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# A double-edged sword: the peculiar effects of polarisation on social cohesion in Antwerp

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## Preface and acknowledgments

Writing a thesis in the midst of a pandemic has been both challenging and inspiring. While research possibilities became more limited and mental perseverance a struggle within the series of lockdowns and social restrictions, describing and understanding phenomena of polarisation and social cohesion proved to be only more interesting at a time in which the social order is significantly tested. This has only strengthened my belief that in today's world, academic research on what holds a society together is vital.

Therefore, I am very grateful for having received the opportunity with this thesis to study those concepts in more detail. Something I couldn't have done without my promotor, Ferran Davesa, given his dedicated supervision and wise advice, making it easier to navigate the complexity of the topic and challenge of the process. Further, I have learnt a lot from the pre-doctoral trajectory, led by Tuba Bircan and Nanouk Verhulst, to finish my first academic endeavour of writing an academic paper. Thanks to their help, this research will hopefully be the first step in a bigger project on polarisation and social cohesion in Belgium.

Most of all however, I am eternally grateful to my friends, family and loving girlfriend especially, who have given meaning and direction in this extraordinary weird year. I sincerely hope this to be the start of a new beginning.

**Abstract**

Western societies have been found to be increasingly divided over the latest years, transcending rational disagreements with hostility and dislike towards others. Belgium, and more specifically its northern region of Flanders, have been no exception. Despite the dividing characteristics of these polarising dynamics, however, the overall level of social cohesion in Belgium has *not* decreased according to some major social cohesion indicators. To understand this quandary, this paper has conducted a mixed-methods empirical study on the effects of polarisation on social cohesion in the specific case of the Flemish province of Antwerp. In doing so, it has adopted a novel theoretical framework: both social cohesion and polarisation are operationalised in an objective dimension (looking from a distance at observable phenomena in society) and a subjective dimension (looking from within people's viewpoints at personal feelings, attitudes and perceptions). The results indicate that this distinction provides a new way of understanding social cohesion in society: on the individual level, people are glued together based on their objective relations and connections; on the community level, people stick together due to subjective feelings of attachment. In that regard, it was found that polarisation most strongly affects the latter: strong polarised emotions (rational polarisation), negative attitudes towards out-groups (morally polarised attitudes) and limited engagement to discuss political or social matters with others (morally polarised behaviour) all decrease people's emotional attachment to broader society. On the individual level of cohesion, it was found that morally polarised behaviour decreases people's close cohesion to their personal network, while morally polarised attitudes *increase* this form of cohesion. These results enhance the theoretical insights in the field by indicating that polarisation and social cohesion are interlinked in a refined way.

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# 1 Introduction

Disagreement and conflicting opinions are an inherent part of democracy, in which these differences are translated into different parties and societal groups (Heywood, 2013; Reiljan, 2020). In recent years, however, this form of rational disagreement in Western democracies has been trumped by an increase of hostility, dislike and antipathy towards others in society (Applebaum, 2018; Boxell, Gentzkow, & Shapiro, 2020; Dimant, 2020; Druckman, Peterson, & Slothuus, 2013; Gidron, Adams, & Horne, 2018; Reiljan, 2020; Rogowski & Sutherland, 2016; Tappin & McKay, 2019). In stark contrast to issue-related differences on a *rational* level, which are an institutionalized element of the democratic system (Heywood, 2013), this increased resentment towards fellow citizens can arguably be called *emotional* polarisation[1]. Strong emotions are formed against the other's group-identity, which endangers the working of democracies by harming the social fabric and institutional consensus in society (Boxell et al., 2020; Dimant, 2020; Gidron et al., 2018; McCoy, Rahman, & Somer, 2018; Reiljan, 2020).

While there have been little systemic studies on such a rise of emotional polarisation in Belgium and its northern region of Flanders, some exemplary cases suggest that it exists there as well: the rise of polarising and extreme parties (Belga, 2019; Huysseune, 2017), strong polarisation of online communication (D'hauwer, 2020) and Flemish citizens becoming more strongly and more emotionally divided over various societal issues (de Preter, 2020; Demeulemeester, 2018; Truwant, 2020). Since emotional polarisation might significantly threaten societal strength by harming political trust and cooperation (Reiljan, 2020), these signals of increasing polarisation in the historically divided society of Belgium are worrisome (Deschouwer, 2012). More specifically, it is expected that emotional polarisation makes the Flemish cohesiveness crumble down since this 'passionate' radicalisation of opposed groups harms the social fabric, levels of trust, legitimacy and political efficacy in society (Boxell et al., 2020; Dimant, 2020; Gidron et al., 2018; McCoy et al., 2018; Reiljan, 2020).

Interestingly enough, however, major social cohesion indicators[2] measuring exactly such togetherness of the Belgian and Flemish society, show stable and increasing levels of cohesion in Belgium in the latest years (Dragolov, Ignácz, Lorenz, & Delhey, 2016; European Council on Foreign Relations, 2020; Janning, 2018; Klavehn, 2016). It has even been found that Belgium is one of the countries with the highest amount of social cohesion in Europe (European Council on Foreign Relations, 2020). A similar

[1] This concept has been developed by the author, drawing upon the concept of affective polarisation existing in the literature (Reiljan, 2020). See theoretical framework.

[2] These indicators are the Social Cohesion Index of the Bertelmann Stiftung (Dragolov et al., 2016) and the EU Cohesion Monitor (European Council on Foreign Relations, 2020)

trend is observed in other European countries: despite the existence of emotional polarisation (Reiljan, 2020), they have seen stable or even increasing levels of their cohesiveness nevertheless (Möller, 2019).

Building upon previous research pointing towards the disrupting and harming effects of polarisation, this is a very puzzling observation. How is it possible that the general cohesiveness of the Flemish society has been strengthening despite the observation of Flanders becoming ever more divided? What, if any, then *is* the effect of polarisation upon the state of Flemish social cohesion?

To answer these questions, a closer examination of the relationship between polarisation and social cohesion is needed. This paper will therefore study how polarisation and social cohesion are interlinked in the case of Flanders through a mixed-methods analysis, combining in-depth interviews with an online survey in the specific case of the Flemish province of Antwerp.

The paper is structured as follows. It will first conceptually disentangle the concepts of polarisation and social cohesion by incorporating an objective and subjective dimension to look at social reality. Second, based on the categorisation of the key-concepts of polarisation and social cohesion at hand, the analytical part will then show how these concepts are interlinked through the results of the survey and in-depth interviews. Ultimately, the paper will discuss these effects and provide some implications and venues for further research.

# 2 Theoretical framework

Essentially, this paper aims at understanding the possible dividing effects of polarisation upon social cohesion in the Belgian province of Antwerp. However, these general terms do not suffice to be precise about this relationship, especially since these concepts can be understood in various ways. Therefore, two so-called 'dimensions' are adopted through which social cohesion and polarisation can be understood: an objective and a subjective dimension.

The objective dimension on the one hand focuses on how people are measurably positioned and structurally embedded in their networks and broader society, as if one looks from above at how people on the ground are positioned in society. Arguably, most of the current and prominent indicators of social cohesion are positioned in this dimension (Bourdieu, 1986; Chan, To, & Chan, 2006; Jenson, 2010; Putnam, 2000).

The subjective dimension, on the other, takes into account how people actually perceive their objective position in society to be (Bollen & Hoyle, 1990; Chan et al., 2006; Friedkin, 2004). Drawing upon the Thomas theorem – which states that what people think of reality is at least as important as reality itself (Merton, 1995) – this dimension incorporates perceptions, emotions and personal interpretations. As opposed to looking from above, one starts from within people's own minds to look at cohesion and polarisation. With regards to social cohesion, this dimension has not been used often before. This paper will show the benefits of doing so.

This conceptual framework enables defining social cohesion and polarisation more precisely.

## 2.1 The difference between emotional and rational polarisation

Polarisation has been a buzzword in both academic and public discourse (Bramson et al., 2016), making the question of what this concept exactly means difficult to answer. In that regard, polarisation is often considered as a cluster of multiple concepts rather than having one straightforward meaning (Boxell et al., 2020; Bramson et al., 2016; Druckman et al., 2013; Fiorina & Abrams, 2008; Gidron et al., 2018; Mason, 2015; Reiljan, 2020; Tappin & McKay, 2019). To navigate this multiplicity of understandings, this paper draws upon the two dimensions described above and distinguishes between *emotional* and *rational* polarisation (as seen in Table 2.1).

**Table 2.1:**

*Forms of polarisation*

| Type 1: rational polarisation | Type 2: emotional polarisation |
|---|---|
| Ideological polarisation[3] | Moral polarisation[5] |
| Issue polarisation[4] | Affective polarisation[6] |

This distinction starts from a very general definition of polarisation: *a form of clustering of opposing groups within society in which the intensity of polarisation depends on the distance between those groups, their congruity and their size* (Reiljan, 2020). Building thereon, the precise element upon which the groups are formed, defines which kind of polarisation one is dealing with.

Rational polarisation as the first type focuses on the divisive power of opinions, ideologies, and issues. In that sense, it draws upon two specific forms of polarisation: 'issue polarisation' and 'ideological polarisation'. While in both cases individuals are polarised on content-based elements, 'issue polarisation' means that only certain issues get polarised (Baldassarri & Bearman, 2007; Mason, 2015), while 'ideological polarisation' deals with polarisation based upon irreconcilable worldviews (Rapp, 2016).

As a result, rational polarisation is defined as *the process in which opposing groups in society cluster together based on rational disagreements*.

In contrast, emotional polarisation goes beyond differences in opinion and deals with how people identify themselves in relation to others and behave accordingly. On the one hand, this form of polarisation draws upon 'moral polarisation' (Tappin & McKay, 2019) in which societal groups have a certain moral judgement about other groups in society: they are seen as essentially good or bad. This form of polarisation specifically transcends issue polarisation since people make such judgements on the basis of the group itself, rather than upon possible arguments these groups might have (Druckman et al., 2013). Indeed, stronger group identities therefore lead to higher moral polarisation (Tappin & McKay, 2019). Through positive emotions for one's own group and negative emotions against other groups, a strong and emotional we-versus-them discourse is then formed which causes issue-related *disagreements* to be overruled by a conflict between opposing group *identities* (Mason, 2015; McCoy et al., 2018; Tappin & McKay, 2019). This is strongly related to intergroup dynamics - in which one

[3] See Rapp, 2016
[4] See Baldassari & Bearman, 2007; Mason, 2015
[5] See Tappin & McKay, 2019
[6] See Boxell et al., 2018; Reiljan, 2019

links one's own identity to the group-identity (Tajfel & Turner, 1979) - and to the typical negative or even stereotypical reactions of groups against so-called out-group threats (Blumer, 1958).

On the other hand, emotional polarisation draws upon 'affective polarisation'. This type applies the broader concept of moral polarisation specifically to political parties, in which they have positive emotions towards their own party and negative emotions to other parties (Boxell et al., 2020; Gidron et al., 2018; Reiljan, 2020; Tappin & McKay, 2019).

Emotional polarisation is thus defined as *the process in which opposing groups in society cluster together based on group identities and the emotions and behaviour that are linked with that*.

Overall, rational polarisation can be placed in an objective dimension since it focuses upon rational disagreements that define people's political position in society. Emotional polarisation situates within a subjective dimension because of its strong focus upon the sensitive and personal question of group identity and consequent emotions.

## 2.2 The difference between objective and subjective social cohesion

Social cohesion, as the second key concept in this research, is in its most general terms about *how well people in a certain social constellation are glued together* (Chan et al., 2006; Dragolov et al., 2016; Friedkin, 2004). However, this concept has become increasingly popular in policymaking and academic research, which makes that multiple interpretations exist (Chan et al., 2006; Dragolov et al., 2016; Fonseca, Lukosch, & Brazier, 2019; Friedkin, 2004; Schiefer & van der Noll, 2017). Furthermore, social cohesion cannot be operationalised into one single index (Botterman, Hooghe, & Reeskens, 2012) because as a phenomenon, it can exist on multiple physical (e.g. city against nation) or non-physical levels (e.g. friends against colleagues).

Within this conceptual pastiche, this paper has defined four specific types of social cohesion based on two distinct axes (as seen in Table 2.2). On the first axis (the measurement level), the distinction is made between the community-level and the individual-level (Fonseca et al., 2019). The former looks at groups – both on the micro and the macro level – while the latter considers one's individual position therein. On the second axis (the measurement method), one finds the objective and subjective dimension as lined out in the case of polarisation above.

**Table 2.2**

*Conceptual framework of social cohesion*

| | | *Measurement Method* | |
|---|---|---|---|
| | | **Objective** | **Subjective** |
| *Measurement Level* | **Community** | TYPE 1<br>Social positioning[7]<br>Social relations/capital[8] | TYPE 3<br>Sense of belonging[9]<br>We-feeling[10] |
| | **Individual** | TYPE 2<br>Which sub-groups in[11]<br>Common behaviour[12] | TYPE 4<br>Positive group emotions[13]<br>Identity feelings[14] |

Consequently, four distinct interpretations of social cohesion emerge. When taking the 'objective' viewpoint, looking from above at how people are visibly interrelated, the first type primarily focuses on macro-level indicators that measure one's social position within society: how people are interrelated and positioned at the community level (Chan et al., 2006; Dragolov et al., 2016; Fonseca et al., 2019; Friedkin, 2004; Moody & White, 2003; Schiefer & van der Noll, 2017; Vergolini, 2011). Drawing on the work of Putnam (2000) and Bourdieu (1986), this is linked with the amount of social capital that exists in society. Therefore, social cohesion in Type 1 is defined as *the way in which people are observably glued together at community level through their position and their social relations in society*.

Going from the community-level to the individual level (within the objective dimension), the second type looks on the one hand at the amount of sub-groups people are in, thereby dealing with matters of civic engagement in their neighbourhood or close circle (Putnam, 2000). On the other, it describes the common behaviour of individuals within society as seen by common norms, values and cultural practices (Chan et al., 2006; Fonseca et al., 2019; Schiefer & van der Noll, 2017). Here, social cohesion is therefore understood as *the way in which people are observably glued together at the individual level based on their common behaviour and their interrelations and engagement in sub-groups*.

Most prior studies and indices on social cohesion are situated within this objective dimension: they operationalise social cohesion on the basis of large surveys at the community level, drawing mostly

[7] See Chan et al., 2006; Dragolov et al., 2016; Fonseca et al., 2019; Friedkin, 2004; Moody & White, 2003; Schiefer & van der Noll, 2017; Vergolini, 2011a
[8] See Bourdieu, 1986; Oxoby, 2009; Putnam, 2000
[9] See Chan et al., 2006; Dragolov et al., 2016; Lev-Wiesel, 2003; Schiefer & van der Noll, 2017
[10] See Chan et al., 2006; Dragolov et al., 2016; Fonseca et al., 2019; Friedkin, 2004
[11] See Putnam, 2000
[12] See Chan et al., 2006; Fonseca et al., 2019; Schiefer & van der Noll, 2017
[13] See Fonseca et al., 2019; Friedkin, 2004; Tajfel & Turner, 1979
[14] See Chan et al., 2006; Fonseca et al., 2019; Gallagher, 2009; Schiefer & van der Noll, 2017

on 'objective' and structural elements focused upon people's position within society (Addeo, Diana, Bottoni, & Esposito, 2017; Berger-Schmitt, 2000; Dickes & Valentova, 2013; Dragolov et al., 2016; European Council on Foreign Relations, 2020; Janmaat, 2011; Jenson, 2010; Klavehn, 2019). In the case of Belgium specifically, such studies attend to, amongst others, the effect of these structural social cohesion indicators on voting choices (Vanhoutte & Hooghe, 2013) or on differences in social capital (Neutens, Vyncke, De Winter, & Willems, 2013). Interestingly, one such study has also captured the level of social cohesion in Flanders specifically (Hooghe, Vanhoutte, & Bircan, 2009).

However, to best understand how polarisation can be linked to social cohesion, this paper argues for a further understanding of the *subjective* dimension of social cohesion, which starts from within people's emotions, perceptions and interpretations of society. As such, the third type of social cohesion includes the important element of sense of belonging to society as a whole on the community-level, as this is often seen as crucial for keeping a society together (Chan et al., 2006; Dragolov et al., 2016; Lev-Wiesel, 2003; Schiefer & van der Noll, 2017). Secondly, this type also includes 'we-feeling', combining everything that relates to common goals (Schiefer & van der Noll, 2017), trust, solidarity and positive attitudes towards generalized others (Chan et al., 2006; Dragolov et al., 2016; Fonseca et al., 2019; Friedkin, 2004). Social cohesion in type 3 is therefore defined as *the way in which people feel like they are glued together at the community-level through their sense of belonging and we-feeling*.

Finally, the fourth type introduces the component of (group) emotions to the question of social cohesion, because sub-group feelings strongly define one's connection to others (Fonseca et al., 2019; Friedkin, 2004; Tajfel & Turner, 1979). This includes the crucial but complex process of identity-feelings, since sharing similar identities might greatly improve one's connection to others (Chan et al., 2006; Fonseca et al., 2019; Gallagher, 2009; Schiefer & van der Noll, 2017). Type 4 is thus defined as *the way in which people feel like they are individually glued together based on how they identify themselves in broader society and in certain groups*.

As this paper will show, a subjective dimension on emotions and perceptions is crucial to understand broader social reality today. Subjective social cohesion will therefore prove a relevant addition to the general social cohesion framework. Indeed, some previous studies on subjective social cohesion already exist, focusing on a sense of belonging or identity and feelings of trust at the community level and on dynamics in smaller groups at the individual level (Almond & Verba, 1989; Bollen & Hoyle, 1990; Breidahl, Holtug, & Kongshøj, 2018; Hipp & Perrin, 2006; Holtug, 2017; Lawler, Thye, & Yoon, 2000; Lev-Wiesel, 2003; Pinto et al., 2020; Rapp, 2016; Sturgis, Brunton-Smith, Kuha, & Jackson, 2014; Vasta, 2010). However, specific research into the effect of the process and dynamics of polarisation on the state of subjective social cohesion are lacking, both in the case of Belgium and more generally.

## 2.3 Understanding polarisation through the lens of social cohesion

The theoretical model outlined above defines both social cohesion and polarisation in a renewed way, accounting for the importance of both measurable indicators, and emotions and perceptions in explaining people's connection to society.

With that framework, understanding polarisation through the lens of social cohesion provides a new perspective on the question of societal togetherness and division, filling an important gap in previous research. To do so, this paper serves as an exploratory study on the effects of polarisation on social cohesion in the case of the province of Antwerp. Based on the theoretical model, four hypotheses on this relationship were formed.

> *H1: the different types of social cohesion and polarisation differ empirically and can be operationalised into distinct indices.*
>
> *H2: both types of polarisation have a predominantly negative effect on social cohesion, given their dividing characteristics into/between opposing groups.*
>
> *H3: while rational polarisation mostly affects objective types of cohesion, emotional polarisation mostly affects the subjective types.*
>
> *H4: Polarisation reveals an upward trend while social cohesion has been decreasing.*

# 3 Methodology

This study draws upon a mixed-methods analysis (Lieberman, 2005). A quantitative survey measures the concepts in an aggregated way and estimates the possible effects between polarisation and social cohesion. This quantitative layer has then been complemented by in-depth interviews exploring respondents' personal feelings and perceptions towards these concepts.

## 3.1 Data collection: description of samples and sampling method

This research has been conducted in the province of Antwerp for various reasons. Belgium at large is a highly relevant and interesting context for studying polarisation and social cohesion due to the historically divided nature of the Belgian society, with many cleavages running through (Deschouwer, 2012) and with the existence of sub-state nationalism and populism in Flanders (van Haute, Pauwels, & Sinardet, 2018). The specific province of Antwerp offers an interesting combination of the diverse and densely populated city of Antwerp and the quasi-rural environments around it.

Two separate groups of data were collected. First, an online survey was created via Qualtrics[15] and shared in the province of Antwerp between February 23rd and March 21st (N = 265). While covering a wide range of spatially organised communities, the sample is however not fully representative given that mostly one socio-economic level of society was reached: rather young or middle-aged, well-educated, and non-poor respondents[16]. The relatively big size, however, somewhat mitigates this bias.

Second, a sub-sample was directly drawn from this bigger sample for the purpose of in-depth interviews. To do this, the survey allowed for opting for a follow-up interview, for which 20 respondents were selected[17]: 10 randomly and 10 focusing upon their levels of social cohesion and polarisation. These interviews[18] were held in the period between March 11th and March 23rd.

## 3.2 Quantitative data analysis: drawing the rough lines

The quantitative analysis based on the survey data was conducted in two phases. First, the latent variables for both social cohesion and polarisation were created. Second, the relationships between the two were estimated. The quantitative approach thus enabled for an *aggregated* view on the research question.

[15] See questionnaire in supplemental material, Appendix G.
[16] See Appendix A for descriptives and overview of the samples.
[17] See Appendix B for sampling method in more details.
[18] Due to the current health measures, all interviews were conducted via Skype. For the topic list, see Appendix G.

### *3.2.1 Creation latent variables*

As the literature section already pointed out, social cohesion as the dependent and polarisation as the independent variable are difficult concepts to grasp. By creating the variables for these concepts[19], the analysis therefore accounted for an empirical 'test' of these possible meanings. On the one hand, the indicators for both concepts have been created based on the data itself (induction) and operationalised from the theoretical meanings (deduction). On the other hand, the concepts have also been discussed extensively with the interviewees to understand their perceptions thereof.

For social cohesion, reliability analysis on the theoretical types concluded that the four types were indeed moderately supported by the data[20]. As a result, four normalised[21] latent variables were created measuring the four types of social cohesion.

For the inductive approach, principal component analysis[22] (estimating which types emerged from the data itself) showed 6 extractable components[23]. Reliability analysis on these components indicated that while 5 could be operationalised, 1 had to be discarded[24].

For polarisation, reliability analysis on the two theoretical types (rational and emotional polarisation) indicated that only rational polarisation could be extracted deductively[25]. Emotional polarisation had to be inductively defined[26] and was divided in two sub-components based on the principal component analysis: 'morally polarised attitudes' and 'morally polarised behaviour' (their interpretation will be discussed in the next section).

### *3.2.2 Estimating the effects of polarisation upon social cohesion*

To analyse the effects of these types of polarisation as independent variables on the types and components of social cohesion as dependent variables, these newly created variables were inserted in a multivariate multiple regression model or canonical regression analysis in which the effects are estimated by the standardised regression coefficients per covariate or independent variable (Dattalo, 2013). This statistical technique, other than OLS multivariate regression, makes it possible to look at the effects of the different types of polarisation on the different types and components of social cohesion *all at the same time*[27]. The results can be found in the next section.

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[19] For the whole statistical process, see Appendix C.1 and C.2.
[20] Based on satisfactory Cronbach's alpha values of around .6, see Appendix C.1.1.
[21] The process of normalisation was chosen for all latent variables to be able to compare the indices. See Appendix C.3.
[22] See results of PCA in Appendix C.1.2.
[23] The meaning of these components is based on the variables loading on them as shown in the PCA, see Appendix C.1.2
[24] Component 6 was not operationalised due to a Cronbach's alpha of .444, see Appendix C.1.2.
[25] Based on a satisfactory Cronbach's alpha value of .576, see Appendix C.2.1.
[26] Based on a non-satisfactory Cronbach's alpha value of -.074, see Appendix C.2.2.
[27] For mor details, see Appendix D for assumptions and Appendix G for statistical output.

## 3.3 Qualitative data analysis: what do people think?

To enhance the empirical understanding of this research, the insights from the quantitative analysis were contrasted by the insights of the interviews. To do so, the interviews were transcribed and coded according to the Grounded Theory method (Glaser & Strauss, 1967). This coding process was done in a combination of deductive and inductive coding due to the length of the interviews (54 minutes on average) using an interpretative approach in accordance with the coding rules set by the codebook[28]. Newly created categorical variables[29] showing overall trends combined with specific personal experiences then allowed putting the results of the quantitative analyses in an enhanced perspective. Incorporating those interviews thus enabled for a more in-depth and 'subjective' view on the research question.

[28] See supplemental material in Appendix G.
[29] See Appendix C.4 for overview and procedure of how these variables were created.

# 4 Results

What is the effect of (the different types of) polarisation upon (the different types of) social cohesion in the province of Antwerp? The first part of this section describes the quantitative and qualitative results of the univariate state of social cohesion and polarisation. In the second part, the actual effects are statistically estimated and compared to the interviewee's perspectives.

## 4.1 State of the union? Social cohesion and polarisation in the province of Antwerp

### *4.1.1 Social cohesion in the province of Antwerp*

For social cohesion, apart from the 4 theoretical types, 5 data-driven components were extracted from the data to check whether they support those theoretical types (see Tables 4.1 and 4.2). In that regard, some differences were observed: the data-driven components show that social cohesion on the individual level is mostly linked to objective elements such as cooperation or social relations (see the lower left corner in Figure 4.1), while social cohesion on the community-level is linked more to subjective elements such as sense of belonging or we-feeling (see upper right corner in Figure 4.1). This is also confirmed when looking at how the components and types of social cohesion are correlated[30].

**Table 4.1**

*Meaning of types of social cohesion*

| | **Type 1** | **Type 2** | **Type 3** | **Type 4** |
|---|---|---|---|---|
| *Definition* | *The way in which people are observably glued together at community level through their position and their social relations in society.* | *The way in which people are observably glued together at the individual level based on their common behaviour and their interrelations and engagement in sub-groups.* | *The way in which people feel like they are glued together at the community-level through their sense of belonging and we-feeling.* | *The way in which people feel like they are individually glued together based on how they identify themselves in broader society and in certain groups.* |
| *Level* | Community | Individual | Community | Individual |
| *Dimension* | Objective | Objective | Subjective | Subjective |
| *Key words* | Social positioning; Social capital | Sub-groups; Common behaviour | Sense of belonging; We-feeling | Group emotions; Identity feelings |

[30] See correlation matrix in Appendix C.1.3.

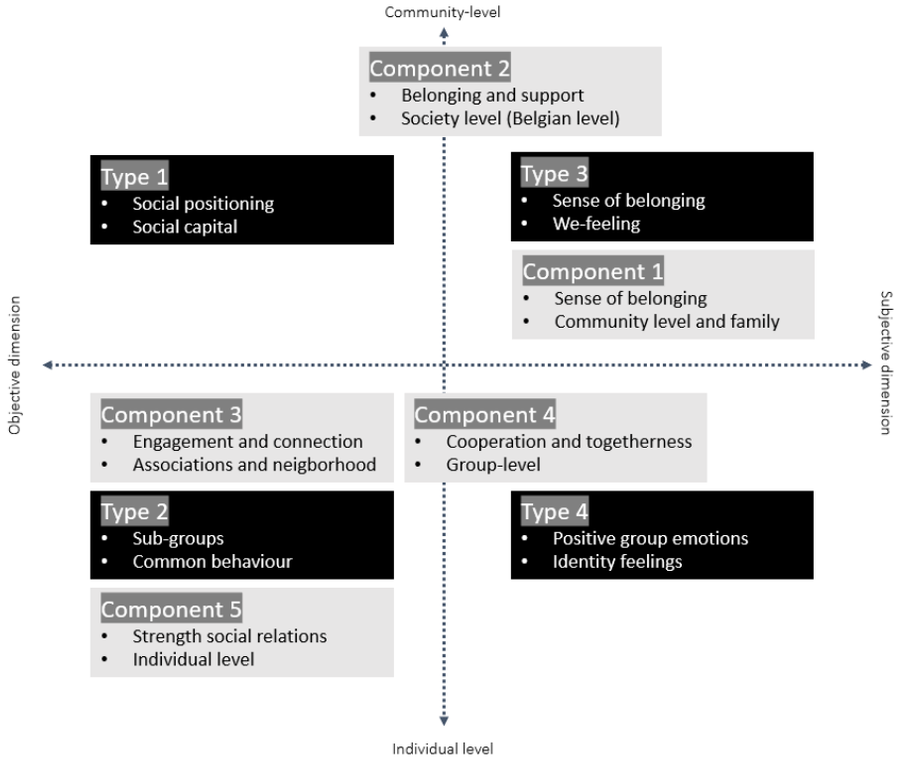
**Table 4.2**

*Meaning of components of social cohesion*

| | **Compon. 1** | **Compon. 2** | **Compon.3** | **Compon. 4** | **Compon. 5** | **Compon. 6** |
|---|---|---|---|---|---|---|
| *Definition* | *The way in which people feel glued together by feeling to belong at the level of Flanders and their closer circle.* | *The way in which people both feel glued together by their belonging at the Belgian level and are glued together through societal support.* | *The way in which people are glued together through their engagement for and connections in their associations and neighbourhood.* | *The way in which people are glued together through their cooperation with (dis)similar groups.* | *The way in which people are glued together through the strength of their social relations with others.* | *The way in which people are glued together on the individual level through their social position in society and support.* |
| *Level* | Community | Community | Individual | Individual | Individual | Individual |
| *Dimension* | Subjective | Mostly subjective | Objective | Mostly objective | Objective | Objective |
| *Key words* | Sense of belonging | Belonging; support | Engagement; connection | Cooperation | Strength social relations | Social positioning |

**Figure 4.1**

*Graphical positioning of concepts and types on theoretical axes*



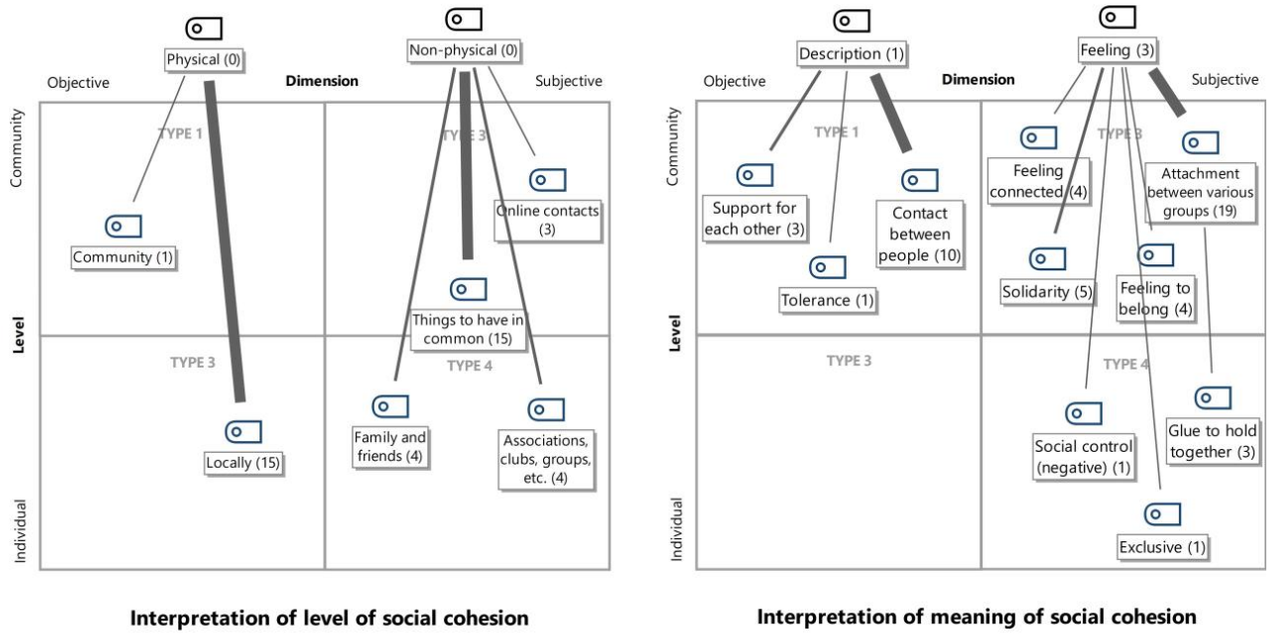

*Note.* Black boxes represent theoretical types, while grey boxes show data-driven components.

To further check the empirical relevance of the theoretical types, the in-depth interviews asked for people's general understanding of social cohesion (see Figure 4.2), people's stance towards the two dimensions specifically and how people see the amount of social cohesion in society today.

On the first point (i.e. people's understanding of social cohesion), the answers were coded according to the level and interpretation of social cohesion. Regarding the *level* (see Figure 4.3), social cohesion was mainly understood as something non-physical in which many respondents interpreted it as having things in common. If understood in a physical way, social cohesion was interpreted as being something local (e.g. in close circle or neighbourhood). Regarding the *interpretation* of social cohesion, most understandings were coded in the subjective dimension. There, the general attachment between groups (a feeling or *subjective* dimension, N = 19) [31] was most important. When social cohesion was understood within an *objective* dimension, some defining characteristics of social capital surfaced ('contact' and 'support').

**Figure 4.2**

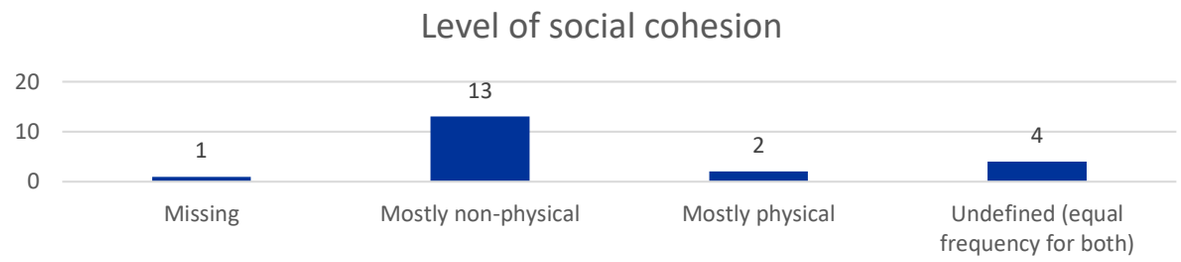
*Graphical representation of codes of social cohesion contrasted with theoretical types*




*Note.* Numbers display code frequency.

[31] This N refers to the amount of codes instead of the number of respondents.

**Figure 4.3**

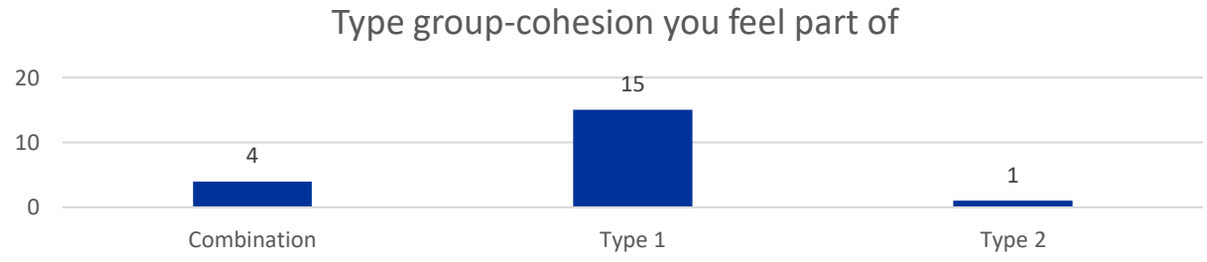



*Note.* Displays case frequency of interpretation of the level of social cohesion by respondents. N = 20.

On the second point (i.e. people's stance towards objective and subjective social cohesion), the interviews *a priori* had defined specific examples to explore people's reactions towards those hypothetical situations[32]. On the community-level first, two artificial communities were presented, and respondents were asked to identify themselves in the applicable dimension[33]. Figure 4.4 indicates that the *objective* type of social cohesion was most recognisable. Compared with the fact that most respondents understood cohesion as something *subjective*, as indicated above, this seems to be a contradiction. Importantly to mention therefore is that respondents understood this Type 1 to be a to be a smaller group of friends, colleagues, or neighbours rather than society at large:

> "[Type] 1 is more like a small group where I – yeah, where you are closer to one another" (R1[34]).

**Figure 4.4**




*Note.* Displays case frequency of type of group-cohesion respondents felt part of. N = 20.

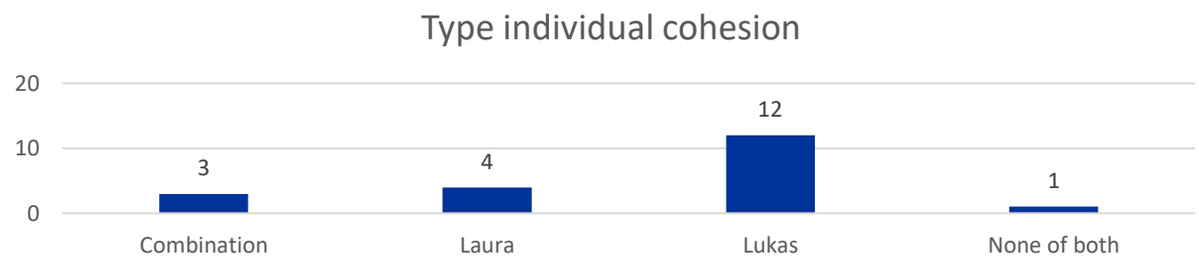
On the individual level, secondly, two artificial characters were presented: 'Lukas' was framed as the example of the objective dimension, while 'Laura' was representing the subjective dimension of

[32] See topic list in Appendix G.
[33] 'Type 1' has the characteristics of the objective dimension, while 'Type 2' is located in the subjective dimension.
[34] The original Dutch phrasing of this and following quotes can be found in Appendix F.

cohesion[35] . As Figure 4.5 shows, Lukas was far more popular than Laura, since most respondents struggled with the element of strong identity feelings that was typical in the case of Laura. In contrast, Lukas was thought to be more open and engaged, and thus more positive. Most respondents therefore disliked Laura:

> "I totally cannot relate to Laura because I don't see myself as an inhabitant of my neighbourhood. I'm also not protective about the way I think nor am I negative towards others (…)" (R15).

**Figure 4.5**



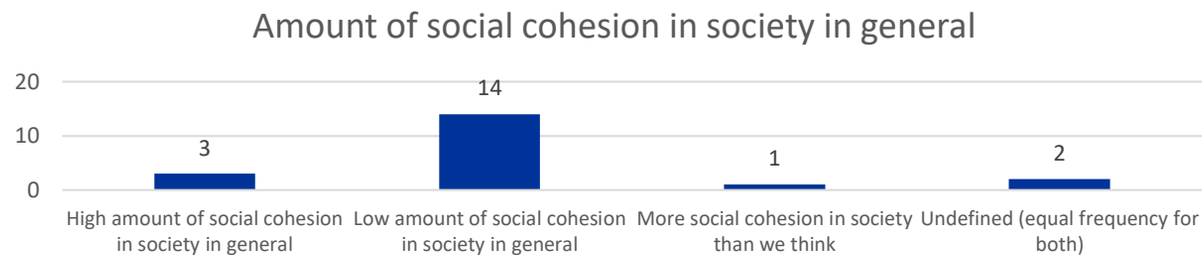

*Note.* Displays case-frequency of which type respondents felt most resemblant with. N = 20.

On the third point (i.e. how people see the amount of social cohesion in society today), a big majority (N = 17) experienced social cohesion in their own lives, but they all stressed this to only be on the individual level. This partly explains why at the same time, many (N = 14) believed there is a low amount of social cohesion in society *in general*. Contrasted with the high number of respondents experiencing cohesion in their personal lives, this means that there is a big difference between how people experience social cohesion in their own lives and in society at large.

> "[…] So, in my own life I think okay there really is social cohesion, but then you see the news and you think like oh, it's totally not as beautiful as we would all hope. So yeah, it's really ambiguous" (R5).

[35] See topic list in Appendix G for how characters were exactly described.

**Figure 4.6**




*Note.* Displays case frequency of amount of social cohesion respondents deemed there to be. N = 20.

Can these interpretations be confirmed by the data at hand? Tables 4.3 and 4.4 summarise the actual state of social cohesion in Flanders through the normalised indices of social cohesion. In that regard, on average it can be said that social cohesion in this dataset is not as low as suggested by the interviews[36]. Interestingly, subjective cohesion proved to be somewhat stronger than its objective counterpart. This corresponds with the fact that most interviewees saw social cohesion to be something subjective indeed although they struggled applying the more abstract principles to their concrete daily lives.

**Table 4.3**

*Statistical overview of theoretical types of social cohesion operationalised*

| | *Objective types* | | *Subjective types* | | **Grand index**[37] |
|---|---|---|---|---|---|
| | **Type 1** | **Type 2** | **Type 3** | **Type 4** | |
| *Mean* | .5016 | .4752 | .6028 | .5433 | .5307 |
| *Std. Deviation* | .1689 | .1988 | .1817 | .1778 | .1281 |
| *Range* | [0,1] | [0,1] | [0,1] | [0,1] | [.14,.81] |
| *N* | 265 | 265 | 265 | 265 | 265 |
| *Cronbach's a* | .563 | .619 | .871 | .559 | .660 |

*Note.* N = 265.

[36] This interpretation is built on the fact that all indices score around .5. However, this interpretation must take into account the way in which the indices are operationalized and normalized, see Appendix C.3.
[37] Here the overall mean of all types or components is presented as a single variable/index of social cohesion.

**Table 4.4**

*Statistical overview of data-driven components of social cohesion operationalised*

| | *Subjective types* | | | *Objective types* | | | **Grand index[37]** |
|---|---|---|---|---|---|---|---|
| | **C1** | **C2** | **C3** | **C4** | **C5** | **C6** | |
| *Mean* | .5433 | .5841 | .4184 | .4462 | .5678 | / | .5119 |
| *Std. Deviation* | .1779 | .1489 | .2431 | .2099 | .1971 | / | .1160 |
| *Range* | [0,1] | [0,1] | [0,1] | [0,1] | [0,1] | / | [.18,.82] |
| *N* | 265 | 265 | 265 | 265 | 265 | / | 265 |
| *Cronbach's a* | .886 | .841 | .724 | .701 | .629 | .444 | .522 |

*Note*. N = 265.

### *4.1.2 Polarisation in the province of Antwerp*

Three types of polarisation were constructed based on both the deductive and inductive approaches: rational polarisation on the one hand, and morally polarised *attitudes* and morally polarised *behaviours* on the other (see conceptual meaning in Table 4.5).

Rational polarisation - being the process in which opposing groups in society cluster together based on rational disagreements - was operationalised on the extent to which respondents answered either extremely positive or negative on certain societal statements[38]. Situated in the objective dimension, the variables in this index are strongly grouped together.

The variables operationalising emotional polarisation – in which opposing groups in society cluster together based on group identities and the emotions that are linked with that – were split into two components[39] consisting of attitudes (moral conception of groups) and behaviours (the specific actions undertaken on it). Hence, while the former deals with how people develop negative emotions towards other groups in society and morally denounce them based on their own group identity, the latter deals with the resulting behaviour from moral polarisation: it measures the extent to which people engage *less* with others in political or societal discussions[40].

[38] See Appendix C.2.1.

[39] See Appendix C.2.2 for specific procedure of principal component analysis.

[40] From a theoretical standpoint, it was expected that this low engagement would be confined to specific out-groups only. After all, most respondents indicated they do indeed feel negative emotions towards other groups in society. However, in this sample respondents were equally (un)prepared to discuss with both their in-group *and* out-group (Pearson correlation = .202**). As a result, the index of morally polarised behaviour in this sample thus measures the extent to which people discuss with other people regardless of their group identity.

Combining all types of polarisation, the results show that there is a conceptual difference between rational polarisation and (the sub-components of) emotional polarisation. In practice they remain somewhat overlapping since rational polarisation is (weakly) correlated to morally polarised attitudes[41], while morally polarised attitudes and morally polarised behaviour as the sub-components of emotional polarisation are not correlated.

**Table 4.5**

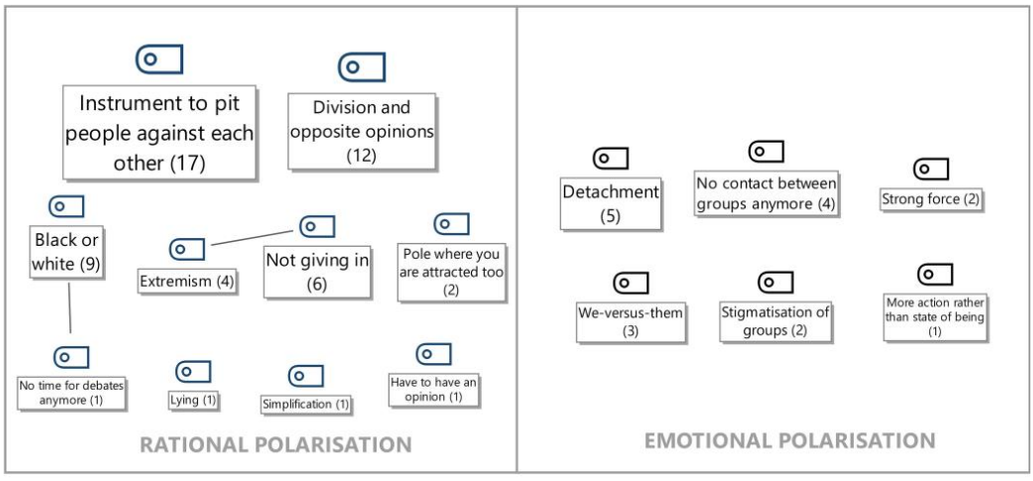
*Conceptual meaning of types of polarisation*

| Rational polarisation | Morally polarised attitudes | Morally polarised behaviour |
|---|---|---|
| *The process of clustering of opposing groups within society based on rational disagreements.* | *The phenomenon of showing negative attitudes towards specific groups based on negative emotions, disagreement and the deliberate omission of certain issues.* | *The extent to which people do not, and do not want to, discuss with other people on political and social matters.* |

This theoretical conceptualisation makes sense with the individual respondents as well. Figure 4.7 summarises its interpretations contrasted with the two theoretical types. Here, polarisation was most strongly understood in the rational dimension. In the sphere of emotional polarisation, both morally polarised attitudes ('we-versus-them') and morally polarised behaviour ('detachment') were recognised, strengthening the relevance of operationalising emotional polarisation in that way.

**Figure 4.7**

*Graphical depiction of coded interpretations of polarisation*




*Note*. Numbers display code frequency.

[41] Pearson correlation = .149, significant at the 0.05 level.

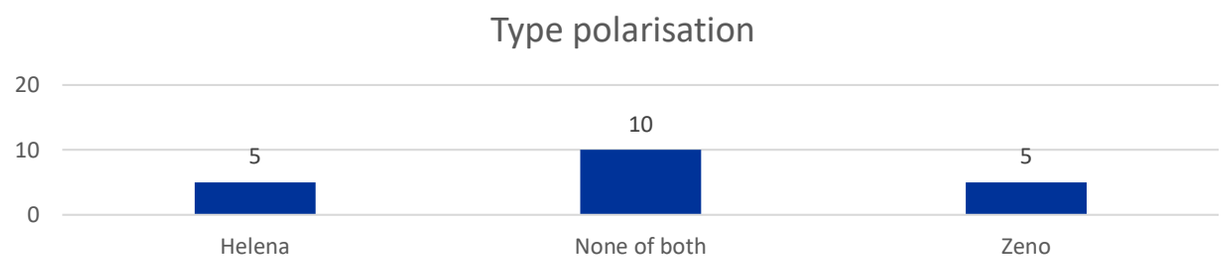
Apart from the general conceptual understanding, many respondents (N = 13) saw polarisation also as something problematic – even when a moral judgement was never specifically asked:

> "Polarisation, I try not to be polarised, it's something moral, I just know it's wrong and that I should have less prejudices and the like, it's something which I don't like for myself" (R14).

Consequently, when asked whether they felt they were polarised themselves, 10 of them clearly stated they were not. However, when looking at respondents' individual polarisation scores[42], only 3 could be excluded from polarisation at all. This might indicate a certain level of social desirability in respondents' answers on the one hand, explained by the negative judgement about polarisation in general, but on the other hand it shows that respondents' understanding of what it means to be polarised proved to be limited; they seemed not to be aware of the concept of emotional polarisation.

When presented with two characters who were polarised according to one of the two types of polarisation, 10 claimed they did not recognise themselves in any of the two (see Figure 4.8).

**Figure 4.8**

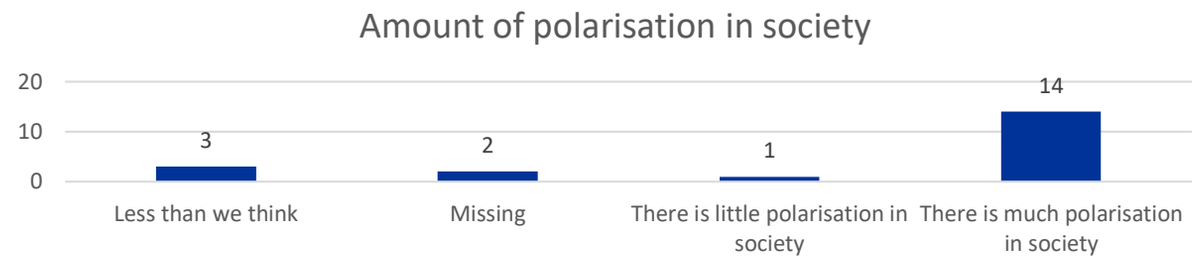



*Note.* Displays case frequency of type of polarisation respondents recognised in themselves. N = 20.

Lastly, when asked about their assessment of the amount of polarisation in today's society, a majority (N = 14) indicated there to be much polarisation, contrasted with only 4 who clearly stated this to be not true (see Figure 4.9).

[42] See Appendix E for analysis.

**Figure 4.9**




*Note.* N = 20.

Contrasted with these experiences, the actual state of polarisation in the province of Antwerp can be found in Table 4.6 and shows that polarisation is not as problematic as expected: rational polarisation is moderately present in this sample. Emotional polarisation as captured by morally polarised attitudes[43] and morally polarised behaviour[44], is weaker.

**Table 4.6**

*Statistical and conceptual overview indices of polarisation operationalised*

| | **Rational polarisation** | **Morally polarised attitudes** | **Morally polarised behaviour** |
|---|---|---|---|
| *Mean* | .5161 | .3761 | .4827 |
| *Std. Deviation* | .2038 | .3013 | .2083 |
| *Range* | [0,1] | [0,1] | [0,1] |
| *N* | 265 | 265 | 265 |
| *Cronbach's a* | .576 | / | .922 |

*Note.* N = 265.

### *4.1.3 How social cohesion and polarisation have evolved over time*

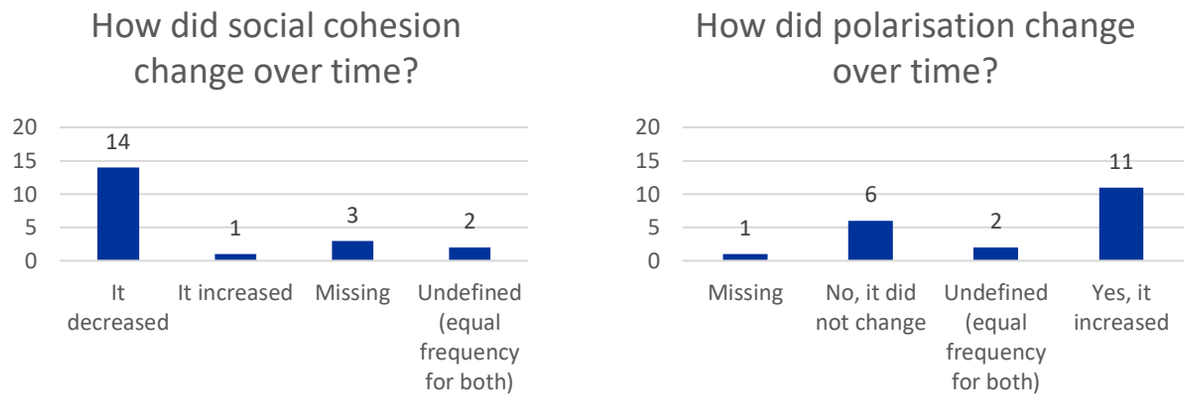
Given the concern about an increase of polarisation and a decrease of social cohesion (expressed by H4), the interviews also asked how respondents interpret social cohesion and polarisation to be evolving over time. As can be seen in Figure 4.10, 14 respondents believed social cohesion to have

[43] Important, as Appendix C.2.2 shows, this index is built on three dummy variables and consists of a four-point scale which has been normalized.

[44] Of course, since no distinction between which groups one discusses with could be made, high scores on this index could also point to general apathy to discuss about societal and political matters in general.

decreased over time, alongside 11 who thought polarisation to have increased. This observation thus confirms the hypothesis that these phenomena are in flux.

**Figure 4.10**




*Note.* Displays case frequency of how respondents perceived social cohesion and polarisation changing over time. N = 20.

## 4.2 The effects of polarisation upon social cohesion

With a solid univariate understanding of both concepts, the effects of polarisation as independent variable upon social cohesion as dependent variable will now be presented from a quantitative and qualitative viewpoint.

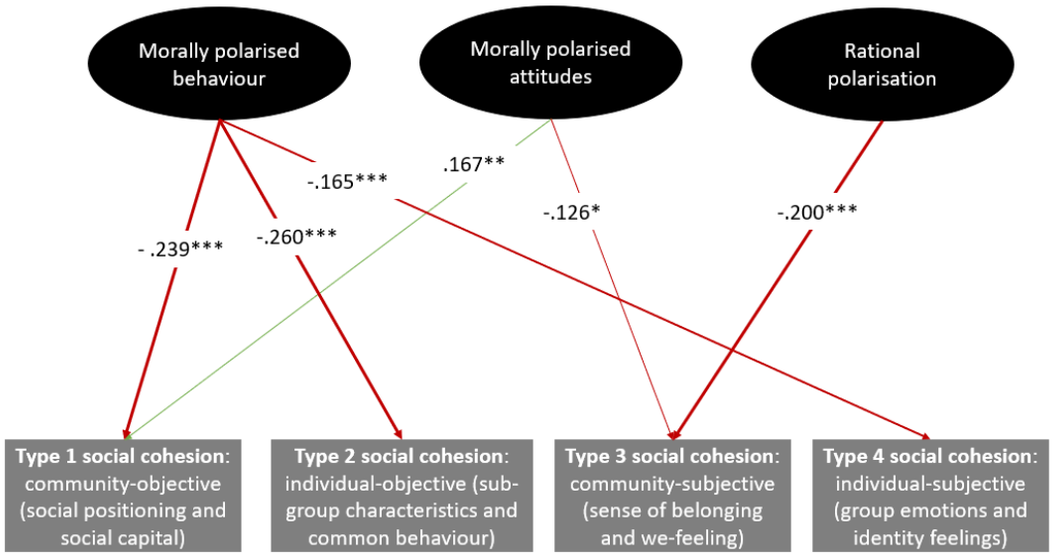
### *4.2.1 The effects of polarisation upon the types of social cohesion*

To estimate whether polarisation has indeed decreased social cohesion and in what way, two multivariate models are presented: one for the theoretical types of cohesion and one for the data-driven components[45]. Figure 4.11 summarizes the effects (measured by standardised regression coefficients) of the first model[46] graphically.

[45] The specific assumptions of the multivariate analysis can be found in Appendix D, the statistical output in Appendix G. Only the assumption of having no outliers is broken.
[46] Overall model fit significant on 0.00-level for Wilk's Lambda, Pillai's trace and Hotelling's trace, see Appendix G.

**Figure 4.11**

*Graphical depiction of effects of polarisation upon the theory-driven types of social cohesion*




*Note.* Standardised regression coefficients, *** = p<.00, ** = p<.01, * = p<.05. N = 265.

In this model, all forms of polarisation affect at least one type of social cohesion. More specifically, the clustering of groups based on rational disagreements (rational polarisation) makes people feel less glued together on the community level. In other words, the more extreme opinions one has, the less one will feel belonging to wider society.

In turn, morally polarised behaviour diminishes how strong people are glued together on the two levels of the objective dimension. That is, a lower engagement with others means that people are also less connected or interrelated in the objective dimension. Furthermore, stronger morally polarised behaviour also causes people to *feel* less glued together on the individual level. This means that being less engaged makes people's identity-feelings to wider society and their own groups lower.

Lastly, the more negative emotions one has towards other groups (morally polarising attitudes), the *higher* one is glued together on the community level through a higher amount of social capital, but the *less* one feels glued together on that same level. This highlights the importance of distinguishing between the two dimensions as done in the theoretical framework: while negative group emotions mean that one's 'objective' social capital and social positioning in society will be *higher*, it also means that one's 'subjective' sense of belonging to society will be *lower*.

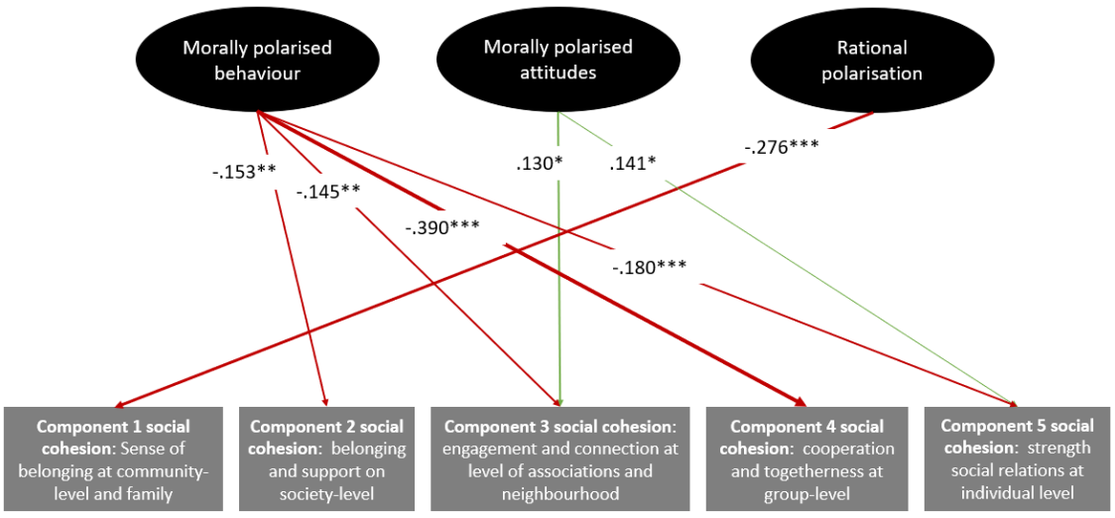
Figure 4.12 shows the effects of the types of polarisation on the data-driven components of social cohesion[47]. Interestingly, this model confirms the general trends observed in the previous one. Firstly, rational polarisation also decreases how people feel belonging at the level of Flanders, their place of residence and their family (although there is no such effect at the Belgian level). In other words, the more extreme one's opinions, the less this type of belonging will be.

Secondly, the stronger morally polarised behaviour in this sample, the lower all remaining Components of social cohesion, with the effect on the objective ones being strongest (Components 3, 4, 5). In other words, the *less* people want to discuss with others, the *lower* a) they feel belonging to and support from the Belgian level, b) their engagement in associations and their neighbourhood, c) their cooperation in sub-groups and d) their strength of individual social relations.

Lastly, the higher one's negative feelings towards out-groups (morally polarised attitudes), the *more* people are glued together at the individual level and the *higher* their engagement and connection in associations or one's neighbourhood. This too confirms the earlier model in which morally polarised attitudes increase social capital. Negative emotions towards out-groups make objective social cohesion at the individual level stronger.

**Figure 4.12**

*Graphical depiction of the effects of polarisation upon the data-driven components of social cohesion*




*Note.* Standardised regression coefficients, *** = p<.00, ** = p<.01, * = p<.05. N = 265.

[47] Overall model fit significant on 0.00-level for Wilk's Lambda, Pillai's trace and Hotelling's trace, see Appendix G.

All in all, only rational polarisation and the unpreparedness to discuss with others (morally polarised behaviour) *decrease* social cohesion as expected in H2. Unexpectedly, morally polarised attitudes understood as negative group emotions *increase* social cohesion, albeit always in the objective dimension only.

Further, the effects of polarisation on both the Components and Types of social cohesion are *not* categorised according to the two dimensions as H3 outlined; rather the opposite seems to be true. How people feel they are glued together through their sense of belonging or identity-feelings (i.e. subjective social cohesion at community level) is mostly decreased by rational polarisation. Furthermore, the way in which people are glued together based on social relations or common behaviour (i.e. objective social cohesion at community level), is *positively* affected by negative attitudes of opposing groups based on group identities and corresponding emotions (i.e. morally polarised attitudes).

Overall, these models therefore show that a significant relationship between social cohesion and polarisation indeed exists but that this is a complex relationship challenging the archetypical expectations on the subject.

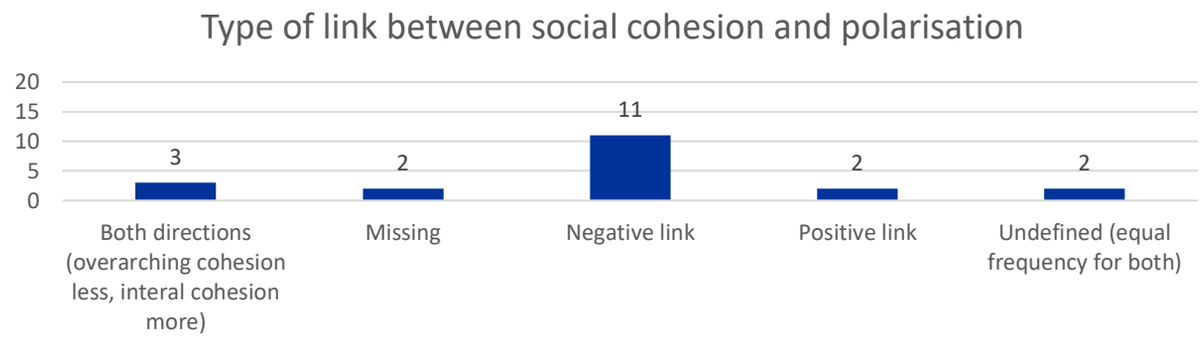
### *4.2.2 Interpretation from respondents*

Can these findings also be confirmed by what people perceive thereof? As it turns out, 18 respondents indeed felt that polarisation could be linked to social cohesion (see Figure 4.13). From them, 11 saw this link to be negative, although not necessarily going from polarisation to social cohesion as measured above. Interestingly, 3 respondents stated this link to be two-sided: they felt that polarisation had increased in-group social cohesion between sub-groups in society, while at the same time decreasing overall cohesion for society at large. As one respondent put it nicely:

> "On the one hand there will be *less* cohesion since many people are starting to step up for themselves (…), for example groups like BLM or LGBT-groups and so on (…) because they start to fight and other people disagree and so on. But *within* those groups, I would think there to be *more* cohesion" (R14).

The perceived increase of cohesion in these smaller groups therefore confirms the finding of the models above that negative group emotions might indeed increase social cohesion at the more individual level, while decreasing overall cohesion at the same time. Further, the general negative link understood by most of the other respondents is also confirmed.

**Figure 4.13**




*Note*. Displays case frequency of how respondents experience of social cohesion and polarisation to be linked. N = 20.

# 5 Discussion

The Flemish society has become increasingly divided over the latest years, mirroring broader global trends on increasing polarisation and division in societies. Considering the disuniting effects of the latter, this paper therefore expected that the social cohesiveness of Flanders has diminished significantly. It turns out that respondents share this worry: they felt an increasing concern about the decrease of social cohesion[48].

> "[…] It really strikes me [silence]. It's weird right? I don't have a clear – I don't have one coherent feeling anymore [about society]. And as a result, when I focus too much on this, I sometimes regret having made children" (R7).

Can it therefore be said that this increase of polarisation has weakened social cohesion? To shed more light on this important yet under-researched question, this paper has explored the empirical effects of polarisation upon social cohesion in the specific case of the province of Antwerp. This paper has adopted a novel theoretical framework, and therefore takes an important first exploratory step in understanding the interplay of these concepts.

Such a framework is crucial: as stated in the theory already, social cohesion and polarisation are multi-dimensional concepts. To meaningfully operationalise these phenomena, this paper has therefore created multiple types within an objective dimension (looking from a distance at observable phenomena in society) and a subjective dimension (looking from within people's viewpoints at the more complex elements of feelings, attitudes and perceptions). The analysis then has confirmed that this framework can be operationalised, showing that social cohesion and polarisation empirically differ within those dimensions.

Based on the results, a renewed framework of social cohesion can be identified. In one's close circle on the individual level, togetherness is based on one's social relations and how one is positioned in one's network, as stated by the objective dimension. This was confirmed by the fact that almost all respondents viewed social cohesion in their personal lives to be about objective elements at the individual level[49]. On the community level, by contrast, it was found that subjective elements like sense of belonging, feeling at home, or feeling a certain common identity define one's connection to society. In other words, social cohesion in smaller groups on the individual level mainly rests upon strong and personal relations (objective dimension), while social cohesion at the level of the broader community needs subjective elements like sense of belonging and identity to keep the bigger group

[48] Interestingly, this was only seen at the societal level.
[49] Even though social cohesion was mostly seen as something subjective in general.

together. This result resembles the theory of imagined communities in which is stated that societies (being on the community level) stick together due to a common belief in a shared identity (Anderson, 1983).

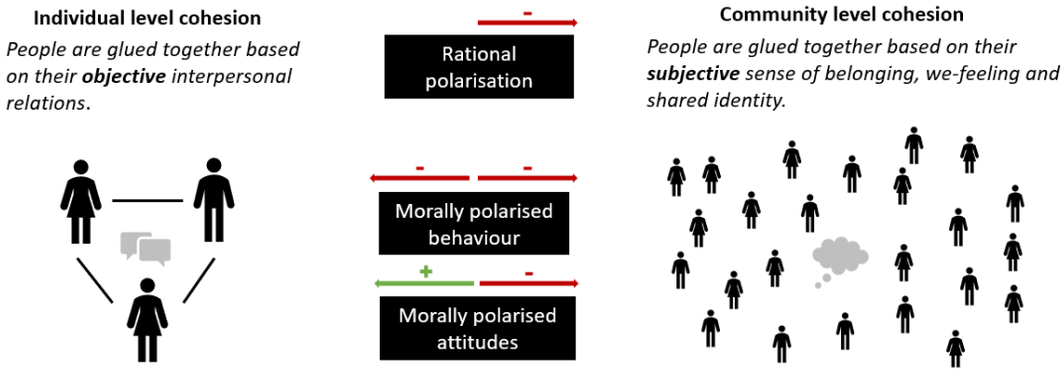
This paper has then dissected the effects of polarisation on this framework of social cohesion. As can be seen in Figure 5.1 below, the study shows an interesting pattern. First, more extreme standpoints (rational polarisation) will decrease one's attachment to broader society on the community level but leave individual cohesion unaffected. This might be explained by the phenomenon of social sorting: people tend to engage more with people with similar standpoints in their intimate relations (Mason, 2015), limiting the effect of extreme standpoints to the feeling of attachment to broader society only.

Second, one's unpreparedness to discuss with others (morally polarised behaviour) is most harmful towards social cohesion in general as it decreases both one's emotional connection to broader society *and* the strength of one's individual connections. Possibly, morally polarised behaviour leads to social isolation, which then explains the diminished attachment on both levels of cohesion.

Thirdly and most interestingly are the effects of negative out-group attitudes (morally polarised attitudes). As it turns out, these attitudes *diminish* one's ties to broader society but *strengthen* one's individual cohesion. These attitudes therefore follow the theory of positive in-group versus negative out-group dynamics (Tappin & McKay, 2019): negative feelings towards others in society increases in-group cohesion but decreases one's emotional connections to everyone else.

**Figure 5.1**

*Graphical depiction of effects polarisation upon social cohesion*




As a result, the relation between polarisation and social cohesion differs substantially from the initial theoretical expectations. Polarisation affects individual cohesion as a double-edged sword: on the one

hand it decreases when people's engagement to discuss with others is limited but increases with negative out-group feelings. On the other hand, community cohesion is consistently diminished by polarisation in the form of extreme standpoints, limited engagement to discuss and negative out-group attitudes.

These findings bear some implications. In general, this paper has shown the importance of adopting emotions and perceptions in social research. More specifically, it was found that to understand what makes a society glued together, one firstly has to distinguish between individual and community cohesion: individual cohesion consists mostly of objective interpersonal relations, while community cohesion is built on the basis of subjective elements like sense of belonging, we-feeling or shared identity. Secondly, polarisation most strongly threatens the community level of social cohesion. This might explain why respondents indicated that their individual social cohesion has not decreased significantly. Thirdly, limited engagement with others has the strongest individual effects on both levels of cohesion, making it a priority when protecting cohesion at large. Lastly, empirical proof for the double-edged sword of in-group and out-group dynamics upon social cohesion was established. As experienced by respondents as well, this type of polarisation divides overall cohesion by strengthening the togetherness of individual groups.

Acknowledging the fact that these exploratory results are based on a sample limited in representative scope and might be biased by the researcher's personal worldviews, this paper serves as a starting point for future research in the field. Studies in this strand of research should scrutinise the specific effects found in this paper on a wider geographical scale, theoretically enhance the proposed framework of social cohesion and polarisation individually or look more specifically at why people are getting emotionally and rationally polarised in the first place (although going beyond the scope of this paper, the interviews indicated the high importance of social media in that regard). For such studies, this paper has hoped to show the importance of incorporating emotions and perceptions, given their crucial relevance in understanding society's togetherness. After all, in today's divisive times, research of this kind is highly important.

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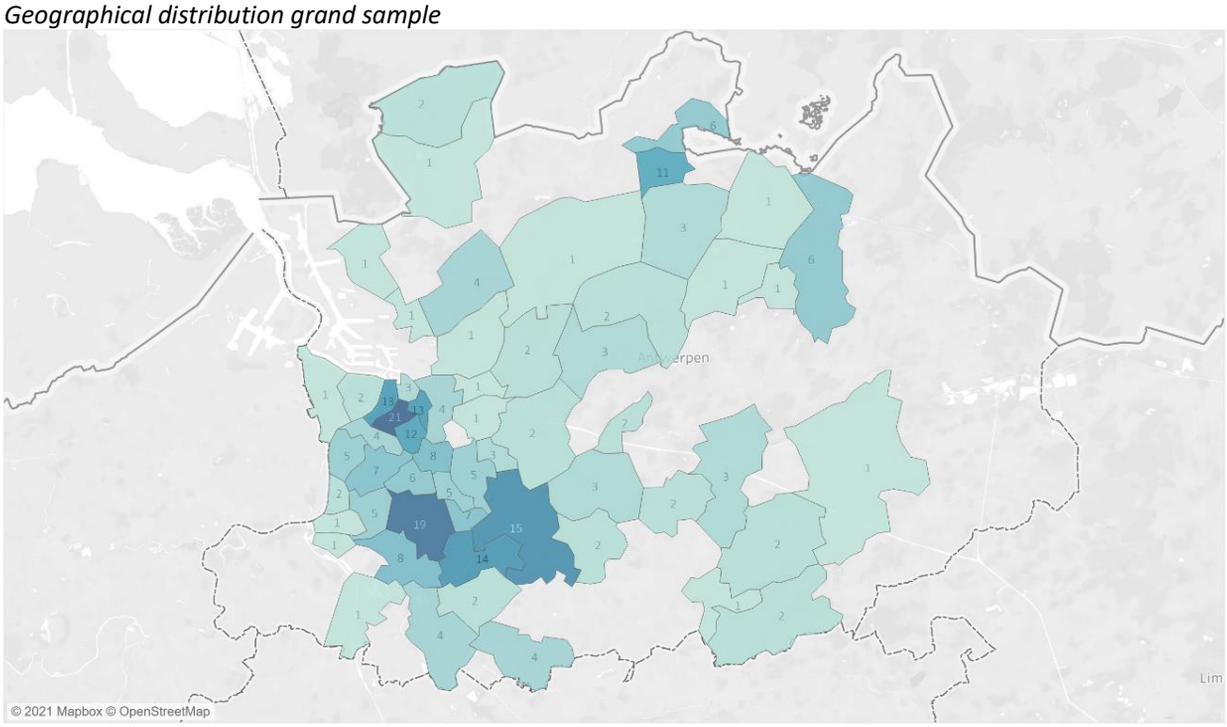
# 7 Appendices

## Appendix A - Statistical overview of the samples

### A.1 Grand sample

**Figure 7.1**
*Geographical distribution grand sample*



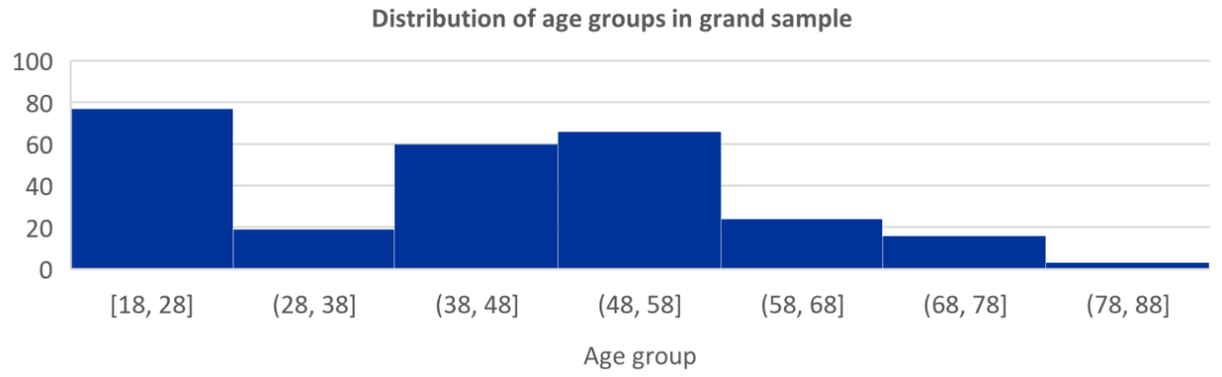

*Note.* N = 265.

**Table 7.1**
*Descriptives grand sample*

| **Continuous variables** | **N** | **Mean** | **Minimum** | **Maximum** |
|---|---|---|---|---|
| *Age (Q2.2)* | 265 | 43.13 | 18 | 82 |
| **Categorical variables** | **N** | **Categories** | **Frequency** | **%** |
| *Gender (Q2.1)* | 265 | Male | 115 | 43.3% |
| | | Female | 150 | 56.6% |
| *Nationality (Q2.3)* | 265 | Belgium | 261 | 98.5% |
| | | Italy | 1 | 0.4% |
| | | Netherlands | 2 | 0.8% |
| | | Spain | 1 | 0.4% |
| *Residence (Q2.6)* | 265 | City | 113 | 42.6% |
| | | Municipality | 152 | 57.4% |
| *Income level (Q3.6)* | 261 | Very difficult to cope | 5 | 1.9% |
| | | Difficult to cope | 13 | 4.9% |
| | | Coping | 103 | 38.9% |
| | | Coping comfortably | 140 | 52.8% |
| *Educational level (Q3.7)* | 264 | Elementary school | 1 | 0.4% |
| | | High school | 52 | 19.6% |
| | | Bachelor | 100 | 37.7% |
| | | Master | 106 | 40% |
| | | PhD | 5 | 1.9% |
| *Employment status (Q3.8)* | 263 | Unemployed | 9 | 3.4% |
| | | Retired | 31 | 11.7% |

| | | | |
|---|---|---|---|
| | Student | 54 | 20.4% |
| | Part-time working | 40 | 15.1% |
| | Full-time working | 123 | 46.4% |
| | Sick leave | 6 | 0.8% |

**Figure 7.2**

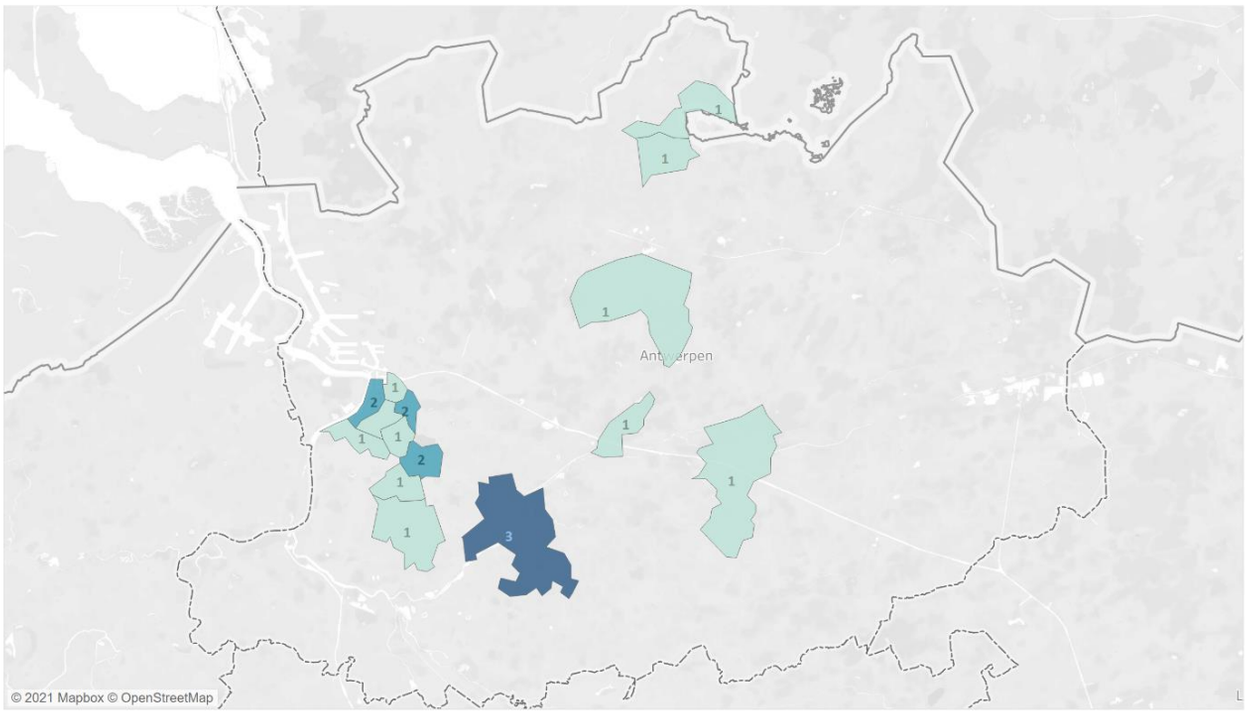



*Note.* N = 265.

## A.2 Interviewees sample

**Figure 7.3**

*Geographical distribution interview sample*




*Note.* N = 20

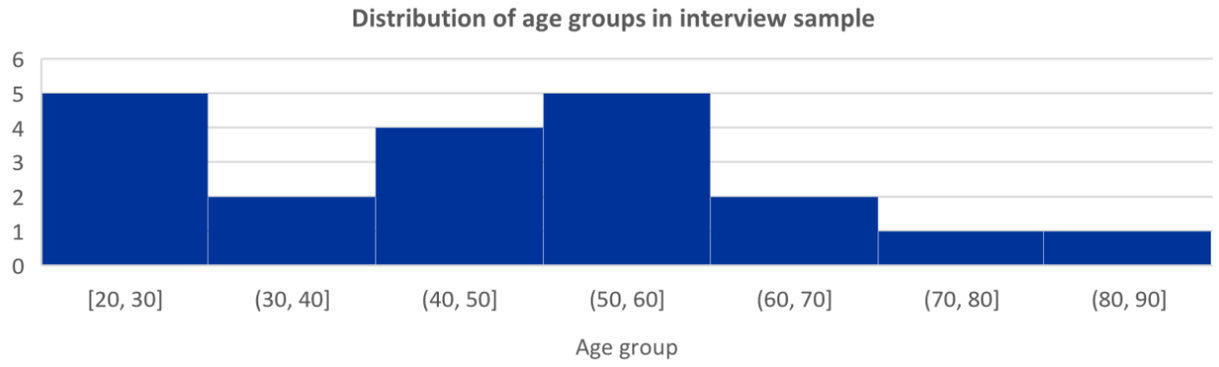
**Table 7.2**

*Description interviewees sample*

| **Continuous variables** | **N** | **Mean** | **Minimum** | **Maximum** |
|---|---|---|---|---|
| *Age (Q2.2)* | 20 | 43.13 | 20 | 81 |
| **Categorical variables** | **N** | **Categories** | **Frequency** | |
| *Gender (Q2.1)* | 20 | Male | 10 | 50% |
| | | Female | 10 | 50% |

| | | | | |
|---|---|---|---|---|
| *Nationality (Q2.3)* | 20 | Belgium | 19 | 95% |
| | | Netherlands | 1 | 5% |
| *Residence (Q2.6)* | 20 | City | 14 | 70% |
| | | Municipality | 6 | 30% |
| *Income level (Q3.6)* | 20 | Very difficult to cope | 0 | 0% |
| | | Difficult to cope | 0 | 0% |
| | | Coping | 9 | 45% |
| | | Coping comfortably | 11 | 55% |
| *Educational level (Q3.7)* | 20 | Elementary school | 0 | 0% |
| | | High school | 3 | 15% |
| | | Bachelor | 8 | 40% |
| | | Master | 9 | 45% |
| | | PhD | 0 | 0% |
| *Employment status (Q3.8)* | 20 | Unemployed | 0 | 0% |
| | | Retired | 3 | 15% |
| | | Student | 4 | 20% |
| | | Part-time working | 3 | 15% |
| | | Full-time working | 9 | 45% |
| | | Sick leave | 0 | 0% |

**Figure 7.4**




*Note.* N= 20.

# Appendix B - Sampling method interview sample

To select the 20 interviewees from the grand sample, first 10 respondents were chosen at random, but controlled for age by selecting representatively per age-group.

The other 10 respondents were chosen on the basis of a) a social cohesion index based on the sum of 13 variables stemming from the theoretical types; b) a polarisation index based on the variables indicating their preferences for the political statements in the survey. More specifically, these indexes were built in the following way:

- Social cohesion index: sum of variables Q3.1, Q3.2, Q3.3_1, Q3.3_2, Q3.10_1, Q5.2_3, Q5.2_4, Q3.5_2, Q5.4_1, Q5.6_1, Q5.6_2, Q4.1_1, Q6.4. The following respondents were selected: 2 with very high scores, 1 with medium scores, 2 with very low scores.
- Polarisation index: based on variables Q7.7_1, Q7.7_2, Q7.7_3, Q7.7_4, Q7.7_5, Q7.7_6, Q7.7_7 for which the following syntax was used: (COUNT IF 0 + COUNT IF 10) – COUNT IF 5. The following respondents were selected: 2 with negative scores (indicating very low polarisation), 1 with medium scores, 2 with very high scores.

# Appendix C - Creation new variables social cohesion and polarisation

## C.1 Social cohesion

### C.1.1 Theory driven approach

Here, the variables (for questionnaire and overview of variables, see Appendix G) indicating to the four different theoretical types were used to check their internal reliability based on the Cronbach's alpha test. Before doing this test, the variables were prepared by recoding the ordinal variables to a scale of 1 to 10 to bring them on the same scale as the interval variables (see syntax in Appendix G). Also, the variables measuring people's attitudes in their city or municipality were combined because they were extracted from the survey as two distinct variables grouped by whether they live in a city or municipality.

Below, tables 7.3 to 7.6 indicate the descriptives of the variables used per type. Table 7.7 gives an overview of the results of the reliability analyses.

**Table 7.3**
*Descriptives variables Type 1*

| | N | Range | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| *Q3.1R** | 265 | 7.50 | 2.50 | 10.00 | 4.3585 | 1.39797 |
| *Q3.2R** | 265 | 7.50 | 2.50 | 10.00 | 6.5943 | 2.36982 |
| *Q3.3_1* | 265 | 6.00 | 4.00 | 10.00 | 8.2189 | 1.13369 |
| *Q3.3_2* | 265 | 8.00 | 1.00 | 9.00 | 5.1887 | 1.53811 |
| *Q3.4_1* | 265 | 9.00 | 1.00 | 10.00 | 6.5887 | 1.93078 |
| *Q3.5_1* | 265 | 9.00 | 1.00 | 10.00 | 8.1472 | 1.61346 |
| *Q3.5_2* | 265 | 8.00 | 1.00 | 9.00 | 4.9660 | 1.91158 |
| *Q3.6R** | 261 | 7.50 | 2.50 | 10.00 | 8.6207 | 1.70232 |
| *Q3.7R** | 259 | 10.00 | .00 | 10.00 | 7.4903 | 2.79723 |
| *Q3.8R** | 263 | 7.50 | 2.50 | 10.00 | 7.5760 | 2.52732 |
| *Q3.9R** | 265 | 10.00 | .00 | 10.00 | 6.3396 | 2.16457 |
| *Q3.10_4* | 265 | 9.00 | 1.00 | 10.00 | 6.0264 | 2.12918 |
| *Q3.10_5* | 265 | 9.00 | 1.00 | 10.00 | 5.6415 | 2.23178 |
| *Q3.10_6* | 265 | 9.00 | 1.00 | 10.00 | 4.2075 | 2.39443 |

*Note.* N = 253.

*These interval-variables have been recoded to a scale on 10 to give them equal weight as the other metric variables

**Table 7.4**
*Descriptives variables Type 2*

| | N | Range | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| *Q4.1_1* | 265 | 27.00 | .00 | 27.00 | 2.5811 | 2.91970 |
| *Q4.1_2* | 265 | 30.00 | .00 | 30.00 | 11.2528 | 8.09135 |
| *Q4.2_1* | 211 | 9.00 | 1.00 | 10.00 | 5.0427 | 2.83231 |
| *Q4.3_1* | 211 | 9.00 | 1.00 | 10.00 | 5.7251 | 2.70630 |
| *Q4.4_1* | 265 | 9.00 | 1.00 | 10.00 | 3.1849 | 2.40260 |
| *Q4.5_1* | 265 | 9.00 | 1.00 | 10.00 | 5.2981 | 2.46909 |
| *Q4.5_2* | 265 | 9.00 | 1.00 | 10.00 | 4.3358 | 2.63794 |
| *Q4.5_3* | 265 | 9.00 | 1.00 | 10.00 | 5.0226 | 2.49231 |
| *Q4.5_4* | 265 | 9.00 | 1.00 | 10.00 | 4.8000 | 2.54386 |
| *Q4.6_14* | 265 | 8.00 | 1.00 | 9.00 | 5.3283 | 1.83860 |
| *Q4.6_2* | 265 | 9.00 | 1.00 | 10.00 | 7.6000 | 1.62089 |
| *Q4.6_3* | 265 | 9.00 | 1.00 | 10.00 | 4.8151 | 1.78794 |
| *Q4.6_5* | 265 | 9.00 | 1.00 | 10.00 | 4.8792 | 1.70798 |

*Note.* N = 211.

**Table 7.5**
*Descriptives variables Type 3*

| | N | Range | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| *Q5.1_1* | 265 | 10.00 | .00 | 10.00 | 5.6264 | 2.38208 |
| *Q5.1_2* | 265 | 10.00 | .00 | 10.00 | 5.2113 | 2.71930 |
| *Q5.1_34* | 265 | 10.00 | .00 | 10.00 | 6.0528 | 2.69347 |
| *Q5.2_1* | 265 | 10.00 | .00 | 10.00 | 5.5547 | 2.38163 |
| *Q5.2_2* | 265 | 10.00 | .00 | 10.00 | 5.2453 | 2.61338 |
| *Q5.2_34* | 265 | 10.00 | .00 | 10.00 | 5.9585 | 2.61301 |
| *Q5.2_5* | 265 | 10.00 | .00 | 10.00 | 8.5623 | 1.90018 |
| *Q5.3_1* | 265 | 10.00 | .00 | 10.00 | 7.5094 | 2.04331 |
| *Q5.3_2* | 265 | 10.00 | .00 | 10.00 | 7.1962 | 2.43848 |
| *Q5.3_34* | 265 | 9.00 | 1.00 | 10.00 | 7.6189 | 2.15542 |
| *Q5.3_5* | 265 | 10.00 | .00 | 10.00 | 8.8377 | 1.84229 |
| *Q5.4_1* | 265 | 9.00 | 1.00 | 10.00 | 6.4868 | 1.67897 |
| *Q5.6_1* | 265 | 10.00 | .00 | 10.00 | 6.6679 | 1.95477 |
| *Q5.6_2* | 265 | 9.00 | .00 | 9.00 | 4.9736 | 2.08241 |

*Note.* N = 265.

**Table 7.6**
*Descriptives variables Type 4*

| | N | Range | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| *Q6.1_1* | 263 | 10.00 | .00 | 10.00 | 7.1293 | 1.51532 |
| *Q6.1_2* | 265 | 9.00 | 1.00 | 10.00 | 6.3170 | 1.62296 |
| *Q6.3_1* | 261 | 9.00 | 1.00 | 10.00 | 6.6667 | 2.31882 |
| *Q6.3_3* | 261 | 9.00 | 1.00 | 10.00 | 5.9387 | 2.58919 |
| *Q6.3_24* | 261 | 9.00 | 1.00 | 10.00 | 6.5479 | 2.62873 |
| *Q6.4_1* | 265 | 9.00 | 1.00 | 10.00 | 5.6491 | 2.31952 |

*Note.* N = 259.

**Table 7.7**
*Overview reliability analyses theoretical types social cohesion*

| | Type 1 | Type 2 | Type 3 | Type 4 | Grand index |
|---|---|---|---|---|---|
| *Cronbach's alpha* | .563 | .619 | .871 | .559 | .660 |
| *N of items* | 14 | 13 | 14 | 6 | 4 |
| *N* | 253 | 211 | 265 | 259 | 265 |

The indexes were then created by summing their underlying variables and then rescaling them to a range of 0 to 1 using the formula (x-max)/(max-min). Figures 7.5 to 7.9 show their histograms.

**Figure 7.5**

*Histogram of Type 1*

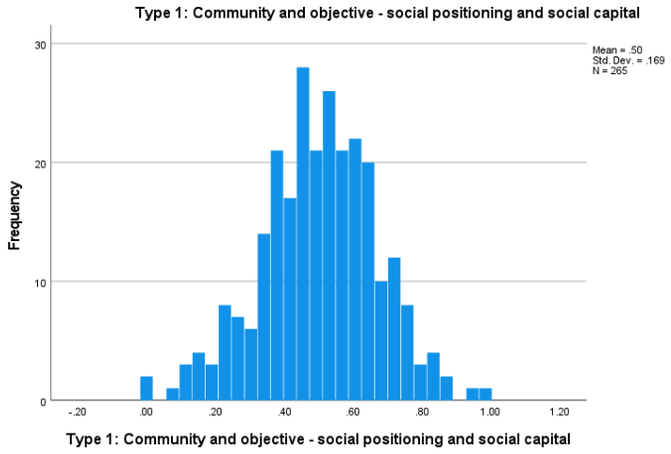



**Figure 7.6**

*Histogram of Type 2*

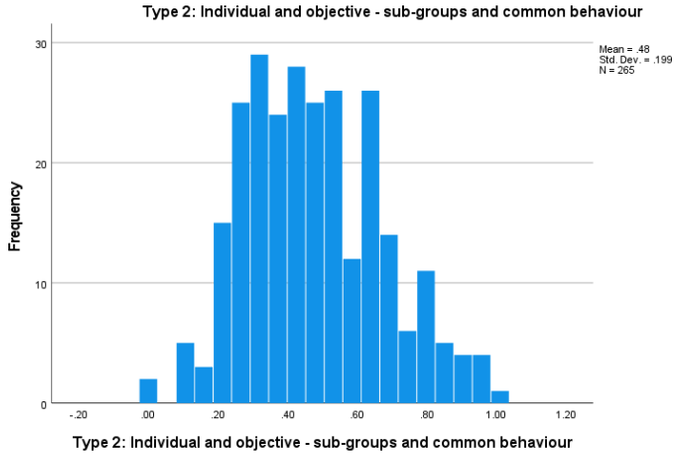



**Figure 7.7**

*Histogram of Type 3*

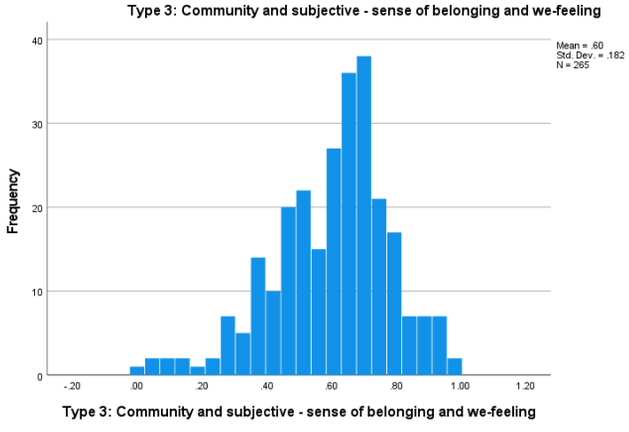


**Figure 7.8**

*Histogram of Type 4*

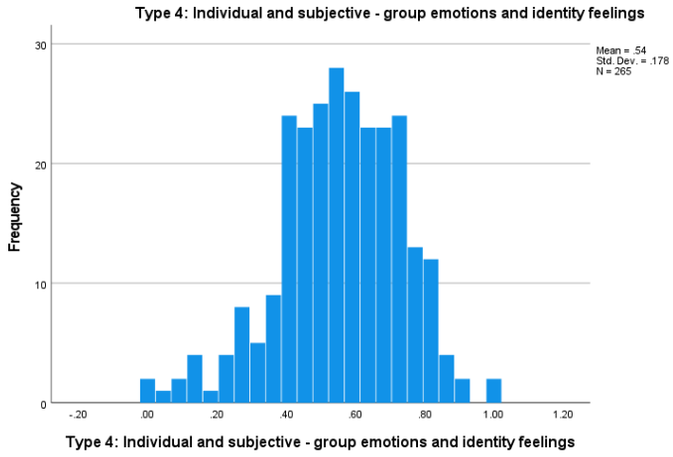
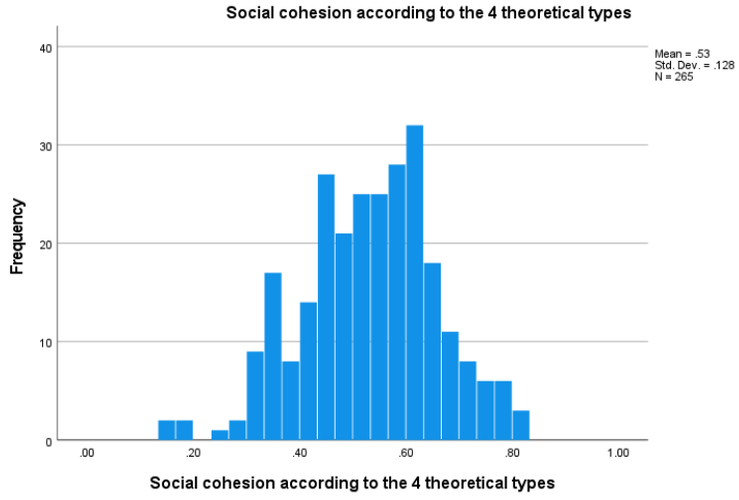



**Figure 7.9**

*Histogram of grand index of types*




### C.1.2 Data-driven approach

Secondly, all the variables used for the four types were inserted in a two-step principal component analysis using a VARIMAX rotation using the correlation-method.

In the first step, this resulted in following output from table 7.8 to 7.10. Table 7.8 shows that the KMO is close to 1, indicating that the underlying variance is indeed diffused enough to suppose that underlying factors exist. The Barlett's Test being significant indicates that the variables are related. Based on the explained variance in Table 7.9 and on the 'elbow' in the Scree Plot in Figure 7.10, it was decided to extract 6 components.

**Table 7.8**

*Barlett's KMO-test*

| | | |
|---|---|---|
| **Kaiser-Meyer-Olkin Measure of Sampling Adequacy.** | | .750 |
| **Bartlett's Test of Sphericity** | Approx. Chi-Square | 5180.081 |
| | df | 1081 |
| | Sig. | .000 |

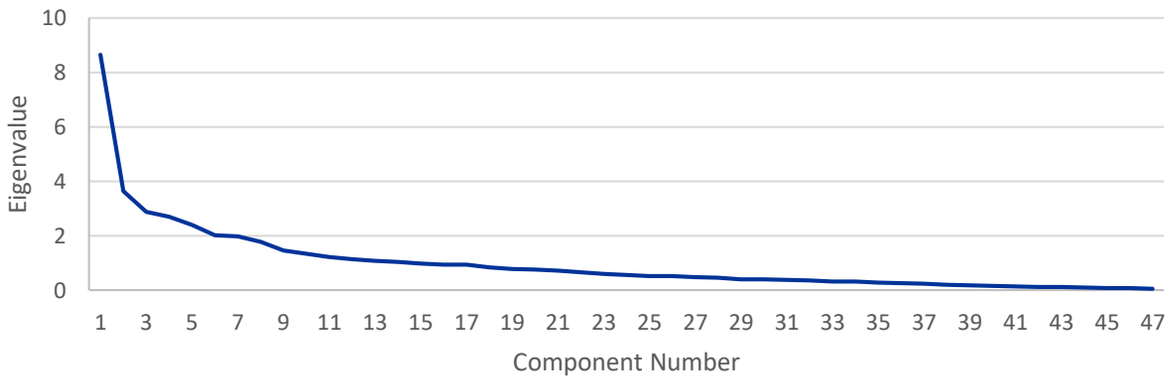
*Note.* N = 265.

**Table 7.9**
*Total variance explained (Eigenvalue >1)*

| | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| *Component* | **Total** | **% of Variance** | **Cumulative %** | **Total** | **% of Variance** | **Cumulative %** |
| *1* | 8.649 | 18.403 | 18.403 | 8.649 | 18.403 | 18.403 |
| *2* | 3.625 | 7.713 | 26.117 | 3.625 | 7.713 | 26.117 |
| *3* | 2.881 | 6.130 | 32.247 | 2.881 | 6.130 | 32.247 |
| *4* | 2.686 | 5.716 | 37.962 | 2.686 | 5.716 | 37.962 |
| *5* | 2.400 | 5.106 | 43.068 | 2.400 | 5.106 | 43.068 |
| *6* | 2.008 | 4.272 | 47.340 | 2.008 | 4.272 | 47.340 |
| *7* | 1.973 | 4.198 | 51.538 | 1.973 | 4.198 | 51.538 |
| *8* | 1.780 | 3.787 | 55.325 | 1.780 | 3.787 | 55.325 |
| *9* | 1.447 | 3.079 | 58.404 | 1.447 | 3.079 | 58.404 |
| *10* | 1.343 | 2.857 | 61.261 | 1.343 | 2.857 | 61.261 |
| *11* | 1.213 | 2.580 | 63.841 | 1.213 | 2.580 | 63.841 |
| *12* | 1.134 | 2.413 | 66.254 | 1.134 | 2.413 | 66.254 |
| *13* | 1.077 | 2.291 | 68.545 | 1.077 | 2.291 | 68.545 |
| *14* | 1.040 | 2.213 | 70.758 | 1.040 | 2.213 | 70.758 |

*Note.* Extraction Method: Principal Component Analysis. N = 265.

**Figure 7.10**
*Scree plot principal component analysis social cohesion*




In a second step, the principal component analysis was repeated by forcing 6 components to be extracted. This resulted in the following output. Based on the factor scores in table 7.10, the variables are then assigned to the 6 components.

**Table 7.10**
*Rotated component matrix social cohesion*

| | **1** | **2** | **3** | **4** | **5** | **6** |
|---|---|---|---|---|---|---|
| *Q3.1R* | 0.145 | 0.042 | 0.123 | 0.190 | 0.150 | 0.107 |
| *Q4.5_4* | 0.106 | 0.130 | 0.001 | 0.868 | 0.087 | -0.035 |
| *Q6.4_1* | 0.084 | 0.077 | 0.172 | 0.288 | 0.084 | -0.171 |
| *Q4.5_1* | 0.025 | -0.123 | 0.030 | 0.608 | 0.086 | 0.265 |
| *Q4.5_3* | 0.010 | 0.129 | 0.070 | 0.837 | 0.063 | 0.022 |
| *Q4.5_2* | -0.074 | -0.080 | 0.053 | 0.655 | 0.120 | -0.159 |
| *Q3.2R* | -0.120 | 0.073 | 0.347 | 0.304 | -0.037 | 0.202 |
| *Q3.3_1* | 0.112 | -0.117 | -0.106 | 0.059 | 0.474 | 0.261 |
| *Q3.10_4* | 0.095 | 0.159 | 0.107 | 0.100 | 0.509 | -0.139 |
| *Q3.4_1* | 0.089 | -0.092 | 0.268 | 0.088 | 0.440 | 0.173 |
| *Q3.3_2* | 0.087 | 0.147 | -0.224 | 0.152 | 0.543 | -0.270 |
| *Q3.10_5* | -0.034 | 0.080 | 0.158 | 0.038 | 0.636 | 0.047 |

| | | | | | | |
|---|---|---|---|---|---|---|
| *Q3.10_6* | -0.200 | 0.154 | 0.008 | 0.178 | 0.530 | -0.110 |
| *Q4.4_1* | 0.146 | 0.166 | 0.626 | 0.176 | 0.205 | -0.190 |
| *Q4.2_1* | 0.075 | 0.054 | 0.804 | -0.007 | 0.137 | -0.089 |
| *Q4.3_1* | 0.074 | 0.118 | 0.775 | 0.006 | 0.132 | -0.020 |
| *Q4.1_2* | -0.093 | -0.006 | 0.509 | 0.257 | -0.279 | 0.212 |
| *Q5.4_1* | 0.309 | 0.468 | -0.128 | 0.049 | 0.107 | 0.272 |
| *Q6.1_1* | 0.303 | 0.432 | 0.071 | -0.069 | 0.263 | 0.216 |
| *Q5.3_1* | 0.300 | 0.691 | 0.196 | -0.035 | 0.011 | 0.253 |
| *Q5.1_1* | 0.298 | 0.681 | 0.174 | 0.042 | -0.046 | -0.177 |
| *Q5.2_1* | 0.152 | 0.773 | 0.178 | -0.017 | -0.132 | -0.087 |
| *Q4.6_5* | 0.137 | 0.690 | -0.023 | 0.139 | 0.131 | -0.155 |
| *Q6.3_1* | 0.125 | 0.739 | 0.179 | -0.055 | -0.086 | -0.070 |
| *Q5.6_1* | 0.118 | 0.499 | -0.140 | 0.135 | 0.104 | 0.110 |
| *Q6.1_2* | 0.075 | 0.507 | 0.034 | 0.004 | 0.232 | 0.141 |
| *Q3.5_2* | -0.101 | 0.541 | -0.016 | 0.009 | 0.096 | 0.028 |
| *Q5.2_2* | 0.817 | 0.119 | -0.073 | -0.057 | -0.029 | -0.112 |
| *Q5.1_2* | 0.813 | 0.031 | -0.100 | -0.029 | 0.019 | -0.204 |
| *Q5.1_34* | 0.774 | 0.130 | 0.205 | 0.025 | 0.014 | 0.059 |
| *Q6.3_3* | 0.772 | 0.014 | -0.045 | -0.031 | -0.025 | -0.143 |
| *Q5.3_2* | 0.722 | 0.159 | -0.029 | -0.062 | 0.098 | 0.201 |
| *Q5.2_34* | 0.715 | 0.170 | 0.249 | 0.110 | -0.058 | 0.126 |
| *Q6.3_24* | 0.695 | 0.060 | 0.363 | 0.046 | -0.056 | 0.109 |
| *Q5.3_34* | 0.689 | 0.160 | 0.202 | 0.019 | 0.000 | 0.280 |
| *Q4.6_3* | 0.635 | 0.217 | -0.174 | 0.092 | 0.128 | -0.121 |
| *Q4.6_14* | 0.547 | 0.182 | 0.017 | 0.171 | 0.091 | 0.057 |
| *Q5.2_5* | 0.506 | -0.025 | 0.000 | -0.110 | 0.332 | 0.398 |
| *Q5.3_5* | 0.505 | 0.044 | 0.026 | -0.161 | 0.360 | 0.476 |
| *Q5.6_2* | 0.425 | 0.300 | -0.258 | 0.057 | 0.106 | -0.083 |
| *Q4.6_2* | 0.394 | 0.148 | 0.038 | 0.014 | 0.347 | 0.212 |
| *Q4.1_1* | 0.212 | -0.007 | 0.192 | 0.094 | 0.006 | -0.170 |
| *Q3.8R* | 0.079 | 0.172 | -0.303 | 0.254 | -0.049 | 0.483 |
| *Q3.6R* | 0.077 | 0.152 | 0.004 | 0.007 | 0.035 | 0.521 |
| *Q3.5_1* | 0.074 | 0.124 | 0.124 | -0.024 | 0.390 | 0.492 |
| *Q3.9R* | -0.026 | 0.128 | -0.051 | -0.003 | -0.018 | -0.286 |
| *Q3.7R* | -0.161 | 0.020 | -0.107 | -0.008 | -0.173 | 0.531 |

To check whether they are also internally reliable, the Cronbach's alpha for the 6 components was then calculated. The result of this can be found in table 7.11. As can be seen in the lower row, some variables were excluded to increase the value of the Cronbach's alpha to acceptable levels. However, the Cronbach's alpha of Component 6 was deemed unsatisfactory, and was therefore not operationalised. All the other components and the overall index of social cohesion based on the 5 components were summed and then rescaled to [0,1] with the formula (x-max)/(max-min). Figures 7.11 until 7.16 show the histograms of these indices.

**Table 7.11**

*Reliability analysis component social cohesion*

| | **C1** | **C2** | **C3** | **C4** | **C5** | **C6** | **Grand index** |
|---|---|---|---|---|---|---|---|
| *Cronbach's alpha* | .886 | .841 | .724 | .701 | .629 | .444 | .522 |
| *N of items* | 15 | 10 | 4 | 6 | 6 | 4 | 5 |
| *N* | 261 | 259 | 211 | 265 | 253 | 253 | 265 |
| *Excluded variables* | / | / | Q4.1_2 | / | / | Q3.9R | / |

*Note.* N = 265.

**Figure 7.11**

*Histogram Component 1*

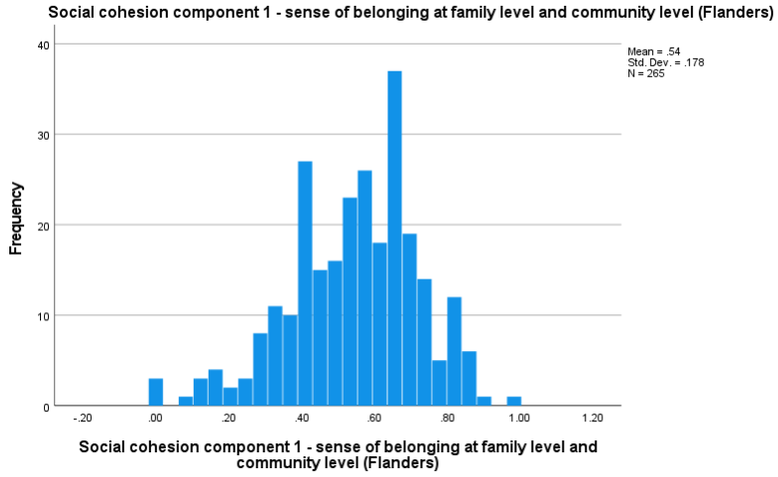



**Figure 7.12**

*Histogram Component 2*

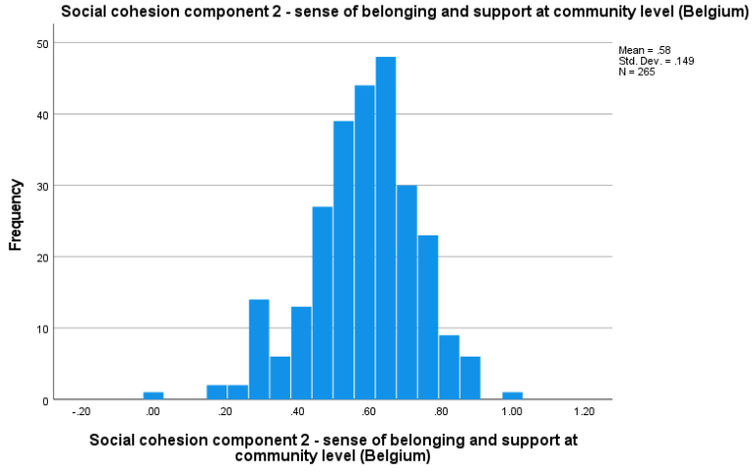



**Figure 7.13**

*Histogram Component 3*

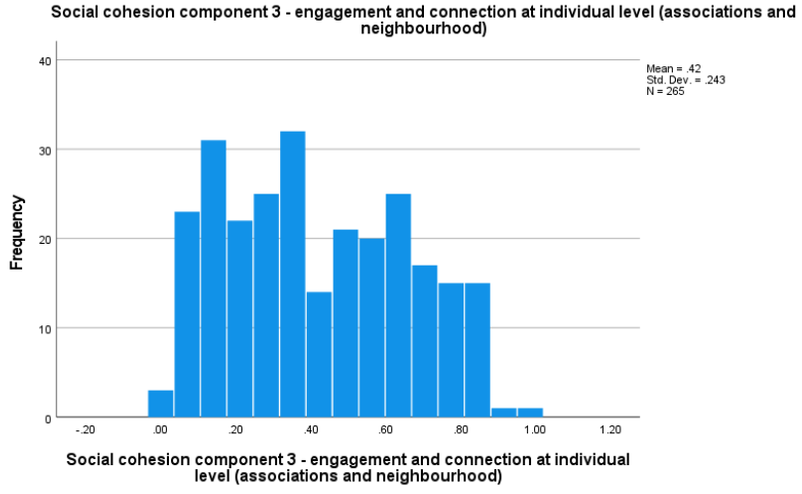


**Figure 7.14**

*Histogram Component 4*

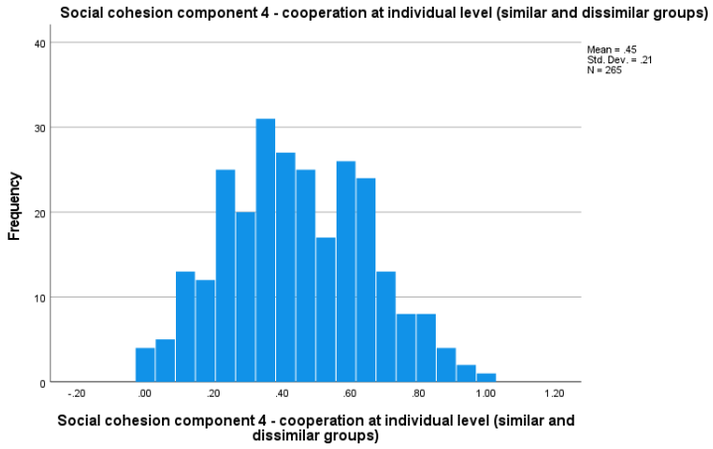



**Figure 7.15**

*Histogram Component 5*

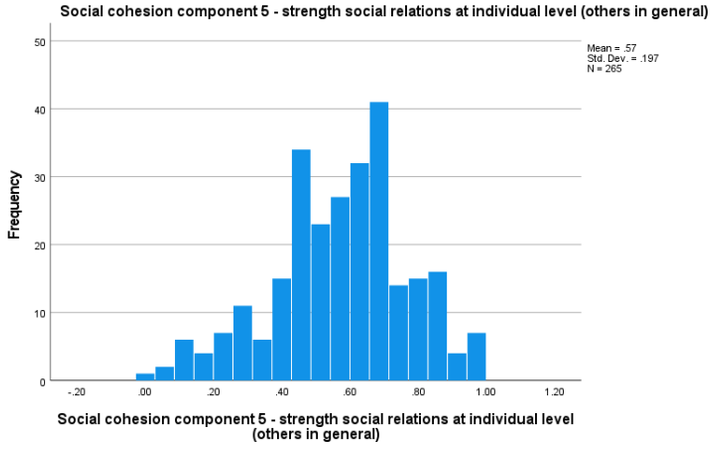
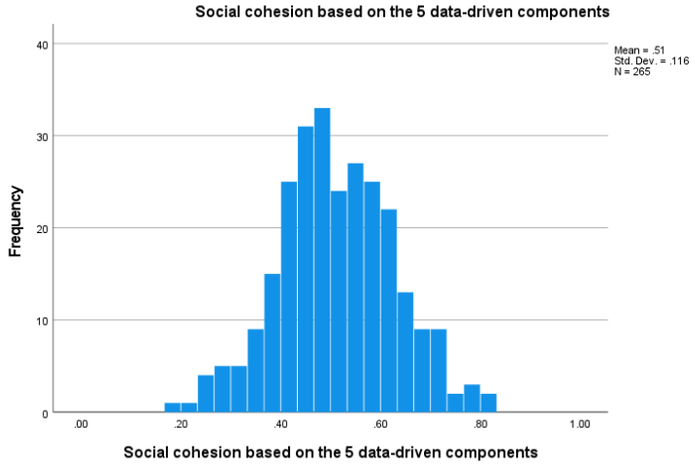



**Figure 7.16**

*Histogram grand index components*



### C.1.3 Correlation between types and components

Table 7.12 shows how the components and types of social cohesion are correlated to one another.

**Table 7.12**
*Correlation matrix between the components ('C') and types ('T') of social cohesion*

| | | C1 | C2 | C3 | C4 | C5 | T1 | T2 | T3 | T4 |
|---|---|---|---|---|---|---|---|---|---|---|
| **C1** | *Pearson Correlation* | 1 | .445** | .152* | .046 | .140* | .159** | .305** | .906** | .720** |
| | *Sig. (2-tailed)* | | .000 | .013 | .461 | .022 | .009 | .000 | .000 | .000 |
| | *N* | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 |
| **C2** | *Pearson Correlation* | .445** | 1 | .199** | .105 | .167** | .286** | .289** | .702** | .670** |
| | *Sig. (2-tailed)* | .000 | | .001 | .087 | .006 | .000 | .000 | .000 | .000 |
| | *N* | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 |
| **C3** | *Pearson Correlation* | .152* | .199** | 1 | .205** | .169** | .218** | .736** | .122* | .209** |
| | *Sig. (2-tailed)* | .013 | .001 | | .001 | .006 | .000 | .000 | .047 | .001 |
| | *N* | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 |
| **C4** | *Pearson Correlation* | .046 | .105 | .205** | 1 | .272** | .264** | .564** | .060 | .198** |
| | *Sig. (2-tailed)* | .461 | .087 | .001 | | .000 | .000 | .000 | .331 | .001 |
| | *N* | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 |
| **C5** | *Pearson Correlation* | .140* | .167** | .169** | .272** | 1 | .734** | .235** | .137* | .179** |
| | *Sig. (2-tailed)* | .022 | .006 | .006 | .000 | | .000 | .000 | .025 | .003 |
| | *N* | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 |
| **T1** | *Pearson Correlation* | .159** | .286** | .218** | .264** | .734** | 1 | .280** | .196** | .213** |
| | *Sig. (2-tailed)* | .009 | .000 | .000 | .000 | .000 | | .000 | .001 | .000 |
| | *N* | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 |
| **T2** | *Pearson Correlation* | .305** | .289** | .736** | .564** | .235** | .280** | 1 | .239** | .308** |
| | *Sig. (2-tailed)* | .000 | .000 | .000 | .000 | .000 | .000 | | .000 | .000 |
| | *N* | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 |
| **T3** | *Pearson Correlation* | .906** | .702** | .122* | .060 | .137* | .196** | .239** | 1 | .732** |
| | *Sig. (2-tailed)* | .000 | .000 | .047 | .331 | .025 | .001 | .000 | | .000 |
| | *N* | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 |
| **T4** | *Pearson Correlation* | .720** | .670** | .209** | .198** | .179** | .213** | .308** | .732** | 1 |
| | *Sig. (2-tailed)* | .000 | .000 | .001 | .001 | .003 | .000 | .000 | .000 | |
| | *N* | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 | 265 |

*Note.* **. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

## C.2 Polarisation

### C.2.1 Theory driven approach

Regarding rational polarisation, the variables of the political and societal statements were used. To operationalise them into a polarisation-index, they were first recoded so that the extreme values were given the highest value (10 = 5, 0 = 5, 9 = 4, 1 = 4, 8 = 3, 2 = 3, etc. see syntax Appendix G). In that way, the actual societal or political preference was overwritten by the way in which the statement was answered.

**Table 7.13**
*Descriptive Statistics variables rational polarisation*

| | N | Range | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| *Q7.7_1R* | 265 | 5.00 | .00 | 5.00 | 3.5283 | 1.59787 |
| *Q7.7_2R* | 265 | 5.00 | .00 | 5.00 | 2.6302 | 1.66715 |
| *Q7.7_3R* | 265 | 5.00 | .00 | 5.00 | 3.2642 | 1.75541 |
| *Q7.7_4R* | 265 | 5.00 | .00 | 5.00 | 3.0302 | 1.86856 |
| *Q7.7_5R* | 265 | 5.00 | .00 | 5.00 | 2.6906 | 1.65674 |
| *Q7.7_6R* | 265 | 5.00 | .00 | 5.00 | 2.7698 | 1.71332 |
| *Q7.7_7R* | 265 | 5.00 | .00 | 5.00 | 2.0868 | 1.62019 |

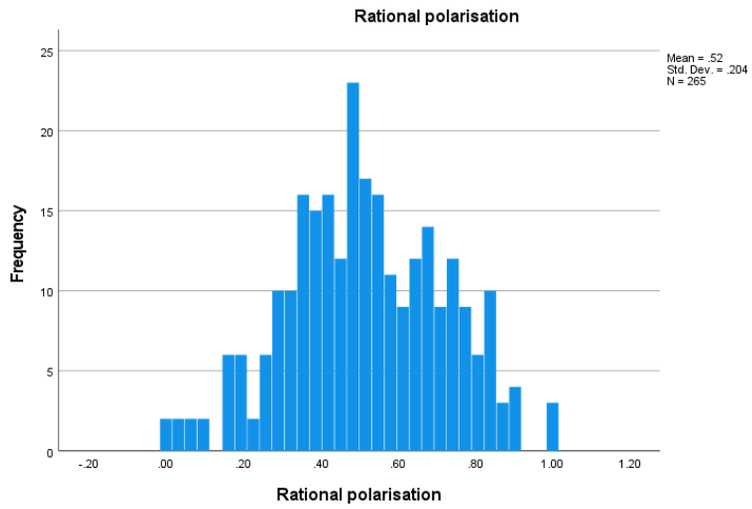
*Note.* N = 265.

Then, reliability analysis of these recoded variables indicated that they indeed point to one single scale. In the last step, these variables were then summed and rescaled to the range of [0,1] based on the formula (x-min)/(max-min). Figure 7.17 shows its histogram.

**Table 7.14**
*Reliability analysis rational polarisation*

| | **Rational polarisation index** |
|---|---|
| *Cronbach's alpha* | .576 |
| *N of items* | 7 |
| *N* | 265 |

**Figure 7.17**
*Histogram of rational polarisation*



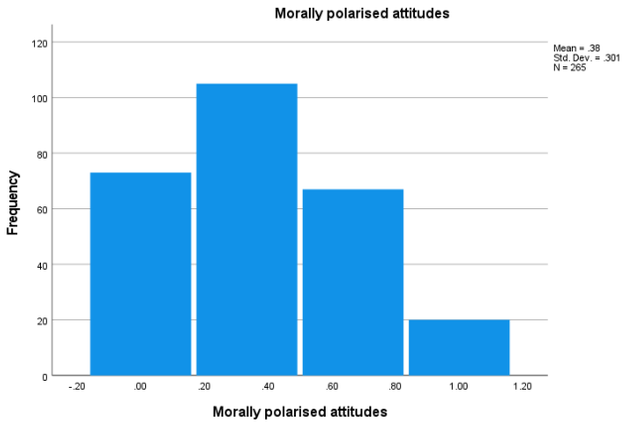

Regarding emotional polarisation, two strands of variables were created. Based on the definition, the first sub-component is morally polarised attitudes, which is defined as developing negative attitudes and emotions towards out-groups due to the fact that they are seen as morally wrong or bad. For this component, the variables Q6.2, Q7.6 and Q7.4 were recoded to dummy-variables with the reference categories respectively being 'negative emotions to certain groups', 'reason for not agreeing is that the other belongs to another political group' and 'omitting certain issues'. The frequencies of these variables can be found in Table 7.15.

**Table 7.15**
*Frequencies variables morally polarised attitudes*

| | | **Negative emotions to certain groups dummy** | **Reason for not agreeing dummy - other political group** | **Issues you omit dummy** |
|---|---|---|---|---|
| N | 0 (no) | 185 | 112 | 154 |
| | 1 (yes) | 80 | 133 | 86 |

On the basis of these dummy-variables, a new scale of morally polarised attitudes was constructed summing these variables, resulting in a 4-point scale, with scoring all 4 points meaning that one has negative emotions to certain groups, disagrees with others due to their political group and omits certain issues. To be able to properly compare this index with the other indices, this was then normalised to a range of [0,1] based on the formula (x-min)/(max-min). Figure 7.18 shows the histogram of this variable.

**Figure 7.18**
*Histogram of morally polarised attitudes*

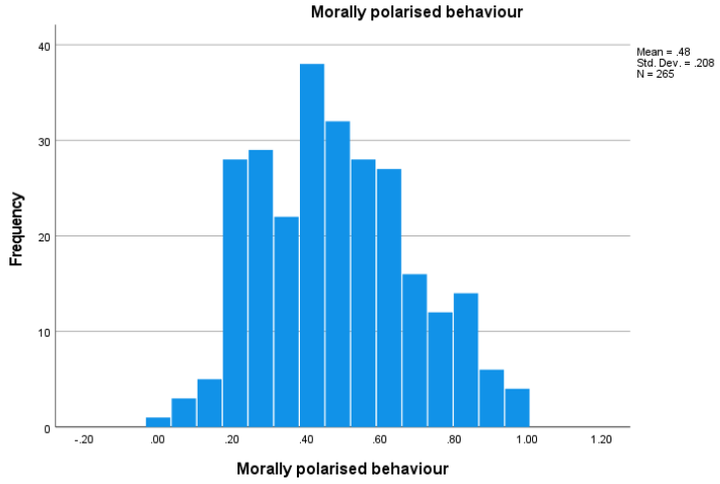



Secondly, the variables indicating the preparedness to and actual enactment of discussing about social or political issues with a) people one knows versus people one doesn't know and b) people with a similar worldview versus people with a different worldview were negatively recoded in order to measure the non-engagement towards discussion (morally polarised behaviour). These variables were then subjected to a reliability analysis (see Table 7.16) which was deemed satisfactory. Ultimately, they were summed and rescaled to the range of [0,1] based on the formula (x-min)/(max-min). Figure 7.19 shows its histogram.

**Table 7.16**
*Reliability analysis morally polarised behaviour*

| | **Morally polarised behaviour** |
|---|---|
| *Cronbach's alpha* | .922 |
| *N of items* | 8 |
| *N* | 265 |

**Figure 7.19**
*Histogram of morally polarised behaviour*




Now, reliability analysis to combine those two into one scale of emotional polarisation was deemed unsatisfactory (see Table 7.17), thereby concluding that no such unified scale can be made.

**Table 7.17**
*Reliability analysis emotional polarisation index*

| | **Emotional polarisation index** |
|---|---|
| *Cronbach's alpha* | -.074 |
| *N of items* | 2 |
| *N* | 221 |

### C.2.2 Data-driven approach

These analyses were then complemented with a principal component analysis using a VARIMAX rotation using the correlation-method with all variables of emotional polarisation used before. Table 7.18 shows that the KMO is close to 1, indicating that the underlying variance is indeed diffused enough to suppose that underlying factors exist. The Barlett's Test being significant indicates that the variables are related. Based on the explained variance in Table 7.19 and on the 'elbow' in the Scree Plot in Figure 7.20, it was decided to extract 3 components.

From the rotated component matrix in Table 7.20 it can then be nicely seen how the components overlap with the variables created above on the basis of the theory. Therefore, no additional variables are created.

**Table 7.18**
*KMO and Bartlett's Test*

| | | |
|---|---|---|
| **Kaiser-Meyer-Olkin Measure of Sampling Adequacy.** | | .769 |
| **Bartlett's Test of Sphericity** | Approx. Chi-Square | 1582.614 |
| | df | 153 |
| | Sig. | .000 |

**Table 7.19**
*Total variance explained principal component analysis polarisation (Eigenvalue >1)*

| | **Initial Eigenvalues** | | | **Extraction Sums of Squared Loadings** | | |
|---|---|---|---|---|---|---|
| *Component* | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| *1* | 5.267 | 29.262 | 29.262 | 5.267 | 29.262 | 29.262 |
| *2* | 2.157 | 11.983 | 41.245 | 2.157 | 11.983 | 41.245 |
| *3* | 1.265 | 7.029 | 48.274 | 1.265 | 7.029 | 48.274 |
| *4* | 1.179 | 6.548 | 54.823 | 1.179 | 6.548 | 54.823 |
| *5* | 1.101 | 6.119 | 60.941 | 1.101 | 6.119 | 60.941 |
| *6* | 1.022 | 5.681 | 66.622 | 1.022 | 5.681 | 66.622 |

*Note.* Extraction Method: Principal Component Analysis

**Figure 7.20**
*Scree plot principal component analysis polarisation*

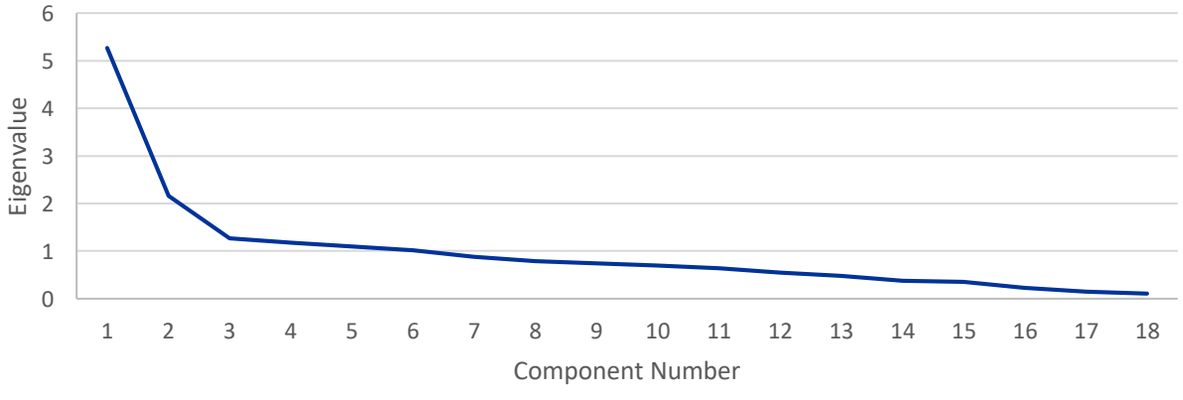


**Table 7.20**
*Rotated component matrix polarisation*

| | Component | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| *Q6.2D* | -.231 | .184 | .637 |
| *Q7.2_1R* | .772 | .030 | -.005 |
| *Q7.2_2R* | .812 | .014 | .064 |
| *Q7.2_3R* | .745 | -.147 | .006 |
| *Q7.2_4R* | .816 | .051 | .122 |
| *Q7.3_1R* | .812 | -.051 | -.085 |
| *Q7.3_2R* | .836 | .032 | -.055 |
| *Q7.3_3R* | .768 | -.134 | -.168 |
| *Q7.3_4R* | .816 | .068 | -.028 |
| *Q7.4D* | .135 | .046 | .736 |
| *Q7.6D* | -.027 | .135 | .141 |
| *Q7.7_1R* | -.091 | .488 | -.309 |
| *Q7.7_2R* | -.074 | .621 | .166 |
| *Q7.7_3R* | .038 | .393 | -.333 |
| *Q7.7_4R* | -.188 | .543 | .030 |
| *Q7.7_5R* | -.023 | .695 | .018 |
| *Q7.7_6R* | .126 | .504 | .096 |
| *Q7.7_7R* | .136 | .465 | .196 |

*Note.* Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

### C.2.3 Correlation between types of polarisation

**Table 7.21**
*Correlation matrix types of polarisation*

| | | **Morally polarised attitudes** | **Morally polarised behaviour** | **Rational polarisation** |
|---|---|---|---|---|
| **Morally polarised attitudes** | *Pearson Correlation* | 1 | -.063 | .127* |
| | *Sig. (2-tailed)* | | .309 | .038 |
| | *N* | 265 | 265 | 265 |
| **Morally polarised behaviour** | *Pearson Correlation* | -.063 | 1 | -.082 |
| | *Sig. (2-tailed)* | .309 | | .184 |
| | *N* | 265 | 265 | 265 |
| **Rational polarisation** | *Pearson Correlation* | .127* | -.082 | 1 |
| | *Sig. (2-tailed)* | .038 | .184 | |
| | *N* | 265 | 265 | 265 |

*Note.* *. Correlation is significant at the 0.05 level (2-tailed).

## C.3 On Min-Max normalisation

It was chosen to normalise the variables on the basis of the formula (x-min)/(max-min) because of the fact that it doesn't change any values within the variable, but rather rescales all indices to comparable scales of [0,1], allowing for a better interpretation. It is most useful when no outliers are reported (because they tend to skew the resulting scale), which was indeed not the case (Vafaei, Ribeiro, & Camarinha-Matos, 2020). Furthermore, it was deliberately chosen not to use standardised values because of their difficulty to interpret them. This approach has been used and discussed in various previous studies which create multi-dimensional scales (Maggino, 2017). However, it must be said that the technique is not optimal to measure the amount of polarisation or cohesion, since it tends to portray a mean of means, thereby always being around the centre.

## C.4 Newly created variables based on the interviews

After having been coded according to the codebook (Appendix G), new variable were created via MAXQDA-software, in which the frequency of the subcodes (which became the categories of the variables as seen in the

codebook) were counted and the most frequent occurring subcode became the dominant category of the respondent for that specific variable. If the same amount of subcodes occurred, the variable was given the extra category 'undefined'. If no subcode occurred for that respondent on a certain variable, the variable was left blank and treated as a missing. The conceptual overview can be found below (Table 7.22), the frequency tables of the relevant variables have been inserted in the analysis above.

**Table 7.22**
*Newly created variables based on coding from interviews*

Social cohesion

| Change over time | Way in which cohesion has changed | Level of social cohesion | Level of physical social cohesion | Amount of overall social cohesion in society | Personal experience social cohesion |
|---|---|---|---|---|---|
| Yes | Increased | Mostly physical | Local level | Little | Yes |
| No | Decreased | Mostly non-physical | Community level | Much | No |
| Undefined | Undefined | | | Undefined | |

Polarisation

| Amount of polarisation in society | Emotional polarisation | Polarised yourself | Change over time |
|---|---|---|---|
| Little | In-group/out-group dynamics | Yes | Yes, increased |
| Less than we think | No in-group/out-group dynamics | No | No, didn't change |
| Much | | Undefined | Undefined |

Link polarisation and social cohesion

| Is there a link? | Type of link |
|---|---|
| Yes | Positive correlation |
| No | Negative correlation |
| | Both positive and negative |
| | Undefined |

# Appendix D - Assumptions of the multivariate tests and models

As stated, the models are built upon a full-factorial Multivariate Multiple Regression or canonical regression analysis. Therefore, this section gives the evaluation of the assumptions of this analysis.

First of all, regression models are built upon the assumption of Independent Random Sampling in order to be able to generalise the results to the wider population. This assumption has been violated despite the effort to be as random as possible, due to the fact that the sample hasn't been drawn in an exclusively random manner. As a result, the results cannot be generalised to a wider population.

Secondly, regression analysis is built upon the assumption of normality. When assessing all variables in the model for normality based upon Q-Q plots (see output in Appendix G), it seems that normality is mostly achieved, except with morally polarised attitudes due to the way in which it was operationalised.

Thirdly, there is the assumption of linearity. Given the theoretically assumed linear links between the independent and dependent variables, this assumption is not specifically checked but deemed satisfactory by the design of the study.

Fourthly, linear regression is affected by outliers. As can be seen in the output (Appendix G), some outliers were identified in 7 variables used. This assumption is thus broken and should be taken into account when interpreting the results.

Lastly, there must be an absence of multicollinearity with regards to the independent variables. As the correlation matrix of rational polarisation, morally polarised attitudes and morally polarised behaviour indicates (see Appendix C.2.3), no variables are higher correlated than .8 so that assumption has been satisfied as well.

# Appendix E - Mixed-methods analysis self-evaluation polarisation

In order to check whether respondents rightly claim to be (non)polarised, the responses have been contrasted with the individual scores on the indices of polarisation, as can be seen in Table 7.23 below. Whenever one of the 3 indices are more than .5, the respondent is considered to be polarised (with .5 being the mean). The last column then states whether the respondent contradicts him or herself.

**Table 7.23**

*Mixed-methods analysis self-evaluation polarisation*

| Respondent nr. | Polarised? | Which type? | Rational polarisation (1) | Morally polarised attitudes (2) | Morally polarised behaviour (3) | Mean polarisation | Conclusion |
|---|---|---|---|---|---|---|---|
| 1 | Says no | None | 0.48 | 0.00 | 0.72 | 0.40 | Contradiction: 3 |
| 2 | Tries not to be polarised | None | 0.74 | 0.33 | 0.60 | 0.56 | Contradiction: 1 and 3 |
| 3 | Says yes (against wokeness) | Sometimes Helena | 0.84 | 0.67 | 0.13 | 0.55 | No contradiction: polarised |
| 4 | Says no | None | 0.77 | 0.67 | 0.25 | 0.56 | Contradiction: 1 and 2 |
| 5 | Says yes but fights against it | None | 0.35 | 0.67 | 0.24 | 0.42 | No contradiction: polarised |
| 6 | Says yes (against racists and injustice) | Little more Zeno | 0.84 | 1.00 | 0.58 | 0.81 | No contradiction: polarised |
| 7 | Says to be strongly polarised | More Zeno | 0.74 | 0.67 | 0.61 | 0.67 | No contradiction: polarised |
| 8 | Says no (not in character but strong opinions) | None | 0.00 | 0.33 | 0.42 | 0.25 | No contradiction: not polarised |
| 9 | Says no (doesn't feel it) | None | 0.74 | 0.33 | 0.60 | 0.56 | Contradiction: 1 and 3 |
| 10 | Says yes | Little bit both but mostly Zeno | 0.48 | 0.33 | 0.10 | 0.30 | Contradiction: not polarised |
| 11 | Says yes | None | 0.77 | 1.00 | 0.64 | 0.80 | No contradiction: polarised |
| 12 | Says no | Little bit Zeno | 0.74 | 0.00 | 0.78 | 0.51 | Contradiction: 1 and 3 |
| 13 | Says yes in some way | More Helena | 0.48 | 1.00 | 0.26 | 0.58 | No contradiction: polarised |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 14 | Says yes in own way | None | 0.55 | 0.67 | 0.72 | 0.65 | No contradiction: polarised |
| 15 | Says no (no fighting with others but strong opinions) | None | 0.65 | 1.00 | 0.64 | 0.76 | Contradiction: 1, 2 and 3 |
| 16 | Hopes not to be but strong opinion | Little bit both but mostly Helena | 0.52 | 0.67 | 0.22 | 0.47 | Contradiction: 1 and 2 |
| 17 | Says no | Mostly Helena | 0.68 | 0.00 | 0.29 | 0.32 | Contradiction: 1 |
| 18 | Says no and hopes no | Mostly Helena | 0.10 | 0.00 | 0.63 | 0.24 | Contradiction: 3 |
| 19 | Says no | More Zeno | 0.45 | 0.00 | 0.50 | 0.32 | No contradiction: not polarised |
| 20 | Thinks no | None | 0.61 | 0.00 | 0.54 | 0.38 | Contradiction: 1 and 3 |

# Appendix F - Original Dutch phrasing of quotes used in analysis

| **Original text** | **Translation** |
|---|---|
| "1 is meer echt een kleinere groep waar ik, ja, waar dat ge nauwer mee elkaar bent." (R1) | "[Type] 1 is more like a small group where I – yeah, where you are closer to one another" (R1) |
| "Die Laura daar kan ik mij totaal niet in vinden omdat ik niet echt mezelf dan zie als een inwoner van de buurt. Ik ben ook niet echt beschermend tegenover hoe dat ik denk en zo negatief tegenover buitenstaanders" (R15). | "I totally cannot relate to Laura because I don't see myself as an inhabitant of my neighbourhood. I'm also not protective about the way I think nor am I negative towards others (…)" (R15). |
| "Dus in mijn leven denk ik dan ok, sociale cohesie is er echt wel, maar dan kijk je op de het nieuws en dan denk je van oei, het is totaal niet zo mooi als we het alleaal zouden hopen zeg maar. Dus ja, het is echt dubbel." (R5). | "[…] So, in my own life I think okay there really is social cohesion, but then you see the news and you think like oh, it's totally not as beautiful as we would all hope. So yeah, it's really ambiguous" (R5). |
| "Polarisatie, ik probeer dat niet te zijn, dat is iets moreels, ik weet gewoon dat dat niet juist is en ik weet dat ik minder vooroordelen moet hebben enzovoort, dat is iets voor mezelf dat ik niet goed vind." (R14). | "Polarisation, I try not to be polarised, it's something moral, I just know it's wrong and that I should have less prejudices and the like, it's something which I don't like for myself" (R14). |
| "En dat valt mij enorm op. [stilte] dat is raar he. Ja, ik heb geen duidelijk, ik heb geen eenduidig gevoel meer. En dat maakt ook dat ik soms, als ik daar te hard op doordenk, wil ik soms, heb ik soms spijt dat ik kinderen heb gemaakt." (R7). | "[…] It really strikes me [silence]. It's weird right? I don't have a clear – I don't have one coherent feeling anymore [about society]. And as a result, when I focus too much upon this, I sometimes regret having made children" (R7). |

# Appendix G - Supplemental material

In addition to the appendices provided here, supplemental material can be found in the digital appendix on this link:

https://vub-my.sharepoint.com/:f:/g/personal/kamil_bernaerts_vub_be/ErVQKruqulZBsxC8Xh5r8l8BDbr0AxVf5CeFNEJ_9I9m0g?e=z9HSYA