

# International Review of Public Policy

6:2 | 2024  
Special Issue

---

## I know better: Self-esteem, egocentrism, and policy learning in the liberalization of Belgian network industries

Stéphane Moyson

---



### Electronic version

URL: <https://journals.openedition.org/irpp/4367>  
ISSN: 2706-6274

### Publisher

International Public Policy Association

### Printed version

Date of publication: September 1, 2024  
ISSN: 2679-3873

Provided by Université catholique de Louvain



---

This text was automatically generated on November 29, 2024.

---

# I know better: Self-esteem, egocentrism, and policy learning in the liberalization of Belgian network industries

Stéphane Moyson

---

## Introduction

- <sup>1</sup> In policy processes, policy actors ranging from politicians and public officials to manager or companies and associations regularly interact and gradually accumulate evidence regarding policy problems and solutions over time. As a result, these actors acquire, translate, and disseminate new knowledge and information. In turn, they maintain, reinforce, or revise their beliefs and preferences regarding policies. ‘Policy learning’ is a concept that captures these cognitive and social dynamics of information processing (Dunlop et al., 2018; Heikkila & Gerlak, 2013; Moyson & Scholten, 2018). Against this background, policy learning may be defined as “the circulation and consumption of policy issue-related information and knowledge among actors in a policy system and structure, within a policy context” (Zaki et al., 2022, p. 22), which results in “belief updates” (Dunlop & Radaelli, 2018).
- <sup>2</sup> Policy learning plays a crucial role in policy change (Moyson et al., 2017). Intermediate outcomes of policy learning also include the development of shared understandings and mutual agreements or the transformation of relationships between parties in conflict (Leach et al., 2014). These roles of information processing have long been recognized by various theories of the policy process – e.g., the Advocacy Coalition Framework (ACF: Nohrstedt et al., 2023) or, more recently, the Punctuated Equilibrium Theory (PET: e.g., Jones & Baumgartner, 2012) – which gave rise to a research program entirely dedicated to the dynamics of learning in policy processes (Dunlop & Radaelli, 2018; Vagionaki & Trein, 2020) and governance (e.g., Heikkila & Gerlak, 2024).

- 3 In line with various bridges between the sociopsychology of emotions and social groups with research across and beyond policy process frameworks (e.g., Bandelow et al. 2021; Gabehart et al. 2023; Hornung et al. 2019; Pierce, 2021), a more recent focus on the microfoundations of policy learning has highlighted the effect of policy actors' individual psychology on their approach to policy experiences and information. For example, the perceived credibility of policy information depends on psychological patterns such as risk aversion or trust (Bédard, 2017). In turn, from a Bayesian perspective (Nowlin, 2021), credible information leads to more belief adjustments. Similarly, 'motivated reasoning' leads policy actors to use new information mainly to substantiate rather than to question their preexisting beliefs (Montpetit & Lachapelle, 2017). Accordingly, Trein and Vagionaki (2022, p. 907) distinguish between "policy-oriented learning, which captures intentions to improve policies in order to solve a policy problem, and power-oriented learning, which entails learning intended to improve the political influence, regardless of the problem-solving contribution of policy decisions". Similarly, Dunlop and Radaelli (2017) suggest that emotions may play a key role in policy learning processes. For example, anxiety stimulates learning (Lablih et al., 2024). Overall, a better understanding of the individual psychology of policy learning is needed (Dunlop & Radaelli, 2017; Moyson & Scholten, 2018).
- 4 This article examines the relationship between policy learning and how policy actors value themselves and their subjective perceptions. Some observers of politics and policy blame policy actors' inflated ego for making them deaf to their environment and unlikely to adjust their policy preferences accordingly: "they always think they know better". From a scientific perspective, two streams of research are worth considering. On the one hand, psychological and educational research "have long acknowledged the power of interest (...) and have pointed to its centrality in learning" (Renninger & Hidi, 2022, p. 23). Furthermore, how learners perceive themselves (e.g., self-efficacy: Jackson, 2002) or regulate themselves (Schunk & Zimmerman, 2003) influences information processing and learning. The self can both facilitate and complicate learning. On the other hand, studies of politics and policy examine the role of the self among politicians and public officials. For example, politicians who hold office have been found to have higher levels of perceived political self-efficacy than partisans and voters (Caprara et al., 2009). There are also various studies on the conceptualization and implications of self-interest vs. public/general interest among civil servants and policy-makers (e.g., Zamir & Sulizeanu-Kenan, 2018), but with some exceptions (e.g., Morf et al., 2023; Moyson, 2018), without considering its relationships with policy learning. In other words, we know that individuals' information processing and learning depend on how they perceive themselves, but we do not know the implications of this relationship in policy processes. While there are different ways to conceptualize how individuals perceive themselves, in this research I focus on how policy actors value themselves (self-esteem) and how they value their own perceptions (egocentrism).
- 5 Do egocentrism and self-esteem influence the information processing of policy actors involved in a decision-making process? Egocentrism is the tendency to confuse subjective perceptions with objective reality and to disqualify all perspectives other than one's own (Galanaki, 2012; Kelley & Jacoby, 1996; Kesselring & Müller, 2011). In the same vein, self-esteem refers to the overall evaluation or appraisal of one's own worth: people with higher self-esteem have a better image of their own beliefs and positions than others (Rosenberg, 1965; Tafarodi & Milne, 2002; Zeigler-Hill, 2013). This study

hypothesizes that egocentrism and self-esteem induce biased processing of policy information. The test of these hypotheses is based on regression analyses of a 2012 survey of 255 Belgian policy actors who had been involved in the European liberalization policy process of two network industries, the rail sector and the electricity sector, for two decades. This article follows a classical structure that presents the theoretical expectations, research design, measures, analysis, and results, before discussing the findings.

## Theoretical insights into the role of the self in policy learning

- 6 Since policy learning refers to updating beliefs (Dunlop & Radaelli, 2018), studying policy learning requires a better understanding of policy actors' belief systems. To this end, I borrow from the ACF (Nohrstedt et al., 2023) which conceptualizes policy actors' belief systems in three strata. The first stratum contains 'deep core' beliefs, which are personal philosophical precepts that are very broad in scope. The second stratum is represented by 'policy core' beliefs, which are precepts specific to one subsystem, such as the proper scope of government action or the identification of groups whose welfare is of primary concern. At this level, actors also hold factual beliefs about the outcomes of policies (e.g., 'I believe that a given policy option increases the degree of justice among population groups'). These factual beliefs, in turn, determine these actors' core policy preferences (e.g., 'I believe that this policy option is better than others'). Policy core policy preferences (or 'policy preferences') are 'normative beliefs that project an image of how the policy subsystem ought to be, provide the vision that guides coalition strategic behavior, and help unite allies and divide opponents' (Sabatier & Weible, 2007, p. 195). In the third stratum, 'secondary' beliefs are more specific. These beliefs concern particular administrative rules, budget allocations, program performance, etc. Put differently, with the ACF, I recognize the plurality of policy information because abstractions of how the world is and should be depend on the belief system of each individual policy actor. Policy learning materializes the process of information processing in which policy actors align normative preferences and intended behaviors with what they (believe to) know about the world.
- 7 At the individual level, policy learning begins when information is acquired, assimilated, and translated – i.e., processed – by policy actors. Most theories of information processing in policy processes start from two assumptions. According to the first assumption, 'there are strong grounds for assuming that most actors will have relatively complex and internally consistent belief systems in the policy area(s) of interest to them' (Sabatier, 1993, p. 30). In line with Festinger's (1957) theory of cognitive dissonance, human beings are comfortable with cognitive consistency, whereas inconsistency provokes 'dissonance' or a state of arousal. Because dissonance indicates erroneous propositions in one's belief system, this state of arousal functions as a "signal" (Baumgartner & Jones, 2012) that the system should be revised to facilitate context-appropriate action (Harmon-Jones et al., 2009). In line with Nowlin's (2021) Bayesian model of information processing in policy processes, in the long run, policy actors tend to align their policy preferences with adjustments in their beliefs about policy outcomes (*Hypothesis 1*). These cognitive efforts deployed by policy actors to

adopt attitudes and behaviors that reduce dissonance serve as a core mechanism that confers concrete policy effects on policy learning.

- 8 However, a second important assumption is that individual rationality is bounded (Dunlop & Radaelli, 2018; Simon, 1991). On the one hand, the information available about policies can be of poor quality or low quantity. On the other hand, individuals' inherent ability to process this information is limited (Moynihan, 2008). Given their limited ability to process information, people must rely on heuristic-based modes of reasoning (Kahneman, 2011). Heuristics are cognitive rules that facilitate information processing. For example, rather than reassessing their entire belief systems in response to every new piece of information, there are strong scientific grounds to believe that people 'tend to conform assessments of information to some goal or end extrinsic to accuracy' (Kahan, 2013, p. 408)—a tendency called 'motivated reasoning' (Kunda, 1990). Accordingly, policy research has demonstrated that policy actors prefer standpoint-consistent information to standpoint-inconsistent information and adjust their beliefs about policy outcomes without necessarily adjusting their policy preferences (Moynson, 2017). In other words, policy actors do not perfectly assimilate all the information they acquire.
- 9 The next step in the analysis of the individual psychology of policy learning is to look for psychological patterns that explain why information processing is more or less biased, with a focus in the present study on the role of the self. There are a variety of concepts that describe how individuals perceive themselves (Bailey, 2003). While some of these concepts, such as self-identity, are depictions of the self, this research examines whether policy actors think about policies according to their preexisting perceptions, how they value them, and how they value themselves. In other words, it looks at the effect of self-esteem (how I value myself) and egocentrism (how I value my perceptions) on policy learning. In doing so, this study assesses a common public intuition that decision makers' egos influence politics and policy.

### **Self-esteem and information processing**

- 10 Some people see themselves as very intelligent, while others do not. Some people believe that they are successful, while others do not. Self-esteem refers to one's overall evaluation or appraisal of one's worth: to have high self-esteem is to feel adequate and satisfied with oneself (Rosenberg, 1965). Self-esteem is a dimension of self-image, a set of mental constructs that describe how people see themselves. These descriptions can be mostly emotional (e.g., 'I feel happy') or mostly cognitive (e.g., 'I feel I am generous')—a category into which self-esteem falls. Self-esteem is analytically appealing because it has been positively or negatively associated with a variety of attitudes (e.g., satisfaction or well-being) and behaviors (e.g., academic achievement or criminal behavior) across different domains such as professional, family, or personal, and across all stages of people's lives (Zeigler-Hill, 2013). The stability of self-esteem over time is high (Rentzsch & Schröder-Abé, 2018) and increases with adulthood (Anusic & Schimmack, 2016).
- 11 Existing political psychology research suggests that self-esteem does not impede the acquisition of policy-related information. Individuals scoring higher on self-esteem score lower on cynicism and higher on volunteerism, helping behavior (e.g., Baumeister et al., 2003), and support for democracy (Marchlewska et al., 2019). Self-

esteem “might be linked” to normative forms of activism (Cichocka et al., 2024, p. 58). The bottom line is that people who feel secure about themselves also feel comfortable exposing themselves to others and their ideas, which promotes “social learning” (van Schie et al., 2023) and the “acquisition of political knowledge” (Dekker & Nuus, 2007). Self-esteem promotes the acquisition of information, but without the expected preference for particular ideas; for example, a recent review of the literature suggests that self-esteem is weakly or not at all associated with specific ideologies (Cichocka et al., 2024). In other words, self-esteem does not directly influence policy preferences or policy updates.

- 12 To the best of my knowledge, the relationship between self-esteem and policy learning has never been examined, but three themes of psychological research can help us formulate expectations. First, self-esteem leads to preferential processing of self-related versus other-related information (Sedikides et al., 2008) at both the behavioral and neural levels (e.g., Nowicka et al., 2018). Second, according to the relevance model (Markus et al., 1985), individuals with low global self-esteem are better at remembering information related to their low social worth or weak competences, whereas this selectivity bias does not exist among those who score high on self-esteem (Tafarodi et al., 2003). Third, individuals with high self-esteem show more ingroup bias than individuals with low self-esteem (see, e.g., Aberson et al., 2000). Taken together, these research results suggest that policy actors with greater self-esteem process and take policy information into account more energetically when that information is supportive or in line with their preexisting ideas or preferences (or those of their group). Thus, when aligning their preferences with policy, high self-esteem policy actors are likely to value their preexisting point of view more than low self-esteem policy actors with regard to new policy information, especially if this information conflicts with their preexisting beliefs. Statistically speaking, this suggests a negative moderating effect of self-esteem on the relationship between beliefs about policy outcomes and the alignment of policy preferences with these changed beliefs over time (*Hypothesis 2.1*).

## Egocentrism and information processing

- 13 Egocentrism is a Piagetian (1920) concept that refers to a stage of infant development characterized by a lack of differentiation between the ego and the alter ego, as well as between the ego and the external world (Kesselring & Müller, 2011). Egocentrism suggests that the subjective experience of the present is more easily influenced by the subjective experience of the past rather than by efforts to draw lessons from theoretical knowledge (Kelley & Jacoby, 1996). However, adults may also keep believing the ‘personal fable’ that they are more ‘unique and special than is really the case’ (Rai et al., 2016, p. 286), with variations related to gender (men scoring higher than women) and age (egocentrism following a curvilinear relationship with age). That said, variations in egocentrism over time are limited (Frankenberger, 2000), so some studies consider it a trait-like personality attribute related to narcissism (Campbell et al., 2000), and scales have been developed accordingly (Tajmirriyahi et al., 2020). However, these scales do not distinguish between different dimensions of egocentrism. While there is evidence that the general public (e.g., Cislak & Wojciszke, 2006) or policy actors (e.g., Moyson, 2018) may privilege politicians or policies that best serve their self-

interest, there is no reason to believe that egocentrism, as such, is related to support for specific political ideologies.

- 14 Egocentrism, in contrast, can affect the processing of information about politics and policy. The idea that egocentrism can influence political reasoning is not entirely new: Piaget's work was part of a general attempt to develop a theory of thinking. In learning environments, adolescents' egocentrism is negatively related to their academic achievement (Bester, 2013), possibly because they believe they are so unique that school methods and content do not apply to them. Experimental research suggests that egocentrism leads people to overestimate their point of view because they know more about themselves than about others, rightfully or wrongfully (Krueger et al., 2008). In the same vein, in conflict and negotiation situations, people may tend to judge "their own important issues to be more important to their negotiation opponent, regardless of their opponent's actual interests" (Chambers & De Breu, 2014, p. 15). Finally, people who are given the opportunity to form prior beliefs about an issue are less likely to take others' opinions into account and are more confident in their own response (Yaniv & Choshen-Hillel, 2012). Taken together, these findings suggest that egocentric policy actors rely more on their initial point of view than on newly acquired information when adjusting their policy preferences. Statistically speaking, this suggests a negative moderating effect of egocentrism on the relationship between changed beliefs about policy outcomes and the alignment of policy preferences with these changed beliefs over time (*Hypothesis 2.2*).

## Synthesis

- 15 The research question and research hypotheses are summarized in Table 1, while the analytical framework of the study is presented in Figure 1.

**Table 1. Study Hypotheses**

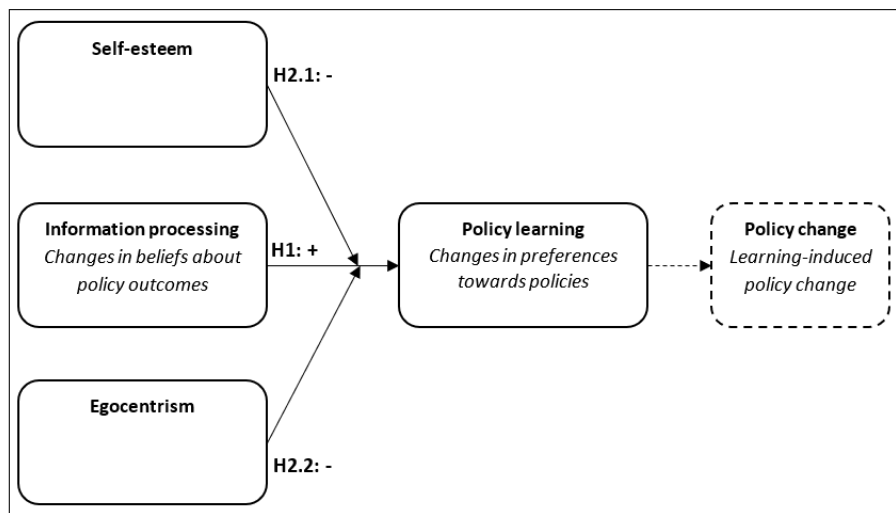
**Research question:** *Do egocentrism and self-esteem influence the information processing of policy actors involved in a decision-making process?*

**Hypothesis 1:** There is a positive relationship between changes in beliefs about policy outcomes and the alignment of policy preferences with these changed beliefs over time (information use).

**Hypothesis 2.1:** There is a negative moderating effect of self-esteem on the relationship between beliefs about policy outcomes and the alignment of policy preferences with these changed beliefs over time.

**Hypothesis 2.2:** There is a negative moderating effect of egocentrism on the relationship between beliefs about policy outcomes and the alignment of policy preferences with these changed beliefs over time.

Figure 1. Analytical framework of the study



## Research design

- 16 To examine the psychology of policy learning, a web survey was administered to Belgian policy actors involved in policy changes relating to the implementation of the European liberalization policy process in network industries in the rail and electricity sectors. Network industries are characterized by the delivery of products or services to final customers via a 'network infrastructure' linking upstream supply with downstream customers' (European Commission, 1999). Network industries are typical of sectors such as telecommunications, energy, transport, or postal services. Since the 1980s, many network industries have been subject to a policy process of liberalization (Genoud, 2004). Network activities have gradually been unbundled. Previously, a state-owned company (or 'incumbent') had a monopoly on the management and commercial exploitation of the network, but now a public 'infrastructure manager' is responsible for the maintenance and security of the infrastructure, and the incumbent competes with other private companies (or 'new entrants') for the use of this infrastructure. In addition, several independent regulatory agencies have been created at the European and national levels.
- 17 This study focuses on two national subsystems of policy actors: the Belgian rail and electricity policy subsystems. In the railway sector, the European liberalization process began in 1991 with the European directive 91/440/EEC. The implementation of this process in Belgium began with the Royal Decree of February 5, 1997 (Dehousse & Gadisseur, 2002). A similar process of liberalization in the European electricity sector was initiated by Directive 96/92/EC. The implementation of this process in Belgium began with the Federal Law of April 29, 1999 (Declercq & Vincent, 2000; Glachant & Perez, 2011). This empirical context is well suited for the study of policy learning because these liberalization processes involve extensive legal, organizational, social, and technical changes imposed by a hierarchically superior policy subsystem (i.e., the European Union). Moreover, they are highly political and entail an increase in power for some subsystem members (e.g., regulatory agencies or infrastructure managers, as

a result of their new responsibilities) or a decrease in power for others (e.g., for state-owned companies, following the end of their exploitation monopoly).

- 18 The web survey was administered by email between April and November 2012 to 1256 people holding top to middle positions within 51 public and private organizations involved in the liberalization process. Given their position, these people were regularly involved in the process of implementing the European liberalization policy: they formed two policy subsystems. The identification of these policy actors was first based on a documentary analysis. Then, a snowballing (or ‘chain referral’) sampling method (Atkinson & Flint, 2001) was applied through a campaign of 33 preliminary semi-structured interviews. 38 out of the 51 organizations participated in the survey: 12 (75%) out of 16 in the railway sector and 26 (74%) out of 35 in the electricity sector. Within the participating organizations, in the railway sector, 199 (35.53%) out of 560 individual policy actors participated in the survey, while in the electricity sector, 214 (30.75%) out of 696 policy actors filled out the questionnaire. The overall response rate for the survey was 32.88% (413 policy actors from 38 organizations). Of course, the European liberalization of network industries has been a gradual process, but, to the best of my knowledge, there were no specific events in 2012, within or outside the railway or electricity sectors, that could have influenced the results of the survey<sup>i</sup>.

## Measures

- 19 This section describes the operationalization of the constructs of the analytical framework of the study in the survey. The items of the dependent and independent variables as well as their statistics are presented in the appendix (Tables 5 to 10).

### Dependent variable: changes in policy preferences

- 20 The evolution of respondents’ policy preferences towards the European liberalization process of Belgian network industries was measured using the ‘simple gain scores’ method (Allison, 1990), which reduces measurement bias in the study of policy learning (Moysen, 2017). Respondents were asked to indicate their preferences for several dimensions of the liberalization process at the beginning of this process (or when they first became involved in the Belgian rail/electricity sector) based on four Likert-type items ranging from ‘very unfavorable’ [-2] to ‘very favorable’ [+2]. They were then invited to indicate their preferences for 2012 using the same items. The initial preferences scores were subtracted from the current preferences scores, resulting in a new list of items or ‘gain scores’. For example, a minimum score of [-4] indicates a respondent who had a very positive opinion [+2] about a dimension of the liberalization policy at the beginning of the policy process and changed to a very negative opinion [-2] about that dimension in 2012. Factor analyses were conducted on the list of the four gain scores, treating each sector separately. The exploratory factor analysis suggested that all scores should be retained in each sector. The confirmatory factor analysis validated this structure in the railway sector ( $\chi^2 = 0.98$ ,  $p = 0.61$ ; RMSEA = 0.00; SRMR = 0.02; CFI = 1.00) and in the electricity sector ( $\chi^2 = 0.82$ ,  $p = 0.66$ ; RMSEA = 0.00; SRMR = 0.02; CFI = 1.00)<sup>ii</sup>. The scores of the two factors were normalized to obtain a scale common to the two sectors. This scale ranges from [-6.79] to [+6.79].

- 21 This study also addresses the issue of recall. Indeed, it can be difficult to remember past preferences (Janson, 1990). However, confidence in a memory is a reasonable indicator of its accuracy (Roediger, 2012). Conviction, in turn, is a reliable indicator of attitude confidence/certainty (Holland et al., 2003). Hence, respondents were also asked to indicate their degree of conviction about their policy preferences on a five-point Likert scale. Respondents who reported that they were ‘not at all unconvinced’ [-2] or ‘rather unconvinced’ [-1] about their past or current preferences were removed from the sample (32 respondents were removed)<sup>iii</sup>.
- 22 Finally, this study focuses on policy actors who had been involved in the European liberalization process for a long time. As this process has been a long-term policy change in network industries, there are good reasons to believe that policy actors have reliable memories of their past preferences regarding this change. Indeed, research in cognitive psychology suggests that the importance of an event or process, as well as the number of opportunities to hear and discuss the event, increases the accuracy of memories of past opinions about the event (Kvavilashvili et al., 2003; Neisser et al., 1996).

## Independent variables

- 23 *Evolution of respondents’ beliefs about policy outcomes*—Similar to the dependent variable, this independent variable was measured using the ‘simple gain scores’ method (Allison, 1990). Respondents were asked to report their past and current beliefs about policy outcomes based on a set of four items in the rail sector / five items in the electricity sector. To determine how respondents’ beliefs evolved over time, the initial belief values were subtracted from the current belief values. This approach produced a new list of items or ‘gain scores’ and thus measured changes in respondents’ beliefs about the outcomes of the liberalization policy. Factor analyses were conducted separately on the list of four/five gain scores in the two sectors. The exploratory factor analysis suggested that all scores in each sector should be retained. The confirmatory factor analysis validated this structure in the rail sector ( $\chi^2 = 6.29$ ,  $p = 0.04$ ; RMSEA = 0.12; SRMR = 0.04; CFI = 0.97) and in the electricity sector ( $\chi^2 = 8.25$ ,  $p = 0.14$ ; RMSEA = 0.07; SRMR = 0.04; CFI = 0.98)<sup>iv</sup>. The scores of the two factors were normalized to obtain a scale common to the two sectors<sup>v</sup>.
- 24 *Egocentrism (personal uniqueness)*—Egocentrism is the tendency to confuse subjective perceptions with objective reality and to disqualify all perspectives other than one’s own. This study focuses on the effect of personal uniqueness – one of the three dimensions of egocentrism (Aalsma et al., 2006; Elkind, 1967). Due to space limitations, the original 8-item scale was reduced to 4 items, consistent with previous research (e.g., Galanaki, 2012; Lapsley & Stey, 2011).
- 25 *Self-esteem*—Self-esteem refers to the overall evaluation or appraisal of one’s own worth (Rosenberg, 1965). Self-esteem can be decomposed into self-acceptance (five items related to the extent to which one is satisfied with oneself) and self-assessment (five items related to the evaluation of the objective qualities of the self) (Tafarodi & Milne, 2002). In reducing their 10-item scale to a 5-item scale, I ensured that each factor of the original scale was represented by at least one item.
- 26 *Covariates*—This research also includes four respondent covariates: gender (male = 0; female = 1), age (from ‘less than 20 years old’ = 1; to ‘more than 70 years old’ = 12; in 5-

year intervals), education level (secondary education or less = 1; undergraduate = 2; graduate or more = 3), and policy subsystem (rail sector = 0; electricity sector = 1). Women and younger people are expected to show greater compliance (e.g., with new policies: Petty & Wegener, 1998), which could explain differences in policy learning (young women would adapt their policy preferences to the European liberalization process more than older men do). In general, educated people benefit from access to more diverse perspectives in their academic lives, which may explain the positive correlation between education and tolerance (Radloff, 2007). Similarly, education could facilitate the adjustment of policy beliefs/preferences and in turn influence policy learning. Policy actors are also more likely to favor a consensual policy, especially if they are less egocentric; therefore, respondents were asked to approximate the percentage of individuals involved in the rail/electricity sector in favor of the liberalization policy process (from '0%' = 1; to '100%' = 5; in intervals of 25%). Finally, the analysis takes into account subsystem seniority ('approximately 1 year [or less]' = 1; 'approximately 2 years' = 2; 'approximately 3 to 4 years' = 3; 'between 5 and 10 years' = 4; 'more than 10 years' = 5), which may also lead to different perspectives on the European liberalization process.

## Analysis and results

- 27 In Table 2, the summary statistics of the dependent variable show that policy actors' preferences have not evolved very much over time. This is especially true in the rail sector, where the mean is close to 0. On average, with a mean of 1.27, policy actors' opinions regarding the liberalization policy have evolved more positively in the electricity sector. A possible explanation for this result is that the liberalization process has been more comprehensive and has thus become more common in the electricity sector than in the railway sector. Furthermore, the standard deviation in the two sectors suggests substantial interindividual variation. Turning to the independent variables, first, the degree of change in beliefs about policy outcomes is low in the two subsystems: on average, many policy actors maintained their beliefs about policy outcomes over time or revised them only slightly. Surprisingly, however, the average of this variable is close to zero in the rail sector, while it is negative in the electricity sector. Second, the average levels of egocentrism and self-esteem reported by respondents are quite similar in both subsystems.
- 28 The covariates have approximately the same mean in each subsystem, except that the policy actors are older in the rail sector than in the electricity sector. Gender was introduced as a numeric (dummy) variable in the regression analyses. Specifically, there were 16 female respondents in the rail sector and 15 in the electricity sector. Similarly, most of the respondents had worked in their respective sectors for a long time: 70.31% for more than 10 years in their sector, 12.29% between 5 and 10 years, 13.65% between 2 and 4 years, and only 3.75% one year or less. This suggests that this sample of respondents is an excellent fit for examining policy learning (Sabatier, 1993). These statistics are close to the demographic information found in the annual reports of the largest organizations in the research population. Consistent with the literature, egocentrism is significantly higher for men than for women (+1.3 on average), while it has a curvilinear relationship with age.

29 Of the 413 survey respondents, 32 were removed because they were not sufficiently confident about their past policy preferences (see above), and 123 others were removed because they did not answer one or more of the questions used to construct the independent variables. The missing values of the covariates were replaced by their mean (consistent with Allison, 2002). Hence, the final sample was composed of 255 respondents: 138 from the rail sector and 117 from the electricity sector. The respondents were from 34 different organizations: 12 from the rail sector and 22 from the electricity sector.

Table 2. Summary statistics

Variable	Rail sector					Electricity sector				
	N	Mean	SD	Minimum	Maximum	N	Mean	SD	Minimum	Maximum
<b>POLICY LEARNING</b>										
Evolution of policy preferences toward liberalization	138	0.25	2.20	-6.79	6.79	117	1.27	1.93	-6.79	6.79
<b>INDEPENDENT VARIABLES</b>										
Evolution of beliefs about liberalization outcomes	138	0.07	2.26	-7.26	7.26	117	-0.97	2.57	-7.26	7.26
Self-esteem	138	16.18	1.70	4	20	117	16.04	1.50	4	20
Egocentrism (personal uniqueness)	138	14.09	2.20	5	25	117	14.25	2.33	5	25
<b>COVARIATES</b>										
Perceived consensus on liberalization	138	2.06	0.77	1	5	117	2.48	0.98	1	5
Professional seniority in the sector	138	4.56	0.98	1	5	114	4.32	1.05	1	5
Sex	138	0.12	0.32	0	1	117	0.12	0.33	0	1
Age	136	7.11	2.07	2	12	117	6.84	2.06	2	12

Education level	135	2.59	0.73	1	3	115	2.79	0.48	1	3
-----------------	-----	------	------	---	---	-----	------	------	---	---

Source: the Author

30 The data were analyzed using multilevel linear regression models (Hox, 2022), as shown in Table 4. There are several good reasons to believe that the results of these analyses are robust. First, despite the correlation between egocentrism (personal uniqueness) and self-esteem in Table 3, the variance inflation factors are never greater than 1.50 or greater than the model-dependent cut-off values (Craney & Surles, 2002). Second, policy actors are nested within organizations: the multilevel design of regression analyses allows us to account for organizational effects on policy learning (Moynson, 2018) while focusing on the individual psychology of information processing. Third, the variables were measured based on items distributed across multiple batteries and pages of the survey questionnaire, which means that the internal consistency of these constructs tends to be lower than that of other questionnaire configurations. Nevertheless, most of the variables included in this study have Cronbach’s (1951) alphas close to or greater than 0.70 – an ‘acceptable’ level according to a widely used rule of thumb in social science research (George & Mallery, 2003). The two exceptions are the dependent variable in the rail sector and personal uniqueness, with Cronbach’s alphas equal to or greater than 0.60, which are more ‘questionable’ but still usable measures of concepts.

Table 3. Correlation matrix of the dependent and independent variables

<b>Correlation</b>	<i>Evolution of policy preferences toward liberalization</i>	<i>Evolution of beliefs about liberalization outcomes</i>	<i>Egocentrism (personal uniqueness)</i>	<i>Self-esteem</i>
<i>Evolution of policy preferences towards liberalization</i>	1			
<i>Evolution of beliefs about liberalization outcomes</i>	0.29***	1		
<i>Egocentrism (personal uniqueness)</i>	-0.15*	-0.05	1	
<i>Self-esteem</i>	-0.03	0.01	-0.29***	1

Source: the Author

Table 4. Multilevel regression models

DEPENDENT VARIABLE Evolution of policy preferences toward liberalization	Model 0 Covariates only		Model 1 H1: Information processing		Model 2 With egocentrism		Model 3 H2.1: Egocent. X info. proc.		Model 4 With self-esteem		Model 5 H2.2: Self-est. X info. proc.	
	Standardized coefficient	Standard error	Standardized coefficient	Standard error	Standardized coefficient	Standard error	Standardized coefficient	Standard error	Standardized coefficient	Standard error	Standardized coefficient	Standard error
<b>FIXED EFFECTS (IND. VARIABLES)</b>												
Evolution of beliefs about liberalization outcomes (H1)			0.31***	0.05	0.30***	0.05	0.30***	0.05	0.31***	0.05	0.31***	0.06
Egocentrism (pers. uniqueness)					-0.10*	0.05	-0.12*	0.05				
Egocentrism (pers. uniqueness) X Evolution of beliefs... (H2.1)							-0.10*	0.05				
Self-esteem									0.01	0.06	0.01	0.06
Self-esteem X Evolution of beliefs... (H2.2)											-0.00	0.06
<b>COVARIATES</b>												
Perc. consensus on liberalization	0.15*	0.06	0.10*	0.06	0.09	0.06	0.10*	0.06	0.10*	0.06	0.10*	0.06
Prof. seniority in the sector	0.07	0.07	0.06	0.07	0.05	0.07	0.03	0.07	0.06	0.07	0.06	0.07
Sex	0.11*	0.06	0.11*	0.07	0.09	0.06	0.07	0.06	0.11*	0.06	0.11*	0.06
Age	0.03	0.07	0.03	0.06	0.03	0.06	0.03	0.07	0.03	0.07	0.03	0.07
Educational level	0.06	0.09	0.04	0.08	0.05	0.09	0.06	0.08	0.04	0.09	0.04	0.09
Sector	0.17*	0.10	0.24**	0.09	0.24***	0.09	0.23**	0.09	0.24**	0.09	0.24**	0.08
Intercept	0.00	0.08	-0.00	0.07	-0.00	0.08	-0.01	0.07	-0.00	0.08	-0.00	0.07
<b>RANDOM PART</b>												
Organizational level: $\sigma^2_{\omega}$	0.25	0.10	0.23	0.10	0.23	0.10	0.22	0.10	0.23	0.10	0.23	0.10
Individual level: $\sigma^2_{\epsilon}$	0.89	0.04	0.84	0.04	0.84	0.04	0.83	0.04	0.84	0.04	0.84	0.04
<b>FIT STATISTICS</b>												
Number of observations	255		255		255		255		255		255	
Pseudo-R <sup>2</sup> at the individual level	0.09		0.19		0.21		0.23		0.19		0.19	
Log restricted-likelihood	-355.39		-320.27		-318.50		-316.12		-320.27		-320.27	
Likeli. ratio chi <sup>2</sup> (null model)			30.23***		3.54*		4.75*		0.01		0.00	
			(Model 0)		(Model 1)		(Model 2)		(Model 1)		(Model 4)	

Standard coefficients (b) are computed using restricted maximum likelihood estimation method. + p < 0.10 \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001. Fit statistics are computed and compared with a full maximum likelihood estimation method. The pseudo R<sup>2</sup> is individual-level only and is based on the algorithm of Snijders and Bosker (1999).

Source: the Author

- 31 Model 0 examines the effect of covariates. Although there is no significant effect of age or education level on policy learning, women’s opinions about the liberalization policy evolved more positively, which is consistent with the theoretical expectation. The effect of respondents’ perceptions of the consensus on liberalization on policy learning is also clear: the greater these perceptions, the more likely respondents are to favor liberalization. Finally, the intraclass correlation coefficient score of 0.07 suggests that while a significant amount of variance is related to organizations, most of this variance is at the individual level; this finding demonstrates both the importance of controlling for the influence of organizations on policy learning and the urgency of improving our understanding of the psychology of policy learning.
- 32 Model 1 examines the effect of information processing. The model clearly demonstrates the relationship between belief change and preference change: when the outcomes of the liberalization policy appeared to be more positive than respondents initially expected, they also positively adjusted their preferences toward that policy (and vice versa). This effect of information processing on policy learning is very strong, as evidenced by the increase in the individual-level pseudo-R<sup>2</sup> and the significance of the likelihood ratio test.
- 33 Models 2 and 3 examine the effect of egocentrism (personal uniqueness). Model 2 demonstrates that the direct effect of egocentrism is significant, even when the effect of information processing is added: egocentric respondents’ preferences toward the liberalization policy have evolved less favorably than the preferences of their less egocentric colleagues. Model 3 focuses on the interaction effect between information processing and egocentrism, which is also significant: when policy actors are more egocentric, the relationship between their beliefs about the outcomes of the liberalization policy and their preferences towards this policy becomes weaker. It is

noteworthy, however, that the effect of egocentrism is weaker than that of information processing when looking at the fit statistics: the pseudo- $R^2$  increases, but only slightly, and the likelihood ratio test is only just significant. Nevertheless, Model 3 remains the best model for this research.

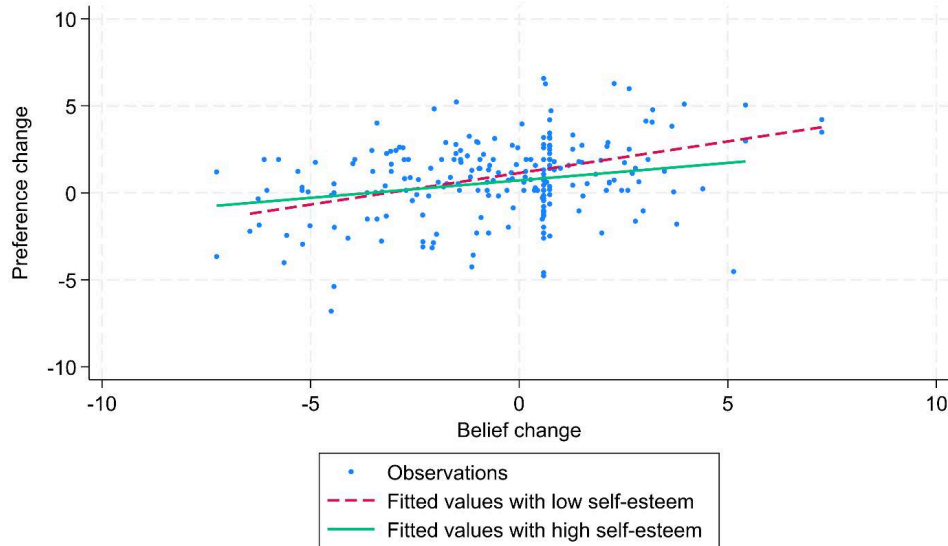
- 34 Models 4 and 5 examine the effect of self-esteem. The models rule out self-esteem as a factor in information processing and policy learning: both the direct effect and the interactive effects of self-esteem are statistically insignificant. This is confirmed by the fit statistics, which display the stability of the pseudo- $R^2$  and the insignificance of the likelihood ratio test.

## Findings

- 35 **Information processing strongly influences policy learning**—The results clearly suggest that policy actors rely on the information they acquire about policy outcomes to adjust their policy preferences over time. In doing so, the results also confirm Hypothesis 1 that policy actors make actual efforts to reduce the cognitive dissonance (Festinger, 1957) between their beliefs about the outcomes of a policy and their preferences for that policy. Another observation is that actors' preferences towards the European liberalization process have remained rather stable over time despite the implementation of this policy, which justifies a cognitive approach to policy processes: policy changes, as such, do not induce changes in belief; rather, policy actors have to change their perceptions of the policy (information acquisition) before they can adjust their beliefs about it (information processing).
- 36 However, there is a notable discrepancy between the results of the descriptive statistics (Table 2) and the regression models (Table 4): while Model 2 demonstrates the individual-level relationship between belief change and preference change (information processing, Hypothesis 1), the descriptive statistics suggest that this does not translate into a collective-level relationship between average belief change and average preference change, especially in the electricity sector, in which the former is negative and the latter positive. Further analyses provide no evidence of an interaction effect between subsystems and information processing, suggesting that individual policy actors in the rail sector do not assimilate policy information more readily than those in the electricity sector. Although the interpretation of this result requires further research, the result is consistent with past research suggesting that aggregate-level learning is not necessarily the sum of individual-level learning in collective settings due to group dynamics or organizational and institutional constraints (Dunlop & Radaelli, 2017). This result also reminds us that while policy actors acquire information and tend to align their policy preferences with this information, the assimilation of this information remains partially biased (Moysen, 2017). The added value of the present study is that it examines two sources of such bias related to the psychology of policy actors: self-esteem and egocentrism.
- 37 **Limited evidence on the effect of self-esteem**—The statistical tests do not confirm an effect of self-esteem on the relationship between belief change and policy learning. This is surprising considering the significant correlation of 0.29 between self-esteem and egocentrism (personal uniqueness). However, the test of the effect of the moderating variables should be viewed with caution given their limited power<sup>vi</sup>. Indeed, Figure 2 suggests that as policy actors' self-esteem increases, the relationship

between their beliefs about the outcomes of liberalization policies and their preferences for these policies becomes weaker. In other words, consistent with the literature on self-esteem, there is evidence to support Hypothesis 2.1 that self-esteem hampers the assimilation of policy information (see Figure 2), but this evidence is limited (see Table 4).

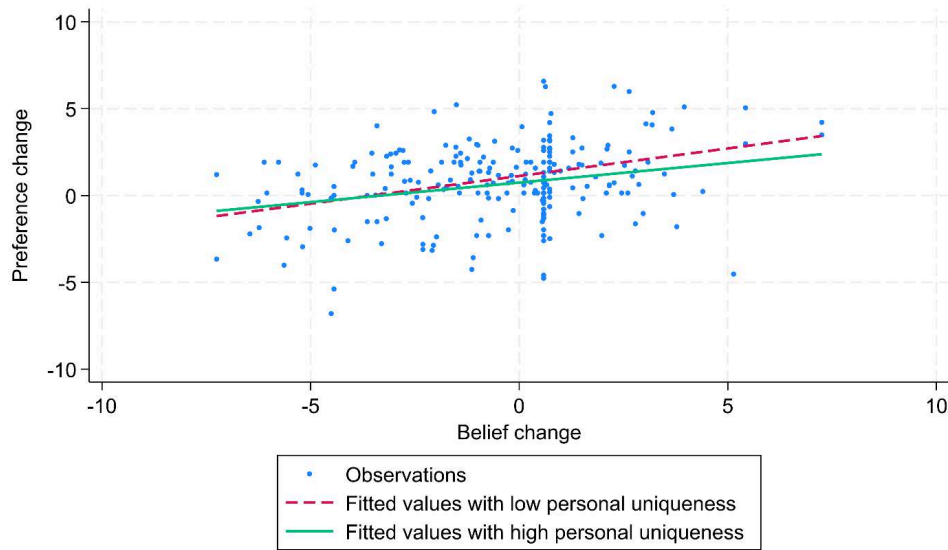
Figure 2. Moderating effect of egocentrism (personal uniqueness) on the relationship between belief change and preference change



Source: the Author

- 38 ***Egocentrism (personal uniqueness) hampers information assimilation***—The research suggests that egocentrism influences the cognitive process of information processing in policy learning. The results demonstrate that when policy actors are more egocentric, the relationship between their beliefs about the outcomes of the liberalization policy and their preferences for this policy becomes weaker. In other words, egocentrism hampers information assimilation, which confirms Hypothesis 2.2 and is illustrated in Figure 3.

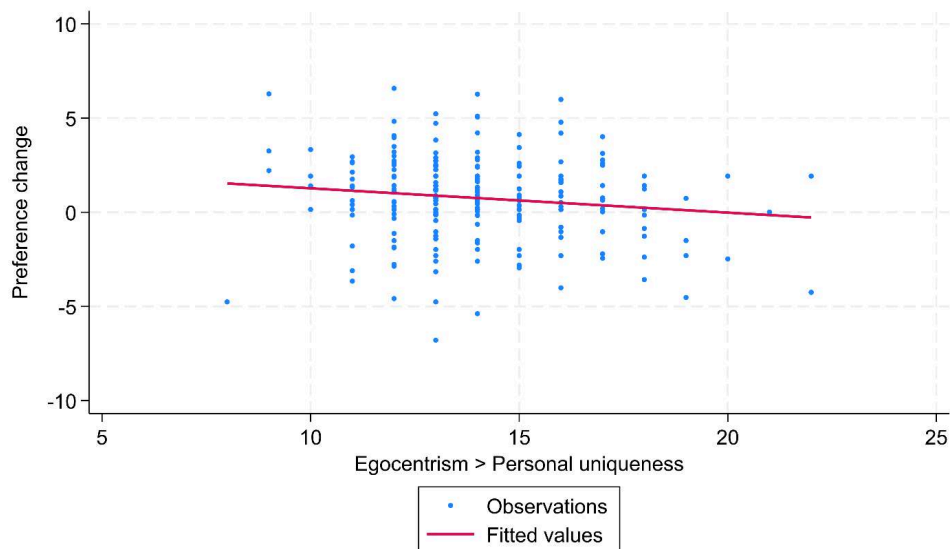
Figure 3. Moderating effect of egocentrism (personal uniqueness) on the relationship between belief change and preference change



Source: the Author

- 39 ***Egocentrism exerts a direct and negative influence on preference change***—Egocentrism also exerts a direct and negative influence on changes in policy preferences over time, a finding that was not anticipated by the theory in this research because egocentrism was not related to political ideologies. The interpretation of this finding is speculative at best. A promising avenue for further research would be to consider the literature on ‘negativity bias’ (Kanouse & Hanson, 1987; Rozin & Royzman, 2001). According to this literature, negative information that suggests the presence of risk – in this case, risk to the self – is considered (Pratto & John, 1991) and learned (Seligman, 1970) with more attention than positive information. In policy science, this means that negative policy information is trusted more than positive information in the revision of policy beliefs (Lachapelle et al., 2014). Accordingly, the weight of negative policy beliefs should be increased among people who rely more heavily on their own point of view than on the point of view of others, as illustrated in Figure 4.

Figure 4. Direct effect of egocentrism (personal uniqueness) on preference change



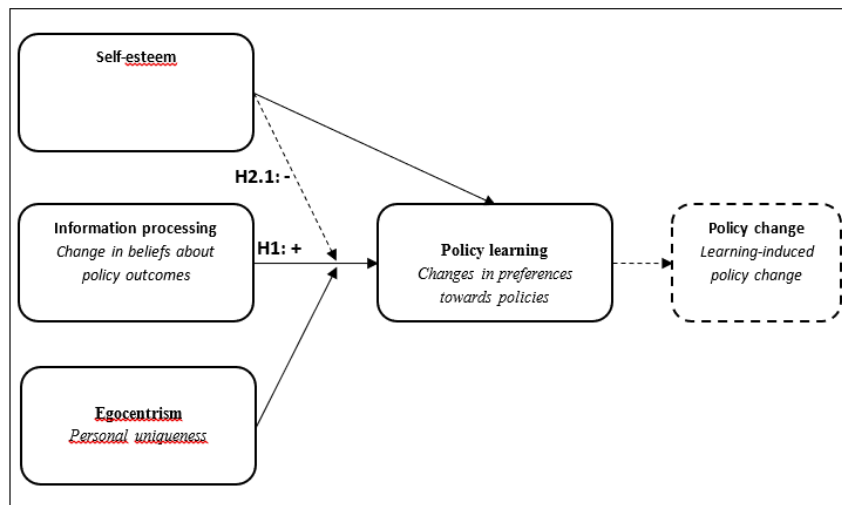
Source: the Author

## Conclusion

- 40 Policy learning is the cognitive and social dynamic through which policy actors revise their beliefs and preferences. This dynamic plays a crucial role in the permanence or transformation of relations between parties to a policy process and, in turn, in policy stability or policy change. This article has examined the influence of the self on the information processing of policy actors. In particular, it was hypothesized that egocentrism and self-esteem would increase the tendency of policy actors to adhere to their own point of view rather than to assimilate standpoint inconsistent information and adjust their own policy preferences accordingly. The test of the hypotheses was based on regression analyses of a survey conducted in 2012 among 255 Belgian policy actors who had been involved in the European policy process of liberalizing the rail and electricity sectors.
- 41 The findings of the study are threefold and are summarized in Figure 5. First, information processing is confirmed as a strong cognitive factor of policy learning: changes in beliefs about the outcomes of a policy strongly induce the alignment of policy actors' preferences towards that policy. Second, the statistical test failed to confirm the expected effect of self-esteem on policy learning. However, the power of this test is limited, and the graphical representation of the data suggests that self-esteem may nevertheless moderate the relationship between policy beliefs and policy preferences. Third, egocentrism affects policy learning in two ways. On the one hand, egocentrism is a source of biased information processing: egocentrism negatively moderates the relationship between adjustments in beliefs about policy outcomes and the subsequent alignment of policy preferences. On the other hand, egocentrism exerts a direct, negative influence on policy learning: the more egocentric policy actors are, the less positive their alignment of policy preferences is over time. Finally, the opinion

of women who perceived the liberalization policy as consensual evolved more positively.

Figure 5. Revised analytical framework of the study



Source: the Author

- 42 From a theoretical perspective, these findings confirm the need for a better understanding of the psychology of policy learning and call for future studies to look into the effects of other dimensions of egocentrism (Aalsma et al., 2006) or, more generally, other psychological triggers of policy learning. For example, individuals may feel the need to identify with others or to conform to their expectations; such ‘susceptibility to normative interpersonal influence’ impacts consumer behavior (Gopinath & Nyer, 2009) and could similarly influence policy actors’ positions. Likewise, the human need for predictability, stability and certainty, or ‘preference for consistency’ (Cialdini et al., 1995) may lead some policy actors’ to want to defend positions that are actually stable over time (‘internal consistency’) or to appear consistent to other people in doing so (‘public consistency’). Furthermore, psychological research suggests that such psychological patterns vary across cultures, which means that studying the psychology of policy learning is crucial for understanding policy-making in different social groups and institutional contexts – a key challenge of recent policy studies (e.g., Heikkila et al., 2019). Finally, the effect of gender on policy learning should be re-examined using research methods that can demonstrate the actual theoretical mechanisms explaining this effect (Petty & Wegener, 1998). Overall, a better understanding of the relationships between self-esteem or egocentrism and policy learning is an important step in the research agenda on “learning governance”, i.e., the “process by which policy actors deliberately strategize, design, and govern policy learning processes to achieve technical or political objectives” (Zaki, 2024, p. 3). Self-esteem or egocentrism can influence the effectiveness of “learning governance interventions” on actors, information and knowledge, systems and structures, as well as policy issue formation.
- 43 From a methodological perspective, the study presented in this article has several limitations that suggest directions for future research. First, assessing the individual psychology of policy actors is a challenging task. Future studies should consider

adapting measurement scales originally designed for the general public – such as those related to adolescent egocentrism – to better fit adult policy actors. Second, longitudinal research is likely to be more appropriate than cross-sectional surveys for measuring policy learning. Experiments would also help reduce the risk of overestimating information processing – social desirability is likely to push survey respondents to show that they learn from new information and experiences (Moyson & Scholten, 2018). Third, this study relied on a statistical approach, which presents potential challenges, such as issues related to statistical power. Qualitative data and/or inductive methods could help identify new psychological factors that influence information processing in specific policy-making contexts. These methods could also shed light on underlying mechanisms, such as the relationship between self-perception and policy learning, thus providing a valuable complement to statistical approaches.

- 44 In practical terms, policy research on the individual psychology of policy learning should be interpreted as an opportunity to shed light on policy actors' modes of reasoning. The findings of this study suggest that high self-esteem and/or egocentric policy actors feel that they know better: they are likely to ignore alternative but potentially relevant points of view. Existing psychological research is mixed on the possibility of 'debiasing' policy actors (e.g., on egocentrism: Eyal et al., 2018; Thomas & Jacoby, 2013). However, it is certainly possible to design institutional settings and policy-making practices, such as policy forums or regulatory impact assessments, that show the distance or proximity between what policy actors (believe they) know and their preferred policy positions. Information or evidence should also be presented in a way that relates to the pre-existing beliefs and positions of policy actors (Bundi & Trein, 2022), especially when they have more self-esteem and/or are more egocentric. Such settings and practices, in turn, are a lever for improving public policy processes from a democratic and managerial point of view.

---

## BIBLIOGRAPHY

- Aalsma, M., D. Lapsley, & Flannery, D. (2006). Personal Fables, Narcissism, and Adolescent Adjustment. *Psychology in the Schools*, 43, 481-491.
- Aberson, C., Healy, M., & Romero, V. (2000). Ingroup Bias and Self-Esteem: A Meta-Analysis. *Personality and Social Psychology Review*, 4, 157-173.
- Allison, P. (1990). Change Scores as Dependent Variables in Regression Analysis. *Sociological Methodology* 20, 93-114.
- Allison, P. (2002). *Missing Data: Quantitative Applications in the Social Sciences*. Sage.
- Anusic, I., & Schimmack, U. (2016). Stability and Change of Personality Traits, Self-Esteem, and Well-Being: Introducing the Meta-Analytic Stability and Change Model of Retest Correlations. *Journal of Personality and Social Psychology*, 110, 766-781.
- Atkinson, R., & Flint, J. (2001). Accessing Hidden and Hard-to-Reach Populations: Snowball Research Strategies. *Social Research Update*, 33, 1-8.

- Bailey, J. (2003). Self-image, Self-concept, and Self-identity revisited. *Journal of the National Medical Association*, 95, 383-386.
- Bandelow, N., Hornung, J., & Smyrl, M. (2021). Theoretical foundations of the Programmatic Action Framework (PAF). *European Policy Analysis*, 7, 14-27.
- Baumeister, R., Campbell, J., Krueger, J., & Vohs, K. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest*, 4, 1-44.
- Bédard, P. O. (2017). Understanding Evidence and Behavioral Responses: Future Directions in Evidence-Based Policy-Making. *Canadian Public Administration*, 60, 443-446.
- Bester, G. (2013). Adolescent egocentrism in a learning context. *Africa Education Review*, 10, 393-409.
- Bundi, P., & Trein, P. (2022). Evaluation use and learning in public policy. *Policy Sciences*, 55, 283-309.
- Campbell, W. K., Reeder, G. D., Sedikides, C., & Elliot, A. J. (2000). Narcissism and comparative self-enhancement strategies. *Journal of Research in Personality*, 34, 329-347.
- Caprara, G., Vecchione, M., Capanna, C., & Mebane, M. (2009). Perceived political self-efficacy: Theory, assessment, and applications. *European Journal of Social Psychology*, 39, 1002-1020.
- Chambers, J. & De Dreu, C. (2014). Egocentrism drives misunderstanding in conflict and negotiation. *Journal of Experimental Social Psychology*, 51, 15-26.
- Cialdini, R. B., Trost M.R., & Newsom, J. (1995). Preference for Consistency: The Development of a Valid Measure and Discovery of Surprising Behavioral Implications. *Journal of Personality and Social Psychology*, 69, 318-328.
- Cichocka, A. Marchlewska, M., & Cislak, A. (2024). Self- Worth and Politics: The Distinctive Roles of Self- Esteem and Narcissism. *Political Psychology*, 45, 43-85.
- Cislak, A., & Wojciszke, B. (2006). The role of self-interest and competence in attitudes towards politicians. *Polish Psychological Bulletin*, 37, 203-212.
- Costello, A. B., Osborne, J. W. (2005). Best Practices in Exploratory Factor Analysis: Four Recommendations for Getting the Most from Your Analysis. *Practical Assessment, Research and Evaluation*, 10, 1-9.
- Craney, T., & Surlis, J. (2002). Model-Dependent Variance Inflation Factor Cutoff Values. *Quality Engineering*, 14, 391-403.
- Cronbach, L. J. (1951). Coefficient Alpha and the Internal Structure of Tests. *Psychometrika*, 16, 297-334.
- Declercq, C., Vincent, A. (2000). L'ouverture du Marché De l'Electricité I. Cadre Institutionnel (The Opening of the Electricity Market I. Institutional Framework). *Courrier Hebdomadaire du CRISP*, 1684, 1-53.
- Dehousse, F., Gadisseur, F. (2002). La Libéralisation du Secteur Ferroviaire et ses Conséquences en Belgique (The Opening of the Electricity Market and its Consequences in Belgium). *Courrier Hebdomadaire du CRISP*, 1771-1772, 1-56.
- Dekker, H., & Nuus, M. (2007). Political Knowledge and its Origins, Including Cognitive Ability, Political Motivations, Political Cynicism, Political Education and Political and Civic Participation.

- In P. Massing (Ed.), *Wirkungsforschung zur Politischen Bildung Im Europäischen Vergleich* (pp. 27-44). Wochenschau Verlag.
- Dunlop, C., & Radaelli, C. (2017). Learning in the Bath-Tub: The Micro and Macro Dimensions of the Causal Relationship between Learning and Policy Change. *Policy and Society*, 36, 304-319.
- Dunlop, C., & Radaelli, C. (2018). Does Policy Learning Meet the Standards of an Analytical Framework of the Policy Process? *Policy Studies Journal*, 46, S48-S68.
- Dunlop, C., C. Radaelli, & Trein, P. (2018). The Family Tree of Policy Learning. In C. Dunlop, C. Radaelli & P. Trein (Eds.), *Learning in Public Policy: Analysis, Modes, and Outcomes* (pp. 1-25). Palgrave Macmillan.
- Elkind, D. (1967). Egocentrism in Adolescence. *Child Development*, 38, 1025-1034.
- European Commission. (1999). Liberalisation of Network Industries. Economic Implications and Main Policy Issues. In *Secondary Liberalisation of Network Industries. Economic Implications and Main Policy Issues*. European Commission.
- Eyal, T., M. Steffel, & Epley, N. (2018). Perspective Mistaking: Accurately Understanding the Mind of Another Requires Getting Perspective, Not Taking Perspective. *Journal of Personality and Social Psychology*, 114, 547-571.
- Festinger, L. (1957). *A Theory of Cognitive Dissonance*. Stanford, CA: Stanford University Press.
- Frankenberger, K. (2000). Adolescent egocentrism: a comparison among adolescents and adults. *Journal of Adolescence*, 23, 343-54.
- Gaberhart, K., Fullerton, A., Crawford, A., & Weible, C. (2023). How are emotions and beliefs expressed in legislative testimonies? An advocacy coalition approach. *Review of Policy Research, Online*, 1-26.
- Galanaki, E. (2012). The Imaginary Audience and the Personal Fable, A Test of Elkind's Theory of Adolescent Egocentrism. *Psychology*, 3, 457-466.
- Genoud, C. (2004). Libéralisation et Régulation des Industries de Réseau: Diversité dans la Concurrence? (Liberalization and Regulation of Network Industries : Diversity in the Competition?). *Revue internationale de politique comparée*, 11, 187-204.
- George, D., & Mallery, P. (2003). *Spss for Windows Step by Step: A Simple Guide and Reference*. 11.0 Update. 4th ed. Allyn & Bacon.
- Glachant, J.-M., & Perez, Y. (2011). The Liberalization of Electricity Markets. In M. Finger & R.W. Künneke (Eds), *International Handbook of Network Industries. The Liberalization of Infrastructure* (pp. 162-178). Edward Elgar.
- Gopinath, M., & Nyer, P.U. (2009). The Effect of Public Commitment on Resistance to Persuasion: The Influence of Attitude Certainty, Issue Importance, Susceptibility to Normative Influence, Preference for Consistency and Source Proximity. *International Journal of Research in Marketing*, 26, 60-68.
- Harmon-Jones, E., D. Amodio, Harmon-Jones, C. (2009). Action-Based Model of Dissonance. *Advances in Experimental Social Psychology*, 41, 119-166.
- Heikkila, T., Berardo, R., Weible, C. M., & Yi, H. (2019). A Comparative View of Advocacy Coalitions: Exploring Shale Development Politics in the United States, Argentina, and China. *Journal of Comparative Policy Analysis*, 21, 151-166.
- Heikkila, T., & Gerlak, A. K. (2013). Building a Conceptual Approach to Collective Learning: Lessons for Public Policy Scholars. *Policy Studies Journal*, 41, 484-512.

- Heikkilä, T., & Gerlak, A. K. (2024). *Learning in Environmental Governance*. Cambridge University Press.
- Hershberger, S. (2005). Factor scores. In B. Everitt & D. Howell (Eds.), *Encyclopedia of statistics in behavioral science* (pp. 636-644). John Wiley.
- Holland, R., B. Verplanken, & van Knippenberg, A. (2003). From Repetition to Conviction: Attitude Accessibility as a Determinant of Attitude Certainty. *Journal of Experimental Social Psychology, 39*, 594-601.
- Hornung, J., Bandelow, N. & Vogeler, C. (2019). Social identities in the policy process. *Policy Sciences, 52*, 211–231.
- Hox, J. (2022). *Multilevel Analysis: Techniques and Applications*. Routledge.
- Jackson, J. (2022). Enhancing Self-Efficacy and Learning Performance. *The Journal of Experimental Education, 70*, 243-254.
- Janson, C. (1990). Retrospective Data, Undesirable Behavior and the Longitudinal Perspective. In D. Magnusson & L. Bergman (Eds.), *Data Quality and Longitudinal Research* (pp. 100-121). Cambridge: Cambridge University Press.
- Jones, B., & Baumgartner, F. (2012). From There to Here: Punctuated Equilibrium to the General Punctuation Thesis to a Theory of Government Information Processing. *Policy Studies Journal, 40*, 1-20.
- Kahan, D. (2013). Ideology, Motivated Reasoning, and Cognitive Reflection. *Judgement and Decision Making, 8*, 407-424.
- Kahneman, D. (2011). *Thinking, Fast and Slow*. New York, NY: Farrar, Straus and Giroux.
- Kanouse, D. E., Hanson, L. (1987). Negativity in Evaluations. In E. E. Jones, D. E. Kanouse, H. H. Kelley, R. E. Nisbett, S. Valins, & B. Weiner (Eds.), *Attribution: Perceiving the Causes of Behavior* (pp. 47-62). General Learning Press.
- Kelley, C., Jacoby, L. (1996). Adult Egocentrism: Subjective Experience Versus Analytic Bases for Judgement. *Journal of Memory and Language, 35*, 157-175.
- Kesselring, T., & Müller, U. (2011). The Concept of Egocentrism in the Context of Piaget's Theory. *New Ideas in Psychology, 29*, 327-345.
- Kline, R. (2005). *Principles and Practice of Structural Equation Modeling*. Guilford Press.
- Krueger, J., K. Vohs, & Baumeister, R. (2008). Is the Allure of Self-Esteem a Mirage after All?. *American Psychologist, 63*, 64-65.
- Kunda, Z. (1990). The Case for Motivated Reasoning. *Psychological Bulletin, 108*, 480-498.
- Kvavilashvili, L., J. Mirani, S. Schlagman, & Kornbrot, D. (2003). Comparing Flashbulb Memories of September 11 and the Death of Princess Diana: Effects of Time Delays and Nationality. *Applied Cognitive Psychology, 17*, 1017-1031.
- Lablih, M., Bundi, P., & Portmann, L. (2024). Does Anxiety Increase Policy Learning? *Policy Studies Journal, Online*, 1-20.
- Lachapelle, E., Montpetit, E., & Gauvin, J.-P. (2014). Public Perceptions of Expert Credibility on Policy Issues: The Role of Expert Framing and Political Worldviews. *Policy Studies Journal, 42*, 674-697.

- Lapsley, D., & Stey, P. (2011). Narcissism. In R. Levesque (Ed), *Encyclopedia of Adolescence* (pp. 1835-1844). Springer.
- Leach, W., C. Weible, S. Vince, S. Siddiki, & Calanni, J. (2014). Fostering Learning through Collaboration: Knowledge Acquisition and Belief Change in Marine Aquaculture Partnerships. *Journal of Public Administration Research and Theory*, 24, 591-622.
- Marchlewska, M., Castellanos, K., Kofta, M., Lewczuk, K., & Cichocka, A. (2019). My way or the highway: High narcissism and low self-esteem predict decreased support for democracy. *British Journal of Social Psychology*, 58(3), 591-608.
- Markus, H., Smith, J., & Moreland, R. (1985). Role of the self-concept in the perception of others. *Journal of Personality and Social Psychology*, 49, 1494-1512.
- Montpetit, E., & Lachapelle, E. (2017). Policy Learning, Motivated Scepticism, and the Politics of Shale Gas Development in British Columbia and Quebec. *Policy and Society*, 36, 195-214.
- Morf, A., Sandström, A., & Söderström, S. (2023). Exploring Enablers and Obstacles to Policy-oriented Learning in Swedish Marine National Park Planning. *Environmental Policy and Governance*, 33, 17-30.
- Moynihan, D. (2008). Learning under Uncertainty: Networks in Crisis Management. *Public Administration Review*, 68, 350-365.
- Moyson, S. (2017). Cognition and Policy Change: The Consistency of Policy Learning in the Advocacy Coalition Framework. *Policy and Society*, 36, 320-344.
- Moyson, S. (2018). Policy Learning over a Decade or More and the Role of Interests Therein: The European Liberalization Policy Process of Belgian Network Industries. *Public Policy and Administration*, 33, 88-117.
- Moyson, S., & Scholten, P. (2018). Theories on Policy Learning: Existing Approaches and Future Challenges. In N. Dotti (Ed.), *Knowledge, Policymaking and Learning for European Cities and Regions: From Research to Practice* (pp. 27-43). Edward Elgar Publishing.
- Moyson, S., P. Scholten, & Weible, C. (2017). Policy Learning and Policy Change: Theorizing Their Relations from Different Perspectives. *Policy Studies Journal*, 36, 161-177.
- Neisser, U., E. Winograd, E. Bergman, C. Schreiber, S. Palmer, & Weldon, M. (1996). Remembering the Earthquake: Direct Experience Vs. Hearing the News. *Memory*, 4, 337-358.
- Nohrstedt, D., Ingold, K., Weible, C., Koebele, E., Olofsson, K., Satoh, K., & Jenkins-Smith, H. (2023). The Advocacy Coalition Framework: Progress and Emerging Areas. In C. M. Weible (Ed.), *Theories of the Policy Process* (Fifth Edition). Taylor & Francis.
- Nowicka, M., Wójcik, M., Kotlewska, I., Bola, M., & Nowicka, A. (2018). The impact of self-esteem on the preferential processing of self-related information: Electrophysiological correlates of explicit self vs. other evaluation. *PLoS ONE*, 13, e0200604.
- Nowlin, M.C. (2021). Policy Learning and Information Processing. *Policy Studies Journal*, 49, 1019-1039.
- Petty, R. E., & Wegener, D. T. (1998). Attitude Change: Multiple Roles for Persuasion Variables. In D. Gilbert, S. Fiske & G. Lindzey (Eds.), *The Handbook of Social Psychology* (pp. 323-390) (4th ed. Vol. 1). McGraw-Hill.
- Piaget, J. (1920). La Psychanalyse dans ses Rapports avec la psychologie de l'Enfant [Psychoanalysis and Child Psychology]. *Bulletin mensuel de la Société Alfred Binet*, 20, 18-34.

- Pierce, J. (2021). Emotions and the policy process: Enthusiasm, anger and fear. *Policy & Politics*, 49(4), 595-614.
- Pratto, F., & John, O.P. (1991). Automatic Vigilance: The Attention-Grabbing Power of Negative Social Information. *Journal of Personality and Social Psychology*, 61, 380-391.
- Radloff, T.D. (2007). Measuring the Impact of Higher Education on Racial Prejudice and Opposition to Race-Based Policy *New York Sociologist*, 2.  
<http://newyorksociologist.org/vol2-table.html>.
- Rai, R., P. Mitchell, T. Kadar, & Mackenzie, L. (2016). Adolescent Egocentrism and the Illusion of Transparency: Are Adolescents as Egocentric as We Might Think?. *Current Psychology*, 35, 285-294.
- Renninger, K., & Hidi, S. (2022). Interest development, self-related information processing, and practice. *Theory Into Practice*, 61, 23-34.
- Rentzch, K., & Schröder-Abé, M. (2018). *Stability and Change in Domain-Specific Self-Esteem and Global Self-Esteem*. *European Journal of Personality*, 32, 353-370.
- Roediger, H. (2012). The Curious Complexity between Confidence and Accuracy in Reports from Memory. In L. Nadel & W. Sinnott-Armstrong (Eds.), *Memory and Law* (pp. 84-117). Oxford University Press.
- Rosenberg, M. (1965). *Society and the Adolescent Self Image*. Princeton University Press.
- Rozin, P., & Royzman, E. B. (2001). Negativity Bias, Negativity Dominance, and Contagion. *Personality and social psychology review*, 5, 296-320.
- Sabatier, P. (1993). Policy Change over a Decade or More. In P.A. Sabatier & H.C. Jenkins-Smith (Eds.), *Policy Change and Learning. An Advocacy Coalition Approach* (pp. 13-39). Westview Press.
- Sabatier, P., & Weible, C. M. (2007). The advocacy coalition framework: Innovations and clarifications. In P. Sabatier (Ed.), *Theories of the policy process* (pp. 189-222). Westview Press.
- Schunk, D., & Zimmerman, B. (2003). Self-regulation and Learning. In W. Reynolds, G. Miller & Weiner (Eds), *Handbook of psychology* (pp.59-78). John Wiley & Sons.
- Sedikides, C., & Gregg, A. (2008). Self-enhancement: Food for thought. *Perspectives on Psychological Science*, 3, 102-116.
- Seligman, M. (1970). On the Generality of the Laws of Learning. *Psychological Review*, 77, 406-418.
- Simon, H.A. (1991). Bounded Rationality and Organizational Learning. *Organization Science*, 2, 125-134.
- Snijders, T. A. B., & Bosker, R. (1999). *Multilevel Analysis. An Introduction to Basic and Advanced Multilevel Modeling*. Sage.
- Tafarodi, R., & Milne, A. (2002). Decomposing Global Self-Esteem. *Journal of Personality*, 70, 443-484.
- Tafarodi, R., Marshall, T., & Milne, A. (2003). Self-esteem and memory. *Journal of Personality and Social Psychology*, 84, 29-45.
- Tajmirriyahi, M., Ta, V., & Ickes, W. (2020). Measuring Egocentrism as a Trait-Like Personality Attribute: The Development and Validation of the Egocentrism Scale. *Psychological Studies*, 65, 481-488.
- Thomas, R., and L. Jacoby. (2013). Diminishing Adult Egocentrism When Estimating What Others Know. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 39, 473-486.

Trein, P., & Vagionaki, T. (2022). Learning heuristics, issue salience, and polarization in the policy process. *West European Politics*, 45, 906-929.

Vagionaki, T., & Trein, P. (2020). Learning in Political Analysis. *Political Studies Review*, 18, 304-319.

Van Schie, C., Cook, J., Elzinga, B., & Ly, V. (2023). A boost in self-esteem after positive social evaluation predicts social and non-social learning. *Royal Society Open Science*, 10, 230027.

Yaniv, I., & Choshen-Hillel, S. (2012). Exploiting the Wisdom of Others to Make Better Decisions: Suspending Judgment Reduces Egocentrism and Increases Accuracy. *Journal of Behavioral Decision Making*, 25, 427-434.

Zaki, B. (2024). Policy learning governance: a new perspective on agency across policy learning theories. *Policy & Politics*, Online, 1-18.

Zaki, B., Wayenberg, E., & George, B. (2022). A Systematic Review of Policy Learning: Tiptoeing through a Conceptual Minefield, *Policy Studies Yearbook*, 12, 1-52.

Zamir, E., & Sulitzeanu-Kenan, R. (2018). Explaining Self-Interested Behavior of Public-Spirited Policy Makers. *Public Administration review*, 78, 579-592.

Zeigler-Hill, V. (2013). *Self-Esteem*. Psychology Press.

## APPENDIXES

### Appendix – Composite variables of the study

**Table 5. Items of change in policy preferences in the rail sector (dependent variable)**

Change scores: Change between 1997 and 2012 in respondents' favourableness to...	Mean	Std Dev	Correlation with Total	Alpha without this variable
The introduction of competition in the railway transport of freight	0.02	0.89	0.48	0.48
The introduction of competition in the international railway transport of passengers	0.06	0.89	0.53	0.45
The unbundling of operations on, and management of, the railway infrastructure	-0.09	0.97	0.26	0.65
The application of regulation by independent regulatory bodies in the rail sector	0.06	0.89	0.34	0.59
Total Cronbach coefficient alpha: 0.61				

**Table 6. Items of change in policy preferences in the electricity sector (dependent variable)**

	Mean	Std Dev	Correlation with Total	Alpha without

Change scores Change between 1999 and 2012 in respondents' favourableness to...				this variable
The introduction of competition in the generation and supply of high-voltage electricity (professional customers)	-0.07	0.97	0.63	0.51
The introduction of competition in the generation and supply of low-voltage electricity (households)	-0.37	1.17	0.55	0.56
The unbundling of generation/supply and transport/distribution of electricity	-0.21	1.02	0.40	0.66
The application of regulation by independent regulatory bodies in the electricity sector	-0.57	1.00	0.31	0.72
Total Cronbach Coefficient Alpha: 0.69				

Table 7. Items of change in beliefs about policy outcomes in the rail sector

Change scores Change between 1997 and 2012 in respondents' opinions about the impact of the liberalization policy on...	Mean	Std Dev	Correlation with Total	Alpha without this variable
Quality	0.06	0.88	0.59	0.72
Safety (personnel and population)	-0.17	1.06	0.67	0.67
Prices	-0.46	1.00	0.44	0.79
Competition	-0.22	0.99	0.63	0.69
Total Cronbach Coefficient Alpha: 0.78				

Table 8. Items of change in beliefs about policy outcomes in the electricity sector

Change scores Change between 1999 and 2012 in respondents' opinions about the impact of the liberalization policy on...	Mean	Std Dev	Correlation with Total	Alpha without this variable
Regularity and reliability of supply	-0.15	0.86	0.52	0.78
Safety (personnel and population)	-0.13	0.66	0.64	0.74
Prices for middle and large professional clients	-0.64	1.17	0.78	0.67
Prices for small professional clients and households	-0.98	1.34	0.84	0.64

Competition	-0.42	1.12	0.75	0.69
Total Cronbach Coefficient Alpha: 0.75				

**Table 9. Items of egocentrism > personal uniqueness**

Do you agree with the following statements?	Mean	Std Dev	Correlation with Total	Alpha without this variable
The way I view the world is very different from the way others view the world.	2.91	0.92	0.36	0.50
I don't talk about my feelings because no one would understand them.	2.35	0.93	0.27	0.58
I am very different from my friends.	2.59	0.86	0.42	0.45
Most people understand me very well. [reversed item]	-3.69	0.69	0.41	0.48
Total Cronbach Coefficient Alpha: 0.60				

**Table 10. Items of self-esteem**

Do you agree with the following statements?	Mean	Std Dev	Correlation with Total	Alpha without this variable
I feel that I am a person of worth, at least on an equal level with others.	4.17	0.67	0.43	0.69
I feel that I have a number of good qualities.	4.10	0.44	0.54	0.62
I have a positive attitude towards myself.	3.97	0.51	0.54	0.61
On the whole, I am satisfied with myself.	3.88	0.57	0.48	0.64
Total Cronbach Coefficient Alpha: 0.70				

## ENDNOTES

i. Within each participating organization, I included in the survey all members from the highest to the lowest organizational level where, according to the interviewees, at least several actors could be identified as relevant respondents for my survey. I applied this 'hierarchical correction' (i.e., including all people at the lowest relevant hierarchical level) to compensate for the tendency of the snowball sampling procedure to over-represent 'well-connected' actors and under-represent 'unconnected' actors (Atkinson & Flint, 2001). The following types of

organizations were invited to participate in the survey in each sector: all competent public administrations, all competent regulatory agencies, the infrastructure manager, the incumbent, all new entrants, the interest groups representing workers (e.g., trade unions or train drivers' associations) and the different types of companies (e.g., association of public sector train companies or associations of green producers). The organizational and individual response rates were fairly similar for each type of organization.

ii. The exploratory factor analysis (EFA: Costello & Osborne, 2005) used principal axis factoring. This method is appropriate when the items are not normally distributed (Shapiro-Wilk tests were conducted on each change score and rejected the normality hypothesis in nearly all cases). Factors with eigenvalues higher than 1.0 were retained: Factors 1 and 2 had eigenvalues of 1.34 and 0.02 in the rail sector, and they had eigenvalues of 1.47 and -0.01 in the electricity sector. After rotation, all items had loadings equal to or higher than 0.33. Most researchers consider 0.30 to be a reasonable cut-off value for deciding whether or not to retain an item in a factor. Hence, the four items were retained for each of the two sectors. Confirmatory factor analysis (CFA: Kline, 2005) was performed using a maximum likelihood procedure. The initial values of the parameters were set to one, except for the covariance parameters, which were set to 0.5. This strategy is appropriate when working with standardized variables with positive covariances. Factor scores were computed using the Bartlett method, as this method provides unbiased scores (Hershberger, 2005). In general, good model fit is indicated by root mean square error of approximation (RMSEA) values lower than 0.60, comparative fit index (CFI) values higher than 0.90, standardized root mean square residual (SRMR) values lower than 0.08, and chi squared test p values higher than 0.05 (i.e., failure to reject the null hypothesis of good fit). Note, however, that RMSEA = 0.00 and CFI = 1.00 may indicate that  $\chi^2 < df$  rather than that there is a perfect fit.

iii. It could further be hypothesized that egocentrism and self-esteem themselves are related to conviction and/or attitude certainty, which in turn could influence the results of the analyses. Indeed, self-esteem is significantly correlated with confidence in the recollection of past preferences (0.15;  $\alpha = 0.003$ ) and current preferences (0.19;  $\alpha = 0.0001$ ) (egocentrism is not). However, the means for both egocentrism and self-esteem are pretty similar between the two groups of respondents – the 32 respondents who were removed (means = 15.4 and 4.23) and the 255 respondents who were sufficiently convinced (means = 16.00 and 4.16) – with none of the t-tests comparing means yielding a significant result. In addition, all analyses were repeated with the 32 removed respondents and yielded similar results.

iv. In the exploratory factor analysis, factors 1 and 2 had eigenvalues of 1.84 and 0.05, respectively, in the rail sector, and they had eigenvalues of 2.02 and 0.12, respectively, in the electricity sector. After rotation, all items had loadings equal to or higher than 0.40.

v. In each sector, the two intermediate variables have Cronbach's alpha ( $\alpha$ ) coefficients equal to or higher than 0.71, except for the evolution in respondents' beliefs about policy outcomes in the railway sector ( $\alpha = 0.62$ ). Deleting change score 3 ('The unbundling of operations on and management of railway infrastructure') slightly increases the  $\alpha$  of this variable to 0.66. There are, however, two reasons to keep the four-item structure. First,  $\alpha$ 's are not weighted, whereas factor scores depend on the loading of each item that comprises the factor structure. In this research, the CFA fit statistics indicate a very good fit. This suggests that change score 3 can be retained. Second, the four-item structure is grounded in the literature on the European liberalization process of network industries, which suggests that this structure is more representative of this policy than the shorter structures (Genoud, 2004).

vi. The power of a statistical test may be defined as the probability of detecting a relationship that actually exists in the population, i.e., the probability of not committing a Type II error (see, e.g., Scherbaum & Ferrer, 2009). PowerUpR, an online software for assessing power in multilevel models, suggests that the power of the tests in Models 1, 2, and 4 is approximately 0.70, which is close to the standard suggested by Hox (2002, p. 241). In Models 3 and 5, in

contrast, the power of the test of the moderating variables is only 0.45. In other words, if the effect is not detected by the test, there is still more than a 50% chance that it exists in the population.

## ABSTRACTS

Policy learning is a key mechanism of policy change through which policy actors revise their beliefs and preferences over time as a result of social interactions and new information. The individual psychology of policy actors is crucial to understanding how institutional settings and social practices influence policy learning. This article looks at the effects of self-esteem—i.e., how policy actors value themselves—and egocentrism—i.e., their tendency to confuse their subjective perceptions with objective reality and to disqualify the perceptions of others.

Based on regression analyses of a 2012 survey of 255 Belgian policy actors who had been involved in the European liberalization process of the rail and electricity sectors, the findings suggest that policy actors who score higher on self-esteem or egocentrism feel that they “know better”: they align their policy preferences to new policy information less than policy actors who score lower. Only egocentrism directly leads to a negative adjustment of policy actors’ preferences towards liberalization policies over time. The theoretical and practical implications of these findings are discussed. They shed light on policy actors’ modes of reasoning and are thus an important step in the research agenda on “learning governance”.

## INDEX

**Keywords:** egocentrism, policy learning, policy process, psychology, self-esteem

## AUTHOR

**STÉPHANE MOYSON**

Université catholique de Louvain (Belgium)

<https://orcid.org/0000-0002-6564-2309>