

Communities during Protest Movements in the middle of COVID-19 epidemic on the Polish Tweetosphere

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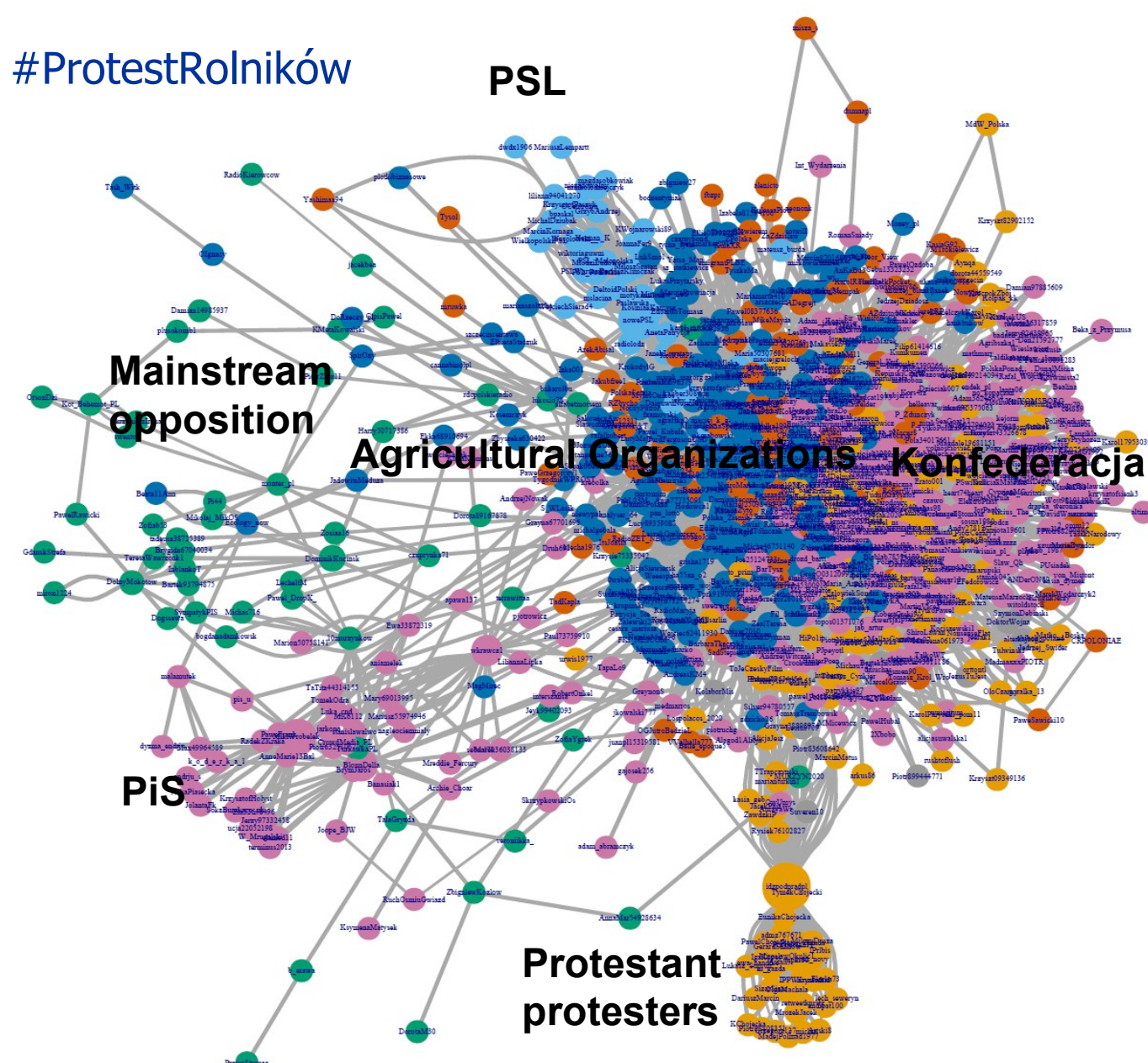
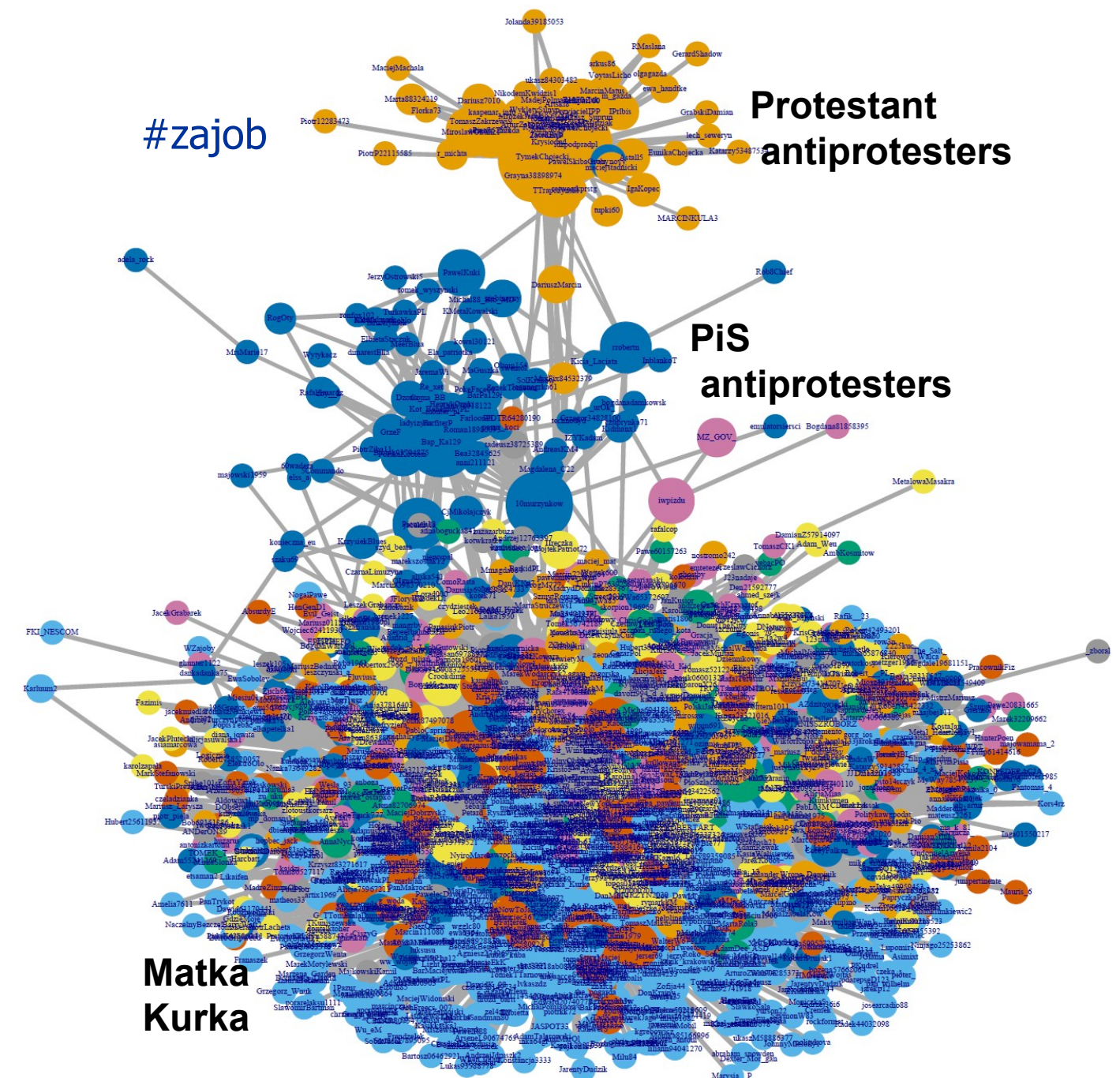
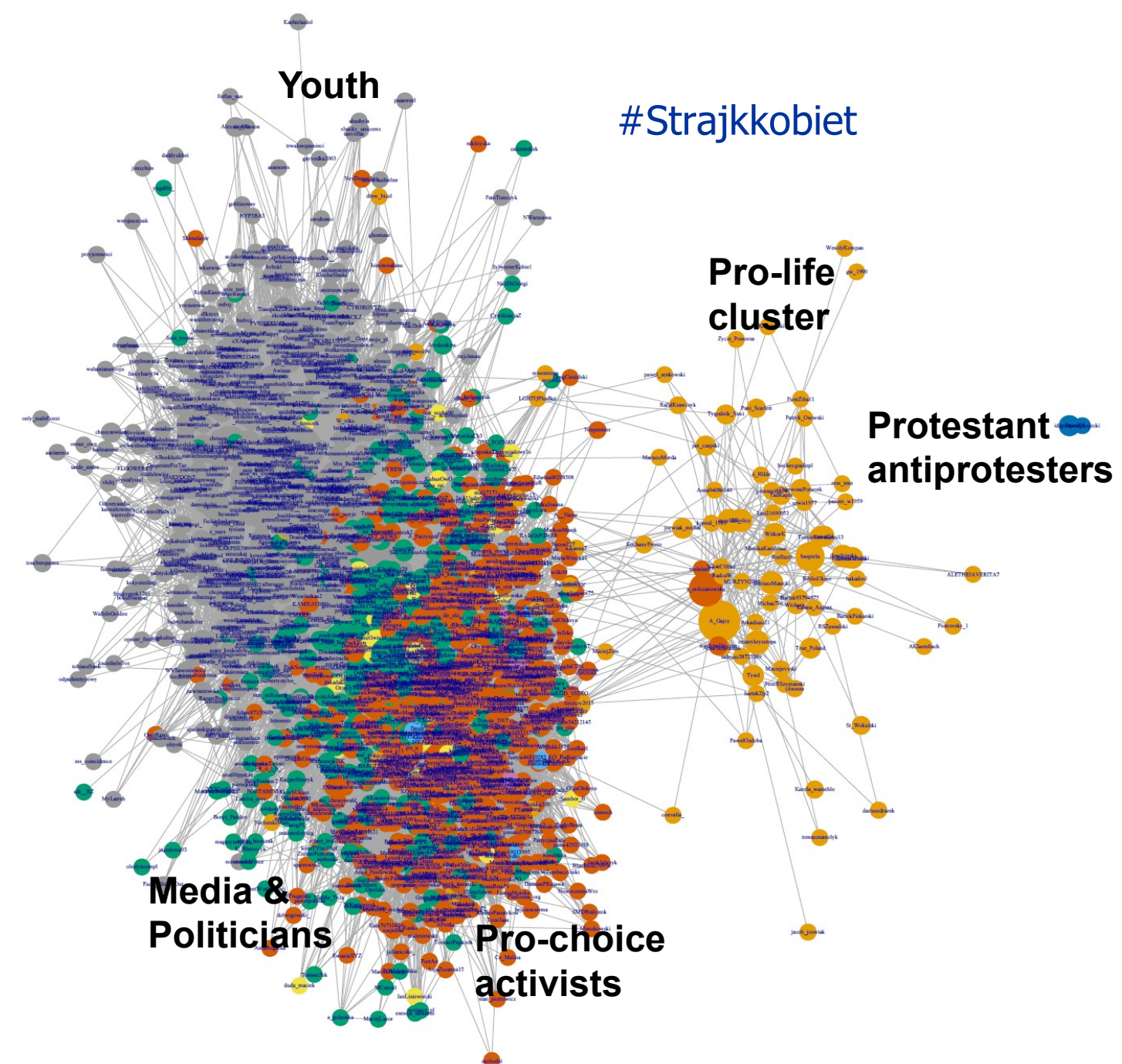
Background: Extensive anti-government protests have been held in Poland in October 2020 related to accumulated social tensions due to COVID-19 pandemic among others. Measures against Coronavirus were not the only reason for demonstrations and protests at this time. For instance farmers organised protests in over 1000 locations across the country. However, pro-choice (abortion) demonstrations gather the highest number of protesters and attention in media.

Research question: We look at the question of how understanding communication patterns among protesters could possibly support epidemiological harm reduction campaigns.

Data: Tweets in Polish language with hashtags:

- #Strajkkobiet representing pro-choice movement woman's strike (227125),
- #zajob representing coronascepticism movement (22379),
- #ProtestRolników for farmers protest (9739) have been collected.

Method: Social Network Analysis (SNA) of the Internet media users connected via their tweets sharing activities (Community detection)



1)Conclusions and practical recommendations for harm reduction communication:

- 2)#Strajkkobiet - Due to the modular structure of the network, where activists, the media, and politicians are in separate communities to the main population, probably the organisers or protest leaders will not be able to propagate pro-health communication towards the younger cluster. We strongly advise any user to be active in creating their health promotion content and the redistribution of existing ones.
- 3)#Zajob - Very high network density with very low modularity suggests that the main component, even if having no internal hierarchical structure, is well interconnected. Such a network is resilient to interventions such as the blocking of single accounts or inhibiting reach of content, is not efficient due to the possibility of information propagation by multiple paths.
- 4)#ProtestRolników - Farmer protest communication has the most modular structure and topology with clear boundaries between communities and opinion leaders. This meant that the main agents such as recognised governmental agencies, agricultural media, journalists, politicians, and influential farmers could propagate campaigns for their followers.