Q Methodology

quantitative and qualitative methods combined in one

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3.1 Q Methodology Origins and Research Approach

Q Methodology, a quantitative research method was designed and developed by an English scientist, psychologist and physicist William Stephenson (1902-1989) in 1930s for studying the subjective views of the research participants through methods of quantitative research analysis, such as correlation and factor analysis. Different from other quantitative research methods, such as surveys, Q methodology works with a relatively smaller sample, studies subjective views of the research participants and evaluates the events from the participant's perspective (Tsuladze, forthcoming). Q methodology neglects the concept of operational definition, meaning that it questions the need for a scholar to offer a scale or a question with a predefined meaning assigned to them as the Q methodology is interested in the subjective viewpoint of the participants and not a predefined meaning of a scholar that is measured by other quantitative research methods. Thus, the *operational definition* is replaced by the concept of *operant subjectivity* that implies that this very subjective, personal viewpoint of each research participant matters (Brown 1980, 4). Since Q methodology is interested in subjective views of the target groups, there are no correct or incorrect responses and these very subjective responses are measured in relation with others' subjective responses (Tsuladze, 2023). Therefore, the Q methodology seeks to identify certain patterns in the responses of the research participants, thus looking at these individuals as variables. I.e., according to this method, the respondents themselves are variables and not the measurements of their opinions, i.e. the statements (Coogan and Herrington 2011, 24).

As mentioned above, the Q methodology works with relatively smaller samples. Namely, sample may consist of 30, 50 or 100 participants depending on the focus and aim of the research. For instance, the scholars of Q Methodology, McKeown and Thomas (1988) suggest a sampling formula according to which a total of 108 respondents is enough for conducting a countrywide study about the attitudes of the respondents concerning sexual minorities considering their religious affiliation; in this case, the sampling considers several demographic characteristics:

Measurement	Category	Quantity

a. sex	1. female 2. male	2
b. age	1. 20-40 2. 41-60 3. 61+	3
c. Educational background	1. general 2. higher	2
d. Religious affiliation	1. Orthodox 2. Catholic 3. Protestant	3
n = (measurement categories) x (independent variable categories) *i.e.* n = (a x b x c x d) x (m) a x b x c x d = 2 x 3 x 2 x 3 = 36 combinations (m) = 3 (religious affiliation categories) (n) = 36 x 3 = 108 (respondents)		

Adapted from McKeown and Thomas 1988, 38.

On the other hand, when studying specific target groups, such as politicians for instance and their attitudes towards certain aspects, there is no need to consider the abovementioned demographic characteristics, and the number of the selected respondents may be even smaller, such as 50 (or less).

Instead of a standard questionnaire, the Q methodology uses pre-formulated statements that are developed based on the previous research with the similar target groups. The statements should be balanced content-wise, i.e. each topic should not be over-represented or under-represented, neither the statements should be overlapping one another. The statements are perceived and understood by each respondent subjectively, and that is all that matters as the statements are displayed and ranked on the Q grid based on these very subjective perceptions and understandings (Tsuladze, 2023). Q grid, a specific type of scale is used to display the statements according to two major criteria: 1) positive/negative attitude towards the statement, or in other words agreement/disagreement; and 2) relevance of the topic. Therefore, the Q grid has two extreme poles, + (agreement) and – (disagreement), and a neutral category that is used to rank those statements that are perceived by the respondent as relatively less important or towards which they have somewhat neutral attitudes.

In respect to data analysis, Q methodology implies four stages of analysis: correlation analysis, factor analysis, factor rotation, and calculation of factor scores (Z-scores). Based on correlation analysis, consensus-disagreement is measured between two categories of variables assessed on the scale from +1 to -1. A strong positive correlation, say, +0.70 means that the respondents who have a high score on one variable also have a high score on another variable; while a strong negative correlation, say, -0.70 means that those who have a high score on one variable have a low score on another variable. As a result, a correlation matrix involving all Q columns (Q sorts) is developed that shows similarities and differences

between the respondents' views. At the next stage, the major factors are identified in the abovementioned matrix and all the factors whose value is above 1 are selected for factor rotation upon which the most important factors are grouped to enable a better interpretation. Finally, the factor scores are measured that show the value of each statement within each factor, as well as the consensus-disagreement among the factors (Watts & Stenner, 2014). The Ken-Q Analysis free online software is used for the data analysis (https://shawnbanasick.github.io/ken-q-analysis-beta/index.html#section1).

3.2 Sampling and Q Grid

The Q statements are always based on the previous research that suggests the discourses for further testing and analysis. About 25-30 (or more) statements are developed and distributed to the research participants who evaluate them according to positive/negative attitude towards the statement, or agreement/disagreement; and relevance of the topic; the statements are sorted on the Q grid with -/+3 ranking system. As an innovative element to this methodology, the Mediatized EU project has added a qualitative component to the research by asking the research respondents to verbally comment on the +3 and -3 statements. The results show that verbal evaluation sometimes differs from Q grid assessment, which gives an interesting findings for research.

3.3 Example of Q Statements identified within Mediatized EU project (case of Georgia)

Georgia

Q Methodology Statements

Political Orientation	1. The government deviates from the European course 2. The opposition deviates from the European course 3. Deviation from the European course goes against the state interests 4. Russia attempts to make Georgia turn its back on the EU 5. If Georgia deviates from the European course, it will inevitably end up under the Russian influence 6. The EU is guided by double standards in relation to Georgia
Pragmatic	7. The EU supports human rights protection in Georgia 8. The EU endorses Georgia's democracy by supporting the proportional electoral system and judicial reform 9. The EU is Georgia's safeguard against Russian threats 10. European integration is a guarantee of Georgia's territorial unity 11. Georgia needs to implement the EU's 'painful' reforms in order to modernize 12. If the reforms are not implemented, the EU will not further financially support Georgia 13. The 'Associated Trio' jointly aspires for European integration 14. After implementing EU reforms, Georgia will ultimately become a EU member state

	15. Georgia is in the process of becoming a European state in terms of improvement of its democracy 16. Georgia is politically polarized and the EU is a key actor helping the country to overcome this polarization 17. The EU uses its financial support to maintain its influence in Georgia 18. Georgia does not need the EU's financial support because of the country's economic growth 19. The EU intrudes in Georgia's internal affairs 20. The majority of Georgian politicians stage a pro-European performance
Identity	21. Euro-Atlantic integration is a choice of the Georgian people 22. Georgia as a Christian country is a member of the European family 23. Georgia is in the process of becoming a European state in terms of its citizens' "mental Europeanization" 24. European liberal values represent a threat to Georgian values 25. Through supporting LGBTQ rights, the EU threatens Georgian family traditions

Q Grid

Please, place the statements on the scale below according to the following principle: place those statements that you disagree with in the "-" category, and put those that you agree with in the"+" category. At the same time, please rank them according to their relevance, marking with "-3" those that are most important to you but your attitude is strongly negative towards; while mark with "+3" those that are most important to you and towards which your attitude is strongly positive. The statements that cannot be placed within any of "-" or "+" categories, will be automatically displayed in "0" category meaning they are relatively neutral for you. Please, put the number of the respective statements in each graph.

Most important/ Very negative attitude			Neutral			Most important / Very positive attitude
-3	**-2**	**-1**	**0**	**+1**	**+2**	**+3**

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Ken-Q Analysis online software for the analysis of Q methodology: https://shawnbanasick.github.io/ken-q-analysis-beta/index.html#section1

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