

Political Activity as a Cause for Political and Social Preferences of Students

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Abstract—The article deals with the dependence of interval variables—estimates (the respondents' attitudes to political parties, political leaders, satisfaction with the work of state bodies, attitudes to voting results) on the nominal parameter "Political activity", which is represented by nine nominal responses:

1. participated in election of various official levels;
2. signed any collective appeals, petitions;
3. participated in election campaign;
4. participated in rallies, demonstrations, and pickets;
5. participated in political parties activities;
6. participated in strikes;
7. no, I was not engaged in anything like that;
8. I do not care about political activity;
9. politics annoys me.

A new version of authorial method applied to analyze cause and effect relation in parallel for any interval and nominal variables, and as a result, it became possible to speak about the dependence of an interval parameter on a multivalued nominal variable, and to select the relation necessary in strength, based only on numerical values.

Keywords—social preferences and orientations; political preferences and orientations; interval and nominal variables; cause-effect relations

I. INTRODUCTION

Political preferences are the balanced dispositions. They are based on a rational choice, a meaningful attitude to political reality.

Political orientations represent the reasoning of preferences from the perspective of internalized values. They are associated with people's beliefs about objectives and means of actions of authorities, political parties and any leaders. Based on these beliefs people decide on support of a policy or countering it, participation and non-participation in elections, support for a particular party and candidate in the elections.

The new version of authorial method applied to analyze cause and effect relationship in parallel for the interval and nominal variables.

To make the parallel analysis of nominal and interval parameters within the multiple comparison (when investigating the relationship) more strict in terms of selection of certain results for description and interpretation, it was

necessary to introduce criteria for such selection. We managed to do that by combining two problems: the problem of investigating the relationship for interval variables through multiple comparison of quantile data partitions for each parameter and the problem of multiple comparison of the same interval parameters for the groups of multivalued nominal characteristics (questions with nominal responses to choose).

The article deals with the dependence of interval variables—estimates (the respondents' attitudes to political parties, political leaders, satisfaction with the work of state bodies, attitudes to voting results) on the nominal parameter "Political activity", which is represented by nine nominal responses: 1) Participated in election of various official levels; 2) Signed any collective appeals, petitions; 3) Participated in election campaign; 4) Participated in rallies, demonstrations, and pickets; 5) Participated in political parties activities; 6) Participated in strikes; 7) No, I was not engaged in anything like that; 8) I do not care about political activity; 9) Politics annoys me.

A new version of authorial method applied to analyze cause and effect relationship in parallel for any interval and nominal variables, and as a result, it became possible to speak about the dependence of an interval parameter on a multivalued nominal variable, and to select the relationship necessary in strength, based only on numerical values.

II. RESEARCH METHODS

When we combine any quantile partitions by interval parameters and groups by nominal responses into one multiple comparison problem, we obtain a result for nominal and interval parameters on a single scale of comparative weightiness. Then, they (triads or quarts) allow us to construct the strength of relationship coefficients according to interval parameters, as before, and normalize them to a single analog correlation (dependency of interval parameter upon itself). The relationship coefficients analogues must be similarly normalized for the groups according to nominal responses. Note that in the case of nominal variables, we can discuss the dependence only in one direction: like the interval parameters depend on the nominal parameters.

Thus, it became possible to talk about the dependence of the interval parameter on the multivalued nominal variable and to select the relationship necessary in strength, based on numerical values only.

When constructing the strength of relationship coefficients (after a general problem of multiple comparisons for all parameters) we suggest two strategies:

1. We should take two nominal responses corresponding to maximum and minimum values of the comparative weightiness of the interval parameter, whose dependence on the nominal parameter is determined.
2. We should take (a search of all variants) three (in the case of triads for interval parameters) or four (in the case of quarts) nominal responses each time. Then the relationship coefficient analogues for three (four) nominal responses are determined, after which the relationship coefficients become averaged over all permutations, since the nominal responses are equal to each other and the streamlining of operation is not implemented for them.

The first strategy is obviously the more stringent and determines a fewer number of relationship as strong ones. We will consider the issue of how the second strategy has identified strong relationship in the case where the cause is a nominal variable of **"Political activity"**.

III. RESULTS

A sociological study of a "civil marriage" phenomenon and a problem of its image formation influenced by students' political orientations was conducted as a part of sociological laboratory work plan (2014). 24 quantitative parameters were selected or constructed to examine the relationship (linear and nonlinear).

The "Political activity" independent (nominal) parameter is the choice out of 10 responses proposed, and we selected 9 responses for further analysis:

- Participated in election of various official levels (**G12-02**).
- Signed any collective appeals, petitions (**G12-03**).
- Participated in election campaign (**G12-04**).
- Participated in rallies, demonstrations, and pickets (**G12-05**).
- Participated in political parties activities (**G12-06**).
- Participated in strikes (**G12-7**).
- No, I was not engaged in anything like that (**G12-08**).
- I do not care about political activity (**G12-09**).
- Politics annoys me (**G12-10**).

The response "A member of the regional office of any political party" out of 10 responses proposed proved to be irrelevant for the great majority of the students.

Let us consider the dependence of 16 interval (quantitative) variables on the nominal variable **"Political activity"**, which takes 9 values (9 responses out of 10 proposed in the questionnaire).

The "Interest in politics" interval parameter may be considered as a specific indicator for the reliability of the survey results because the greatest comparative weightiness was observed for nominal responses corresponding to the real political activity: "Signed collective appeals, petitions" (the comparative weightiness = +3659), and "Participated in election campaign" (+2897). There is a complete lack of interest in politics for the following two nominal responses: "I do not care about political activity" (-4268) and "Politics annoys me" (-4148).

TABLE I. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "INTEREST IN POLITICS" (X05) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-03	+3659	The idea of intrinsic value of the individual, the recognition of human rights and freedoms
G12-04	+2897	The idea of respect for traditions, the past, and countering various innovations and changes
G12-09	-4268	The idea of value of the nation as the highest form of social unity
G12-10	-4148	Not sure
Factor of the connection strength (average of the 24 permutations) = 0.62		
Factor of the connection strength (maximum value) = 0.86 (1342)		

TABLE II. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "ENGAGEMENT IN THE POLITICAL ISSUES DISCUSSION IN YOUR GROUP" (X06) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-04	+3429	Participated in election campaign
G12-05	+1475	Participated in rallies, demonstrations, and pickets
G12-09	-2129	I do not care about political activity
G12-10	-2114	Politics annoys me
Factor of the connection strength (average of the 24 permutations) = 1.14		
Factor of the connection strength (maximum value) = 1.66 (2314)		

The next interval parameter "Engagement in the political issues discussion in your group" also shows the reliability of the survey results. It takes on the maximum value (comparative weightiness = +3429) for the "Participated in election campaign" nominal response group. A slightly lower value (+1475) is present for the "Participated in rallies, demonstrations, pickets" nominal response group. The nominal responses: "I do not care about political activity" (-2129) and "Politics annoys me" (-2114) showed the lowest values.

Next, we turn to the interval parameters, which no longer work as indicators. We begin to consider the results that can be just explained, but not be reliably determined logically.

The expressed negative attitude to the United Russia party (-3421) observed in those respondents who were annoyed by politics. However, this is also typical for the group, whose representatives participated in the election campaign (-2800). Nevertheless, those respondents who simply do not care about

political activity showed the most positive attitude to the United Russia party (+1926).

TABLE III. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "ATTITUDE TO THE UNITED RUSSIA PARTY" (X07) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-02	+1115	Participated in election of various official levels
G12-04	-2800	Participated in election campaign
G12-09	+1926	I do not care about political activity
G12-10	-3421	Politics annoys me
Factor of the connection strength (average of the 24 permutations) = 1.13		
Factor of the connection strength (maximum value) = 1.65 (1432)		

TABLE IV. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "ATTITUDE TO THE FAIR RUSSIA PARTY" (X08) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-06	+3299	Participated in political parties activities
G12-07	-3517	Participated in strikes
G12-09	+2674	I do not care about political activity
G12-10	-4317	Politics annoys me
Factor of the connection strength (average of the 24 permutations) = 1.64		
Factor of the connection strength (maximum value) = 2.42 (2143)		

Attitude to the Fair Russia party is most evident (+3299) among those respondents engaged in the activities of political parties, and to a lesser extent it is inherent in those who do not care about political activity (+2674). The opposite pole of attitude to the Fair Russia party is formed either by respondents who are annoyed by politics (-4317), or by respondents who participated in strikes (-3517).

TABLE V. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "ATTITUDE TOWARDS THE LDPR PARTY" (X09) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-04	+860	Participated in election campaign
G12-05	-2627	Participated in rallies, demonstrations, and pickets
G12-07	-3767	Participated in strikes
G12-09	+664	I do not care about political activity
Factor of the connection strength (average of the 24 permutations) = 0.97		
Factor of the connection strength (maximum value) = 1.42 (2134)		

The negative attitude towards the LDPR party is most characteristic (-3767) of respondents who participated in strikes, as well as those who participated in rallies, demonstrations, pickets (-2627).

The Yabloko party attracted (+2952) particularly those who did not care about political activity. However, the respondents who do not accept this party are those who are annoyed by politics (-2917), on the one hand, and who participated in rallies, demonstrations, pickets, on the other hand.

TABLE VI. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "ATTITUDE TO THE YABLOKO PARTY" (X11) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-04	+630	Participated in election campaign
G12-05	-2160	Participated in rallies, demonstrations, and pickets
G12-09	+2952	I do not care about political activity
G12-10	-2917	Politics annoys me
Factor of the connection strength (average of the 24 permutations) = 1.15		
Factor of the connection strength (maximum value) = 1.64 (1432)		

TABLE VII. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "ATTITUDE TO V.V. PUTIN" (X12) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-02	+2935	Participated in election of various official levels
G12-05	+1009	Participated in rallies, demonstrations, and pickets
G12-08	-1044	No, I was not engaged in anything like that
G12-10	-4241	Politics annoys me
Factor of the connection strength (average of the 24 permutations) = 1.33		
Factor of the connection strength (maximum value) = 1.85 (2413)		

Those who participated in elections of various official levels demonstrate a positive attitude to V.V. Putin (+2935). Negative attitude to V.V. Putin (-4241) characterizes those who are annoyed by politics.

TABLE VIII. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "ATTITUDE TO D. A. MEDVEDEV" (X13) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-02	+444	Participated in election of various official levels
G12-03	+409	Signed any collective appeals, petitions
G12-04	-626	Participated in election campaign
G12-10	-4252	Politics annoys me
Factor of the connection strength (average of the 24 permutations) = 0.85		
Factor of the connection strength (maximum value) = 1.18 (2413)		

As for the attitude towards D. A. Medvedev, the negative attitude towards him (-4252) also characterizes those who are annoyed by politics.

TABLE IX. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "ATTITUDE TO V.V. ZHIRINOVSKY" (X14) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-02	+72	Participated in election of various official levels
G12-04	+2193	Participated in election campaign
G12-06	-2999	Participated in political parties activities
G12-09	-3476	I do not care about political activity
Factor of the connection strength (average of the 24 permutations) = 1.13		
Factor of the connection strength (maximum value) = 1.63 (1423)		

Obviously negative attitude of respondents (-3476) to V.V. Zhirinovskiy is peculiar to those who do not care about political activity, though we can say the same about those who already participated in political parties activities (-2999). Positive attitude to V.V. Zhirinovskiy (+2193) is characteristic of those respondents who participated in election campaign.

TABLE X. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "ATTITUDE TO G.A. ZYUGANOV" (X15) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-04	+773	Participated in election campaign
G12-06	-1062	Participated in political parties activities
G12-08	+836	No, I was not engaged in anything like that
G12-10	-4310	Politics annoys me
Factor of the connection strength (average of the 24 permutations) = 0.98		
Factor of the connection strength (maximum value) = 1.37 (1432)		

Those respondents who are annoyed by politics showed an extremely negative (-4310) attitude towards G.A. Zyuganov.

TABLE XI. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "ATTITUDE TO S.M. MIRONOV" (X17) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-03	+997	Signed any collective appeals, petitions
G12-06	+406	Participated in political parties activities
G12-07	-3726	Participated in strikes
G12-10	-4367	Politics annoys me
Factor of the connection strength (average of the 24 permutations) = 1.14		
Factor of the connection strength (maximum value) = 1.68 (2413)		

Negative attitude towards S.M. Mironov is observed among those respondents who are annoyed by politics (-4367), as well as those who participated in strikes (-3726).

TABLE XII. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "ATTITUDE TO A.A. NAVALNY" (X18) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-02	-982	Participated in election of various official levels
G12-03	+3768	Signed any collective appeals, petitions
G12-04	+314	Participated in election campaign
G12-07	-3098	Participated in strikes
Factor of the connection strength (average of the 24 permutations) = 1.24		
Factor of the connection strength (maximum value) = 1.70 (1243)		

TABLE XIII. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "DISSATISFACTION WITH THE RESULTS OF VOTING IN THE ELECTIONS TO THE RF STATE DUMA" (X19) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-04	-2011	Participated in election campaign
G12-07	+1582	Participated in strikes
G12-08	-629	No, I was not engaged in anything like that
G12-09	+1321	I do not care about political activity
Factor of the connection strength (average of the 24 permutations) = 0.72		
Factor of the connection strength (maximum value) = 1.03 (3214)		

Attitude to A.A. Navalny is polarized: it is clearly positive (+3768) for those who signed collective appeals; and clearly negative (-3098) for those who participated in strikes.

Those who participated in election campaign more often showed dissatisfaction with the results of voting in the elections to the RF State Duma (-2011). However, those who participated in strikes (+1582), or those who did not care about political activity (+1321) were positive towards that issue.

TABLE XIV. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "A SATISFACTION WITH THE RESULTS OF VOTING IN THE RUSSIAN FEDERATION PRESIDENTIAL ELECTIONS" (X20) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-04	-1434	Participated in election campaign
G12-07	+3956	Participated in strikes
G12-09	+1975	I do not care about political activity
G12-10	-919	Politics annoys me
Factor of the connection strength (average of the 24 permutations) = 1.08		
Factor of the connection strength (maximum value) = 1.54 (3124)		

Those respondents who participated in strikes (+3956), in particular, and those who did not care about political activity (+1975), to a lesser extent, showed a satisfaction with the results of voting in the Russian Federation presidential elections. The respondents who participated in the election campaign were the least satisfied with the results of the voting (-1434).

TABLE XV. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "SATISFIED WITH THE WORK OF THE RUSSIAN PRESIDENT V.V. PUTIN" (X21) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-02	+1421	Participated in election of various official levels
G12-07	+1161	Participated in strikes
G12-08	-956	No, I was not engaged in anything like that
G12-10	-3896	Politics annoys me
Factor of the connection strength (average of the 24 permutations) = 1.02		
Factor of the connection strength (maximum value) = 1.44 (2413)		

Those respondents who are annoyed by politics were primarily dissatisfied with the work of the Russian President Vladimir Putin (-3896). However, the most satisfied with V.V. Putin, were those who participated in election of various official levels (+1421), or who participated in strikes (+1161).

TABLE XVI. DEPENDENCE OF THE INTERVAL PARAMETER (VARIABLE) "SATISFACTION WITH THE WORK OF THE RUSSIAN FEDERATION STATE DUMA" (X22) FROM THE NOMINAL PARAMETER (VARIABLE) "POLITICAL ACTIVITY" (G12)

Response group	Comparative weightiness	Nominal answer to the question-cause Strategy of identifying the "average permutations" relation
G12-04	-562	Participated in election campaign
G12-07	+3507	Participated in strikes
G12-09	+678	I do not care about political activity
G12-10	-3168	Politics annoys me
Factor of the connection strength (average of the 24 permutations) = 1.20		
Factor of the connection strength (maximum value) = 1.65 (1243)		

The respondents who participated in strikes showed satisfaction with the work of the Russian Federation State Duma (+ 3507). The opposite estimate (-3168) is typical for those who were annoyed by politics.

IV. CONCLUSION

We demonstrated the new method for joint analysis of interval and multivalued nominal data on the specific study data in the context of political sociology. As a result, we obtain the new cause and effect information, as the interval variables depend on multivalued nominal variables.

This continues research in the context of nonlinear nature with regard to social sciences (human sciences):

1. Synergetic paradigms in the science [6, 9-11].
2. Author's method of studying statistical relations [1, 2].
3. Nonlinearity of psychological and social science [3-5, 7, 8, 12-15].

It also staticizes acceptance synergetic paradigms in psychological and social science.

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