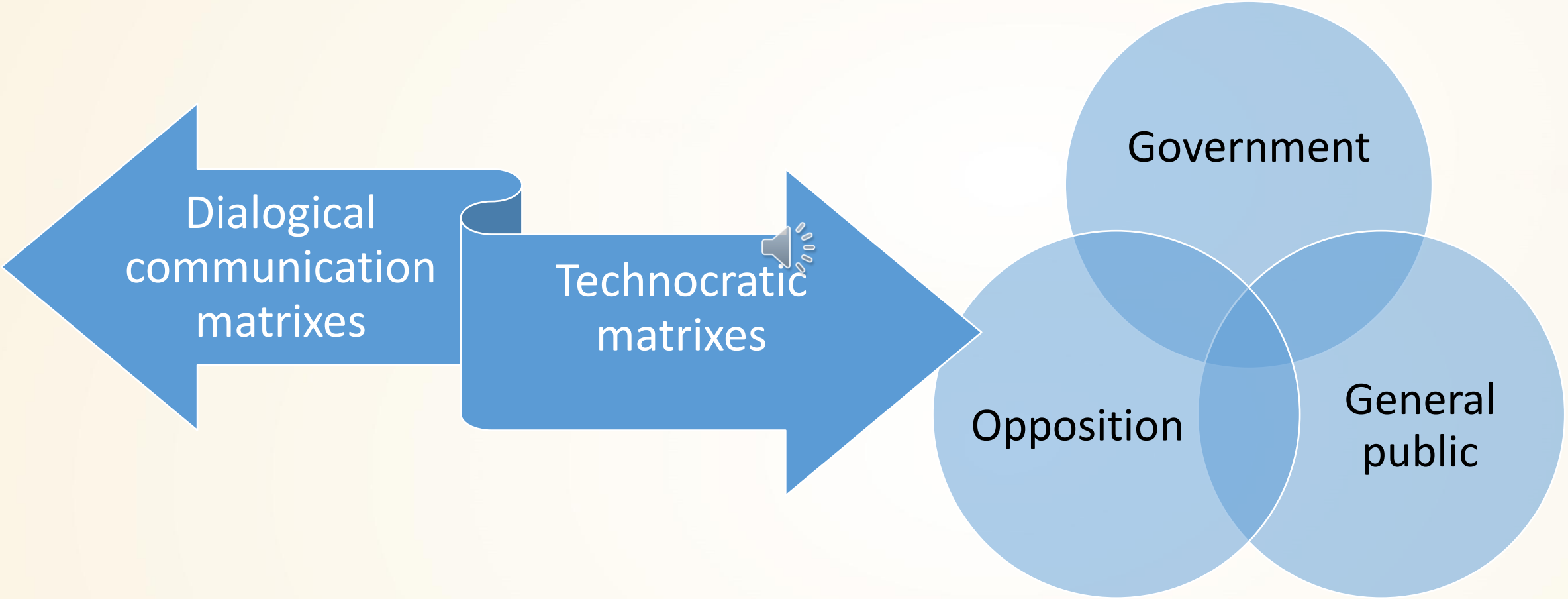
*In this case, the source of information is Navalny.*

# Level of social stress (63%)

# *Semantic network expressing social stress*

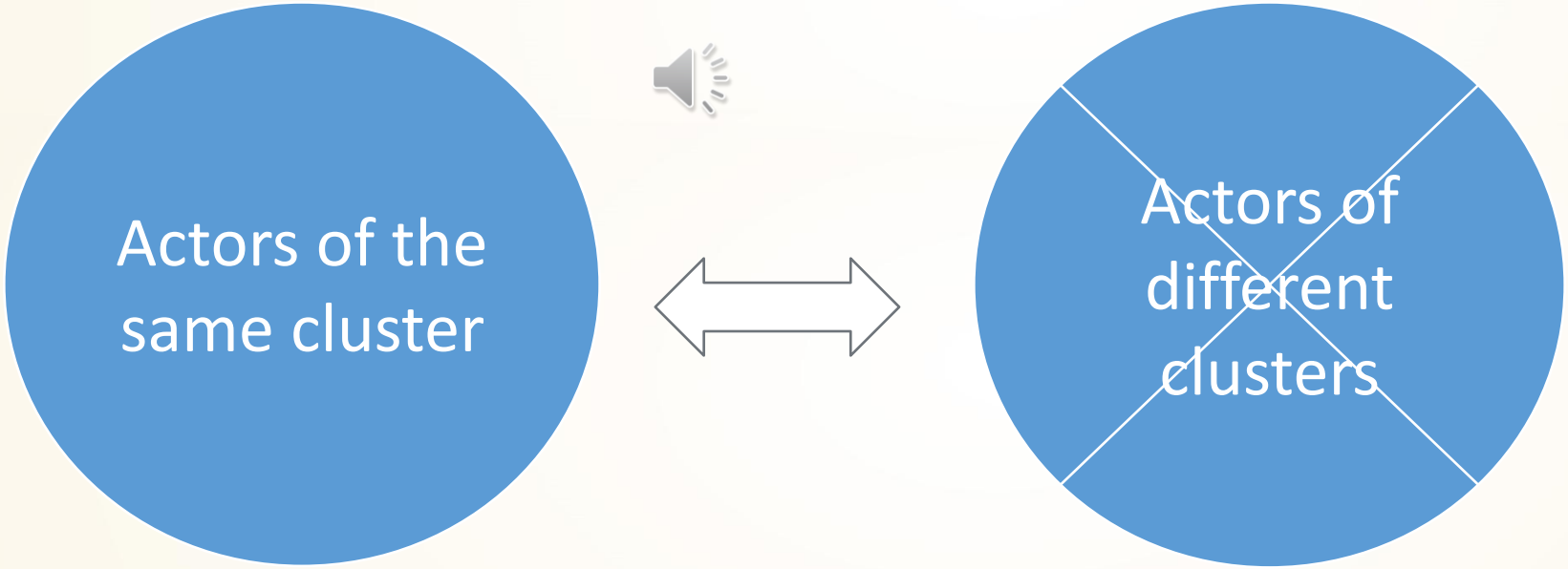


# *Conclusion*


Dialogical communication matrixes
Technocratic matrixes
Government
Opposition
General public

# *Conclusions*

Digital dialogue



# Thank you for your attention

idzyaloshinsky@hse.ru

mpilgun@iling-ran.ru