The Flemish Survey Climate: An Analysis Based on the Survey of Social-Cultural Changes in Flanders

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The survey climate is seen as a broad concept with different indicators studied over an extended period of time. In the last decades, the evolution of the survey climate is of great interest to many social researchers because of the widespread ideas that the willingness of respondents to participate in surveys is decreasing and the nonresponse rates are increasing. Many researchers have described this negative evolution of the survey climate in both Europe (de Heer (1999); de Leeuw & de Heer (2002); Loosveldt & Storms (2003); Loosveldt & Storms (2008)), and the USA (Brick & Williams (2013); Kim, Gershenson, Glaser & Smith (2001)). However, some researchers are less negative about the evolution of the survey climate. Beullens, Stoop, Loosveldt & Vandenplas (2014) found that the mean response rate for all countries was stable for several rounds of the European Social Survey. They saw clear differences between countries in response rates and in the evolution of these rates.

The differences in the assessment of response rate trends suggests that the evolution of these rates is influenced by the specific content and design of a survey. The fact that response rates depend on these characteristics hampers the study of the evolution of the survey climate over an extended period of time based on different surveys. To solve this problem, a study that has been done repeatedly over an extended period of time within the same population is needed. In this way, the essential survey characteristics are nearly constant, which offers the possibility to check if certain indicators of the survey climate, even in similar circumstances, are changed. Moreover, we can evaluate the relevance of different survey climate indicators. An opportunity for all this is found in the Survey of Social-Cultural Changes from the Research Centre of the Flemish Government. The survey was organized for the first time in 1996 and repeated each year. In 2015, the 20th edition took place. There are paradata available from many survey years (1996–2013) to evaluate several aspects of the survey climate. Each year, the same research design, fieldwork procedures and concept definitions were used, which increases the internal comparability of the data. In the next section, we take a closer look at the study.

Social-Cultural Changes Survey

The Survey of Social-Cultural Changes (SCV Survey) is a survey of a representative sample from the Dutch-speaking population that inhabits the Flemish Region and Brussels-Capital Region (Belgium). It assess values, opinions and beliefs with respect to social and policy themes. This survey is yearly organized by the Research Centre of the Flemish Government (SVR) with a lot of attention and care for the quality of the fieldwork and collected data. Every year, 1500 interviews need to be completed. The random sampling is based on the National Register. The results of the survey are an important source of information for policy preparation and evaluation and for scientific research concerning social changes.

The SVR is responsible for the sample design, the development of the questionnaire, the methodological support and evaluation of the quality of the data collection, and the creation of a research report and documented data file. A committee of survey methodologists from several Flemish universities offers methodological and scientific support. The actual data collection is done by an external commercial fieldwork organization, and the questionnaire is administered during a face-to-face interview at each respondent's house. Since 2003, the interviewers have utilized computer-assisted personal interviewing (CAPI). To reduce the length of the face-to-face interview, respondents receive a drop-off questionnaire at the end of the interview that has to be completed and sent to the research center.

Nonresponse indicators of the survey climate

Outcome rates (such as response rates (RR1), cooperation rates (COOP1), refusal rates (REF1) and contact rates (CON1)) are the far most commonly used indicators for the survey climate. In the SCV Survey, they are calculated based on AAPOR (2015); see Appendix 1 for the exact formulae. Figure 1 shows the evolution of

the outcome rates from 1996 to 2013. Survey years 1998 and 1999 were excluded from the analyses due to their strongly deviant pattern, which probably originates in less strict organizational support and follow-up in the initial survey years. Four simple linear regressions, in which an outcome rate was predicted by the survey year, were executed (RR1: $F_{(1,14)}$= 0.18, p= 0.680; COOP1: $F_{(1,14)}$= 10.98, p= 0.005, b= -0.44; REF1: $F_{(1,14)}$= 11.80, p= 0.004, b= 0.50; CON1: $F_{(1,14)}$= 9.86, p= 0.007, b= 0.46).

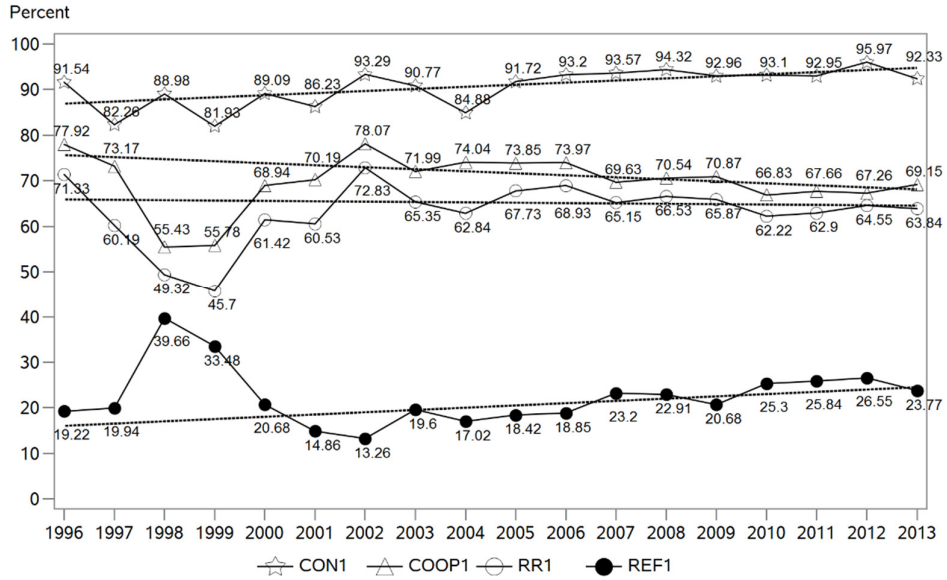

Figure 1: Outcome rates: contact rate (CON1), cooperation rate (COOP1), response rate (RR1) and refusal rate (REF1)

The first remarkable result is that the response rate, RR1, was stable over a period of 18 years with a mean of 65.14%. On the other side, the cooperation rate, COOP1 (mean: 71.51%), decreased by 7.92 percentage points in 18 years and the refusal rate, REF1 (mean: 20.63%), increased by 9 percentage points in 18 years. This apparent contradiction can be explained by the increase in the contact rate, CON1 (mean: 91.14%), by 8.28 percentage points in 18 years. Through the years, the respondents refused more frequently to participate in the interview; but, due to the fact that the interviewers were able to contact more respondents, this is not visible in the overall response rates. The increase in the contact rate can be linked to changes in the design of the SCV Survey. The contact procedure is extended over the years: in the latter years, more contact attempts had to be made. The minimum number of contact attempts increased from three in 1996 to four in 2001 and to five in 2007. In addition, refusal conversion was implemented in 2007.

Throughout the years, the reasons for refusal are the same, with the five most frequent reasons as follows: “Waste of time”, “I never participate/It’s none of your business”, “I don’t have time”, “I am not interested” and “Too busy/Don’t want to be disturbed.”

Besides the classical outcome rates, there are four other survey climate indicators related to participation and follow-up that can be described for the SCV Survey.
The first indicator is the extent to which a first contact attempt resulted in an appointment for an interview. This tells us something about how easy it is for the interviewers to complete an interview. Data are available for 2000 to 2013. The percentage of first contact attempts that resulted in (an appointment) for an interview ranges from 27.32% to 47.34% with a mean of 35.96%. A simple linear regression where this percentage was predicted by the survey year is significant ($F_{(1,12)}$= 11.57, p= 0.005, b= -0.79). The percentage decreased by 11.06 percentage points over 14 years.

The second indicator is the mean number of contact attempts needed until a final outcome can be assigned to a sample unit. Data are available for 2000 to 2013. The mean number of contact attempts ranges from 2.27 to 2.93 with a mean of 2.62. A simple linear regression that predicts this number by the survey year is significant ($F_{(1,12)}$= 51.90, p< 0.0001, b= 0.05). The number increased by 0.7 contact attempts over 14 years.

The third indicator is the extent to which respondents say they would participate again or refuse to participate again in a survey like the SCV Survey. Data are available for 2002 to 2013. The percentage of respondents who say they would participate again ranges from 81.59% to 87.45% with a mean of 84.18%. A simple linear regression where this percentage was predicted by the survey year is not significant ($F_{(1,12)}$= 0.74, p= 0.405). The percentage of respondents who say they would participate again in a comparable study was stable over time.

The fourth indicator is the (non)response to the drop-off questionnaire. Data are available for 2002 and for 2004 to 2012. The percentage of respondents who sent the drop-off questionnaire ranges from 80.63% to 92.08% with a mean of 87.78%. This response rate is high. A simple linear regression where this percentage was predicted by the survey year is significant ($F_{(1,8)}$= 12.25, p= 0.008, b= -0.86). The percentage decreased by 8.6 percentage points over 10 years. The evolution was even worse for the percentage of respondents who sent the drop-off questionnaire spontaneously. This percentage ranges from 53.75% to 78.40% with a mean of 67.16%. A simple linear regression where this percentage was predicted by the survey year is significant ($F_{(1,8)}$= 23.93, p= 0.001, b= -2.20). The percentage decreased by 22 percentage points over 10 years.

If we only look at the response rate (RR1) and the extent to which respondents say they would participate again in a comparable study, the survey climate seems stable. However, a thorough examination shows clear evidence for the worsening of the climate. Through the years, the interviewers' first contact attempt has become less successful, interviewers need more contact attempts per sample unit and respondents are less willing to send the drop-off questionnaire (spontaneously). Similarly, the cooperation rates have decreased and the refusal rates have increased. The contact rate increased due to interviewers' increased efforts. It are the changes in the design (e.g., more contact attempts) that compensate for the effect of the worsening of the survey climate on the response rate.

Organizational indicators

Nonresponse indicators are one group of indicators that tell us something about changes in the survey climate. These indicators focus on the respondents as actors (e.g., respondents accept or refuse the interview, respondents send the drop-off questionnaire or not, etc.). As previously suggested, it would be a very narrow perspective to use only these kinds of respondent-related indicators. The survey climate is a broad concept and many different indicators are necessary to acquire an accurate idea of the evolution of the climate. The climate is, for example, also visible in the way a survey is organized. Several organizational indicators are considered: the length of the interview, the number of interviewers used to complete the total number of interviews, the length of the fieldwork and the price of a completed interview.

The length of the interview ranges from 57 to 93 minutes with a mean of 74 minutes (1996–2013). A simple linear regression in which the length of the interview was predicted by the survey year was executed ($F_{(1,16)}$= 13.46, p= 0.002; b= 1.35). The length of the interview has increased by 24.3 minutes over 18 years.
Many interviewers are needed to reach the amount of 1500 interviews each year. The number of interviewers needed increases throughout the years. In the first three years, there were around 53 interviewers. In the next three years, there were around 87 interviewers. Since 2002, the number of interviewers has been approximately 100 (See Figure 2).

The fieldwork organization needs a certain period of time to finish the 1500 interviews, which is expressed by the number of days of the fieldwork period. A simple linear regression where this number was predicted by the survey year is not significant ($F_{(1,15)}$= 0.04, p= 0.841). The length of the fieldwork period was stable

throughout the years. This is a remarkable finding: although there were almost twice as many interviewers in the latter years of the survey than in the first years of the survey, the fieldwork period remains unchanged. The increase in the number of interviewers only resulted in a stabilization of the fieldwork period, not in a decrease (See Figure 2).

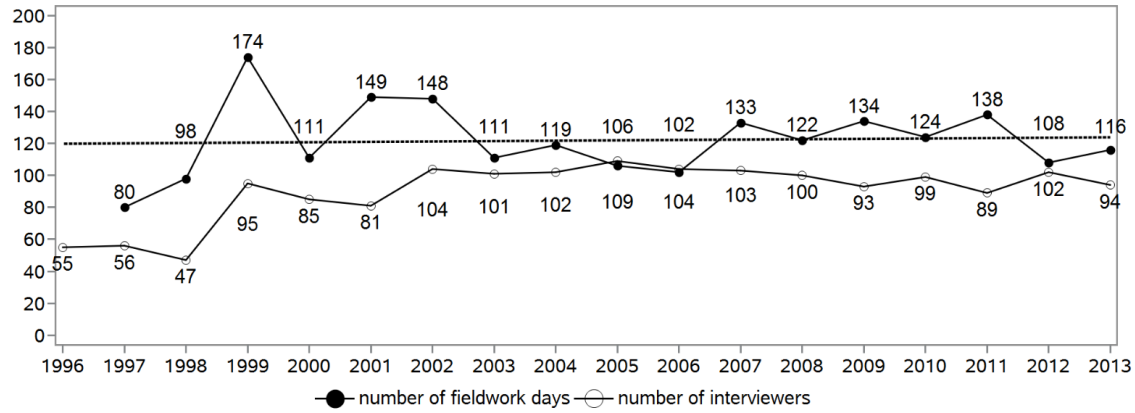

Figure 2: Organizational indicators: number of fieldwork days and number of interviewers

In social sciences, a face-to-face survey is an expensive research method. A large amount of the survey costs are the fieldwork costs (the cost of the fieldwork organization and of the sampling by the National Register). The fieldwork costs are expressed by the price of a completed interview (See Appendix 1) and are indexed to make a year-to-year comparison valuable. Data are available for 2004 to 2013. The cost for a completed interview ranges from €136.13 to €167.45 with a mean of €154.84. A simple linear regression that predicts this cost by the survey year is significant ($F_{(1,8)}$= 7.24, p= 0.028, b= -2.47). The cost for a completed interview has decreased by €24.7 over 10 years. This is a striking finding. We, instead, expected the fieldwork cost to increase because the effort of the interviewer per interview is increasing: there are more contact attempts per respondent and longer interviews. Moreover, the fieldwork organization has also needed to direct more interviewers in the latter years because the same number of interviews is done in the same time period with more interviewers. The evidence for the evolution of the survey climate is mixed. A negative evolution can be seen in the fact that more effort is needed to obtain the same result. A positive evolution can be seen in the fact that it is less expensive to obtain the same result.

<u>Contrast between respondents and non-respondents</u>

Another way to learn something about the survey climate is to look at the evolution of the contrast between respondents and non-respondents. In comparison to the response rate, it can also indicate if the cooperation of certain groups of respondents is changing over time. There is always a certain bias in a realized sample due to over- or underrepresentation of certain groups (e.g., underrepresentation of people with low educational level). This bias can be solved statistically by weighing the data. The standard deviation of these weight coefficients can be seen as an indicator of the survey climate. If the standard deviation increases, the bias increases (the contrast grows) and the survey climate decreases.

In the SCV Survey, weights are based on gender, age and education. The weights are transformed with a $\log_{10}$-transformation to create more symmetric data. The minimum value ranges from -1.72 to -0.40 with a mean of -0.91. The maximum value ranges from 0.89 to 2.14 with a mean of 1.37. The standard deviation ranges from 0.21 to 0.33 with a mean of 0.29. Three simple linear regressions in which a characteristic of the transformed coefficient was predicted by the survey year were executed. None of these are significant (minimum: $F_{(1,16)}$= 2.47, p= 0.117; maximum: $F_{(1,16)}$= 0.32, p= 0.578; standard deviation: $F_{(1,16)}$= 2.56, p= 0.123). The contrast between respondents and non-respondents for age, gender and education was stable over the years as the standard deviation of the weights are stable. This can be considered as good news for the survey climate.

Attitude of respondents towards surveys

As a last indicator for the survey climate, we take a look at the attitude of respondents towards surveys like the SCV Survey. The SCV Survey contains some questions to measure this attitude. These questions make clear the respondents in general have a positive attitude towards surveys. Respondents describe the SCV Survey as a pleasant experience with easy questions. In general, respondents see the results of surveys as credible and useful for policy because the government gets an idea of the opinion of the population. Surveys are not seen as an invasion of their privacy or as a waste of time. Respondents do not want to be paid for their cooperation and find that all people have a responsibility to participate in surveys. Besides being positive, the attitude of the respondents is stable over time. There are no significant changes in the way respondents answered this questions throughout the years (2000–2013), so this indicates a stable survey climate. Some remarks need to be made for this indicator. Firstly, the results are based on self-reports, which are not always very reliable. Secondly, most of these questions were asked in the face-to-face interview but, in some years, some of the questions were included in the drop-off questionnaire. The comparison of these answers revealed that the face-to-face answered questions are clearly positively biased due to social desirability. Finally, nothing is unfortunately known about the attitude of the non-respondents.

Conclusion and discussion

The SCV Survey offers a unique opportunity to study the survey climate over an extended period of time by the same survey. This is a requirement to make valuable conclusions about the evolution of the survey climate, since the climate indicators are influenced by the design of the specific study. The comparison of indicators over different studies is problematic.

The SCV Survey has a lot of paradata, which creates the possibility to study a lot of survey climate indicators. Some indicators reveal no important changes in the survey climate in Flanders from 1996 to 2013. For other indicators, the described evolution is a clear sign of a deteriorating survey climate. Results show that, within the same survey, one can compensate for this negative evolution by increasing the efforts to ensure a completed interview. However, the range of improvements to optimize the contact procedure seems to be almost depleted. The next area where researchers and interviewers can intervene with the decreasing survey climate is the area of refusal. We can think about better training for the interviewers, incentives for respondents and shorter interviews. But if the survey climate is really worsening, these extra efforts will also only be a temporary solution. Nevertheless, interviewers are key players in the data collection of substantive variables and paradata needed to analyze the survey climate. Good training and appropriate remuneration for the interviewers is important to keep the quality of the data high.

Although this paper offers a profound analysis of the survey climate in many of its dimensions, the societal dimension is missing. We did not report about privacy legislation and changes in this domain since 1996. We also did not look at the way survey results are presented in the media and if, or how, this has changed over the past 20 years. Findings regarding the general societal level of the survey climate can enrich our knowledge about the survey climate and can help us understand some of the changes.

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Appendix 1

$$\text{RR1} = \frac{1.10\ \text{Complete}}{1.10\ \text{Complete} + 2.11\ \text{Refusal} + 2.20\ \text{Non contact} + 2.30\ \text{Other (eligible)} + 3.00\ \text{Unknown eligibility}}$$

$$\text{COOP1} = \frac{1.10\ \text{Complete}}{1.10\ \text{Complete} + 2.11\ \text{Refusal} + 2.30\ \text{Other (eligible)}}$$

$$\text{REF1} = \frac{2.11\ \text{Refusal}}{1.10\ \text{Complete} + 2.11\ \text{Refusal} + 2.20\ \text{Non contact} + 2.30\ \text{Other (eligible)} + 3.00\ \text{Unknown eligibility}}$$

$$\text{CON1} = \frac{1.10\ \text{Complete} + 2.11\ \text{Refusal} + 2.30\ \text{Other (eligible)}}{1.10\ \text{Complete} + 2.11\ \text{Refusal} + 2.20\ \text{Non contact} + 2.30\ \text{Other (eligible)} + 3.00\ \text{Unknown eligibility}}$$

$$\text{price of a completed interview} = \frac{\text{cost of the fieldwork organization} + \text{cost of the sampling by the National Register}}{\text{number of completed interviews}}$$