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Article

Mapping elementary students' understandings of the police

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Keywords: police, social institutions, phenomenography, civics, teaching

Highlights:

– Research on conceptual change in civics is needed.

– Phenomenography is useful for mapping different ways of understanding a particular concept, in this case, the different ways elementary students understand the police.

– Civics teaching can benefit from mapping understandings of phenomena such as different social institutions.

Purpose: Investigate first- to third-graders' understandings of the police.

Design/methodology/approach: Phenomenography is used to analyze elementary students' understandings of the police as a social institution

Findings: The results indicate three qualitatively different ways of understanding the police. The police as: attributes, activities and as a part of the democratic welfare state.

Practical implications: Civics teaching that aims to develop students' understandings of the police can benefit from taking the three different ways of understanding into consideration.

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1 INTRODUCTION

A high level of trust among citizens in social institutions[1], such as the police, healthcare, and schools, is seen as central to a well-functioning democracy (Dinesen, 2012; Rothstein, 2001, 2013; Rothstein & Stolle, 2008). Schools are recognized as key actors in providing a good education regarding the role of these institutions in a democratic society (Biesta, 2011; Geboers et al., 2013; Osler & Starkey, 2006; Sandahl et al., 2022; Sant, 2019). In Sweden, teaching about social institutions and democracy is supposed to start as early as when the children enter compulsory school at age seven (Swedish National Agency for Education, 2022). However, there is a need for more educational research on how younger students understand social institutions in order to develop better elementary school civics teaching (Hansen, 2020; Kenner, 2020; Löfström, 2019; Sandahl et al., 2022; Straub & Ravez, 2020). Consequently, this article presents an empirical study of how young citizens view the central establishments in the society surrounding them. This is done by examining Swedish first- to third-grade (aged 7-9) students' understandings of the police as a social institution using a phenomenographic theoretic framework.

In curricula, both internationally and in Sweden, social institutions play a crucial role in the civics syllabus[2], which outlines how students should understand why these institutions exist and how they are structured and function (Löfström & Grammes, 2020; Swedish National Agency for Education, 2019;). More recently, there has also been a trend in curricula in many countries, including Sweden, to place an even greater emphasis on students' understanding of facts, in social science, most prominently the understanding of central concepts (Priestley et al., 2021; Sandahl et al., 2022; Swedish National Agency for Education, 2022).

Research on younger students' understandings of society and, furthermore, on the development of teaching given these understandings, has to some extent been deprioritized compared to studies concerning civics education for adolescents/young citizens (K. Andersson, 2015, 2020; Campbell, 2008; Hess & McAvoy, 2015; Persson et. al., 2019; Torney-Purta et al., 2001). Some of these studies take teaching into account and the results show that developing democratic values, knowledge about society, and trust in social institutions is positively affected by an open, inclusive classroom climate; for example, when discussing civic virtues, it seems important that students' opinions are respected (Amnå et al., 2010; Campbell, 2008; Torney-Purta et al., 2001). Other studies have investigated this relationship more thoroughly and developed and/or tested how the open conversation in the classroom, known as deliberation, can best be shaped to increase democratic values among students (K. Andersson, 2015, 2020; Biesta, 2011; Geboers et al., 2013; Hess & McAvoy, 2015; Persson et al., 2019). For upper secondary school students, there are also recurring international measurements of civic competence: democratic values, trust in politicians and institutions, trust in one's own skills and communication abilities, political knowledge, and political engagement (Amnå et al., 2010; Geboers et al., 2013; Torney-Purta, 2001). Further, youth culture studies have investigated adolescents' and young adults' attitudes to and life in society (Gibson, 2020; Swalwell & Payne, 2019). However, as with other civics education research, youth culture research focuses on

[1] Political scientists define social institutions as structures, with an accompanying organization, that have a regulatory framework which in turn gives rise to patterns of behavior over time (Lundqvist, 1998; Rothstein, 1994), exemplifying the most basic ones as courts, the police, schools, and healthcare (U. Andersson & Oscarsson, 2020).

[2] In this article, we use civics as a synonym for the Swedish elementary school subject of "Samhällskunskap", a subject based on the disciplines of political science, sociology, and economics.

adolescents and, in addition, makes discursive claims rather than surveying children's understandings (Blevins & LeCompte, 2015; Clay & Rubin, 2020; Mitra & Serriere, 2015).

Even though research on, for example, deliberation in civics teaching above all focuses on upper secondary school students, there are examples of studies in North American contexts examining students in elementary grades (Beck, 2003, 2005). Generally, there seems to have been a more profound research interest in younger students' views about social science concepts in North America (see below) compared to Europe. This has also been acknowledged in country reports from European countries identifying challenges for civics education and research on civics education in Europe, especially on young children's understandings of core civics concepts (Hansen, 2020; Kenner, 2020; Löfström, 2019; Straub & Ravez, 2020). In Sweden, Sandahl et al. (2022) have highlighted the scarcity of studies involving children of younger ages with a focus on conceptual understanding and conceptual development.

However, the research most relevant to review for the aim of this article is found in the broader field of *conceptual change*. The literature on conceptual change has a long tradition and is rooted in various theoretical frames (Özdemir & Clark, 2007). A lot of studies deal with the puzzle of whether individuals in their understandings of a concept move from misunderstandings to science-based understandings, or whether such understandings can be held simultaneously (Duit & Treagust, 2003). There are also several competing models regarding the process of conceptual change (Carey, 2000; Vosniadou, 2007; Wiser & Amin, 2001). However, before getting into the process of changing conceptual understandings, some kind of classification or mapping of existing understandings has to be carried out (Halldén, 1997). The absolute majority of studies mapping students' conceptual understandings have been conducted in science and math and fewer deal with social concepts/phenomena. Lundholm and Davis (2013), who carried out an overview of this research on concept understandings among students, stated that "[t]he evidence base for conceptual change in social science is thin" (p. 288). Though there are some studies, for example in geography, most of them focus on natural geographic phenomena and geoscience education (Cheek, 2010; Dove, 2016; Lane et al., 2019; Sexton, 2012) and few on students' understandings of socially oriented concepts, such as sustainable development (Jackson & Pang, 2017; Jackson et al., 2016). Most of the publications also target upper secondary students' perceptions and not those of elementary school students. On a similar note, a focus on older students' understanding of concepts is dominant in studies of conceptual change in history education (Halldén, 1997; Limón, 2002). In particular, upper secondary students' understandings of so-called first-order concepts (propositional concepts, such as "king"), compared to their understandings of second-order concepts (disciplinary concepts, such as establishing "historical significance"), have been studied (Stoel, 2015; Van Boxtel & Van Drie, 2018).

There are, however, a number of studies that look explicitly at civics concepts, in particular, Avery's (1988, 1992), Beck's (2003), Hahn's (1998), Helwig's (1995), and Turiel's (1983) seminal work on students' views of political tolerance, becoming political, identity, civil liberties, and moral thinking. As mentioned above, research on American elementary social studies teaching has been carried out by some pioneers such as Brophy and Alleman (2005, 2009), who recurrently discuss the subject's potential. However, it has also been suggested in this context that more studies are needed that take into account the diverse and ever-changing population of elementary schools (children of colour and children from low-income households; Falkner, 2020; Halvorsen, 2017). Further, concepts from economics have been studied (Webley, 2005), paving the way for more studies of students' understandings of economic and financial concepts (Collins & Odders-White, 2015; Remmele & Seeber, 2012). There are also Nordic researchers who, building on this work,

investigate concepts relating to economics and the welfare state in Swedish civics teaching, but once again with a solid focus on adolescents/upper secondary students' perceptions (M. Björklund & Sandahl, 2020; Jansson et al., 2023; Johansson & Sandahl, 2024; Jägerskog et al., 2019). Some studies, at least in part, focus on younger students' views, but they are aimed at concepts other than the one at the centre of this article, such as value and distributive justice (M. Björklund et al., 2022; Tväråna, 2018). Thus, this article aims to carry on this, in our view, a much-needed tradition of research on conceptual understanding, systematically examining first- to third-graders' understandings of social institutions and linking these understandings to teaching in the subject of civics.

2 AIM OF THE STUDY

The argument of the study presented here is in short that citizens' trust in social institutions is essential for a thriving democracy (Dinesen, 2012; Rothstein, 2001, 2013; Rothstein & Stolle, 2008) and that schools are key players in developing citizens' understanding of these social institutions in a democratic society (Biesta, 2011; Geboers, et al., 2013; Osler & Starkey, 2006; Sandahl et al., 2022; Sant, 2019). However, today we do not know enough about how students in Grades 1-3 (aged 7-9) understand these institutions and how education and teaching can be designed to develop these students' understandings. In light of this, the purpose of our study is to contribute knowledge about how students in Grades 1-3 understand social institutions and how teaching based on this knowledge can be designed to develop their understanding. In the study, we do this by empirically investigating how students in Grades 1-3 in Sweden understand one social institution, the police. The research question is:

- How do students in Grades 1-3 (aged 7-9) in Sweden understand the social institution of the police?

In the next section, we will present the theoretical and methodological framework used in the article, phenomenography. In short, this framework was developed in order to achieve what is aimed in this study: to investigate students' understandings of subject-specific phenomena and, from that, develop teaching to assist the students' learning.

3 THEORY

The theoretical basis for our study is phenomenography (Marton, 2015). Phenomenography's object of investigation is humans' way of understanding, experiencing or seeing different phenomena. Phenomenography assumes that there are a limited number of different *ways of understanding* a certain phenomenon among humans as a collective. As a research task, phenomenography aims to map and describe the different ways in which a particular phenomenon is understood by a particular group of people. According to phenomenography, a specific understanding of a phenomenon is made up of different discerned *aspects* of the phenomenon and different discerned *values* within these aspects. Thus, each different understanding can be described in terms of which aspect of the phenomenon, and which values within that aspect have been focused and discerned.

According to phenomenography, the different ways of understanding a phenomenon are logically related, as they are different ways of understanding the same phenomenon and can, therefore, also be categorized in an *outcome space* (Marton, 2015). The outcome space describes, at a collective level, the experience of the particular phenomenon by the studied group of people.

Typically, the different understandings in the outcome space can be placed in a hierarchy, where simpler understandings precede more complex or developed understandings.

In our case, this means that we assume that at the collective level, among Swedish compulsory school students Grades 1-3, there are a limited number of different ways of understanding the phenomenon of the police. These different ways of understanding the police can further be described in terms of distinct aspects and values within these aspects and categorized in a hierarchical outcome space.

Phenomenographic theory can be placed in a teaching context (Marton, 2015). In this respect, the phenomenographer argues that the central aspects and values defining the phenomenon must be made accessible to the students. This should be done by means of the teacher introducing students to systematic variation, in the form of specific patterns of variation with regard to the central aspects and their values, beginning with the easiest, most elemental aspect and its values (Larsson, 2021). Most basically, the systematic patterns of variation should focus on each aspect separately and make them distinguishable by contrasting values within the aspect and making each value's uniqueness distinct.

In our study, we do not test any teaching empirically. However, based on the results from our empirical study, we aim to discuss what teaching should focus on in terms of aspects and values and how this should be done when it comes to developing first- to third-grade students' understandings of the social institution, the police.

4 METHODOLOGY

4.1 Selecting participants

The overall goal when collecting data in phenomenography is ideally to exhaust all different understandings of a phenomenon within the group being studied (Marton & Booth, 1997; Åkerlind, 2005). In our case, we wanted to exhaust as many different understandings of the police among Swedish first- to third-grade students as possible. To achieve this goal, we selected participants with as much variance as possible within this group and kept on adding participants until we achieved saturation in different understandings (Trigwell, 2000). In total, 37 students (labelled E1-E37) participated. To address possible variations in understanding due to gender, we made sure that there was a fairly even distribution of girls (18) and boys (19) among the participants. To address possible variations in understandings due to rural/urban areas and socio-economic standards, we targeted schools in both rural and urban areas, and for the urban areas, we differentiated with regard to socio-economic standards. The Swedish city of Gothenburg is a segregated city with distinct low-income and high-income areas. Thirteen students from a school in a low-income area (average income below 250 000 SEK/year, 40 per cent foreign-born, unemployment rate of over 10 per cent) participated and 14 students from a school in a high-income area (average income over 350 000 SEK/year, under 10 per cent foreign-born, unemployment rate of under 4 per cent). In addition to this, 10 students from a school in the countryside (an agricultural area) 100 kilometres north of Gothenburg also participated. The schools, as well as the students and students' legal guardians, gave their informed consent to participate in the study.

4.2 Data type

In phenomenographic research, data can be collected in different ways. The most common is through semi-structured interviews (Marton & Booth, 1997, Åkerlind, 2005), which we chose to do.

Our interviews were designed to reveal how the participating students understand the police, trying to open as many aspects of their understanding as possible. In seminal research outlining the phenomenographic interview, this is argued to be done by "preparing a number of *entry points* for the discussion of the phenomenon, varying the context for the discussion by varying the aspects of the phenomenon that are fore-grounded" (Booth, 2008, p. 1). In order to accomplish this, and considering the young age of the interviewees, we turned to the research of photo interviewing (Mannay, 2010; McBrien & Day, 2012). In this tradition, using photos is considered to help young children who are not used to being interviewed to describe abstract issues and verbalize memories when discussing a phenomenon (Cappello, 2005). One obvious problem with using photos is, of course, that the photo can delimit the interviewee to only talk about the photo. In studies assessing photo interviews with children, methods combining many visual elements and verbal elements (semi-structured interview guides) are therefore argued to be suitable (Zartler, 2014). A single sheet with 10 different pictures (see Appendix 1) of police officers, police stations and police vehicles were used as entry points for the interviews, opening up the conversation. When showing the picture we asked questions, such as: "What do you see in the pictures?", "What is happening in that picture?" "Why did you choose that picture?". We also asked more direct questions about the police such as "Why do we have the police?" "Who is in charge of the police?". The overall aim was to exhaust each student's ways of experiencing the police. The interviews lasted for 5-30 minutes, with an average length of 11 minutes. The interviews were carried out in Swedish, audio-recorded, and transcribed verbatim.[3]

4.3 Analysis

Our goal with the analysis of the interview transcripts was to find the different ways that Swedish students in Grades 1-3 understand the police. The analysis followed the phenomenographic way of analyzing interview transcripts, thus aiming to identify the different ways of understanding represented in the interview transcripts as a whole (Marton & Booth, 1997; Åkerlind, 2005). This meant that the analysis did not focus on the individual's way of understanding but on the different ways of understanding that could be derived from the transcripts as a whole. This process of analyzing follows a specific path. Initially, we read all the interviews and highlighted sections of the interviews where we thought a particular view emerged. After this, we carefully and thoroughly discussed our findings and based on this, we either confirmed our initial interpretation or made reinterpretations constantly, trying to keep an open mind. Once we had arrived at a preliminary set of ways of understanding based on our reading of the interviews, we began the next phase of the analysis. This involved cutting out the passages in the interviews that represented each particular understanding and placing the passages that represented the same understanding together, i.e., decontextualizing the ways of understanding from the interviews they originally came from and creating what phenomenographers call a *pool of meaning*. Once this was done, we analyzed the ways of understanding we had found and discussed whether there were other possible ways of understanding than the ones we had found so far and whether one or more of the passages should be placed in another category than the one in which it had initially been placed.

[3] The interview excerpts have been translated from Swedish to English by the authors.

In this part of the process, we also returned to the original interview transcripts from which each passage was taken to check for any ambiguity in the meaning of the passage. Throughout the analyzing process, we tried to focus on the emerging understandings as a set of understandings, in order to remain directed towards the collective understanding, relating the different understandings to each other and to the phenomenon of the police as a whole. Finally, we were able to determine three different hierarchically ordered ways of understanding the police among Swedish first- to third-grade students and distinguish these understandings in terms of which aspects and values within the aspect were discerned. It should be stated that the presented outcome space is not seen as incontrovertible but should give a solid and empirically justifiable description of the different ways of understanding police found among Swedish 1-3 graders.

5. FINDINGS

In this section, the outcome space with the three different ways of understanding the police among Swedish first- to third-graders is described. Table 1 shows a list of the three categories and summarizes the findings. Below, we will describe the different categories of ways of understanding the police accompanied by quotations from the student interviews. The outcome space is ordered hierarchically in that it ascends from more concrete understandings to more abstract understandings. The different understandings are all to be seen as contextualized against the backdrop of the students living in Swedish society. An effort has been made to make the different understandings as clear as possible, i.e., we have chosen the most distinct empirical quotations to represent them.

Table 1. Different ways of understanding police among Swedish first- to third-graders

way of understanding	discerned aspect(s)	discerned values
C the police as part of a democratic welfare state	governance _____ funding	parliament, law _____ tax
B the police as activities	activities	prevent intervene follow-up
A the police as attributes	attributes	clothes premises means of transport equipment
0	0	0

5.1 Understanding A: Police as attributes

In this way of understanding, the students define the police by their attributes and physically recognizable characteristics. The aspect indicated by the students is thus an *attribute aspect* and the different values indicated in this aspect are: *clothing, premises, means of transport* and *equipment*.

Students indicate the aspect by referring to different values within the aspect. For instance, though not explicitly using the term, the students indicate an awareness of the uniform by talking

about “police clothing” (E4) or saying that the police “always wear the same clothes...” (E5). The students also express the merit of the uniform by claims such as “I think that police officers have special clothes... so you can see that they are police officers.” (E8).

In a similar manner, students refer to other values of this aspect. The students indicate an awareness of the premises by, for example, recognizing a “a police station” (referring to a picture) (E2) and also exhibiting an awareness of other premises associated with the police, such as “the prison” (E18).

Further, the students say that the police have specific means of transport, such as “police car[s]” (E34), police “helicopter[s]” (E6), police “bikes” (E1) and even sometimes use horses, “yes, mounted police” (E27).

Yet another value referred to in this aspect is the equipment the police use: “they have weapons” (E17), “handcuffs” (E15), “torches” (E18) and “magnifying glass[es]” (E34).

In summary, the empirical excerpts show that this understanding demarcates an extremely concrete level of understanding of what the police are. The discernible values in terms of clothing, premises, vehicles and equipment are distinctions that make the police physically appear in relation to other physical phenomena in the students’ world. This focus on these physical attributes forms the basis of this understanding.

5.2 Category B: Police as activities

In this way of understanding, the students define the police by their activities, i.e., what they do. Consequently, the aspect indicated by the students is an *activity aspect* and the different values indicated in this aspect are activities: *prevent*, *intervene* and *follow up*.

Students indicate the aspect by referring to different values within the aspect. The students indicate an awareness of the police as a preventer when, for example, saying that “[the police] need to be there to keep an eye on everything too (...) so that they know that everything is safe and stuff” (E22). In more precise terms, the students indicate this value with formulations such as that the police “check that you don’t drive too fast” (E32), have a load that is “too heavy” (E36) in your car or monitor so “that someone does not come and steal things” (E5).

The value of intervening is indicated by the students showing an awareness of the police’s task to intervene when something has gone wrong. This can be in relation to crimes. The police “stop illegal stuff” (E24), “catch thieves” (E27), “arrest criminals” (E10), “stop thieves at a bank robbery” (E14), “hunt people who steal” (E6), and “ensure that those who have broken the law go to jail” (E20), and “if someone has murdered someone, they [the police] come and arrest the murderer” (E23). This value can also surface in relation to other dimensions of tasks that the police do. The police “rescue people” (E25) or “help when [road] accidents occur” (E27) or when “someone has crashed their car” (E30).

The students also indicated an awareness of how the police follow up or investigate crimes by referring to different investigative details. The police “try to find traces” (E8) or “evidence” (E22) like “footprints or DNA, perhaps” (E30). In this realm, the police also scan “CCTVs” (E14) to “find clues” (E14) and interrogate suspects, “they [the police] ask what you were doing (...) for example, what you did at three o’clock or something.” (E18).

When we look at the empirical excerpts shown, this understanding (as well as the previous one) can be described as being fairly concrete. It is centred around various actual actions that are, by their nature, often physically visible, such as catching thieves or interrogating suspects. Compared to the previous understanding, however, it is possible to argue that the concreteness is not as

tangible. Recognizing the police as monitoring to prevent crimes and solve crime is less tangible than recognizing their direct physical attributes and presence.

5.3 Category C: The police as part of a democratic welfare state

In this way of understanding, the students define the police as part of a democratic welfare state. In this respect, two distinct aspects are indicated in the students' understanding: the *governing aspect* with two indicated values, *law* and *parliament*, and the *funding aspect* with one indicated value, *tax*.

Students indicate the governing aspect by referring to two different values within the aspect. With regard to the value parliament, the students indicate this by showing an awareness that the state and the parliament are responsible for the police, "It's the parliament" that governs the police (E26) and "I think it's the state (...) or those who lead Sweden (...) the prime minister and all that" (E27). When students address the values the law and the police, they indicate an awareness of the dual role of the law for the police. The police should enforce the law, "they [the police] come if you break the law" (E20) and "it's very good that the police exist (...) you can't just do anything. There are laws and so on" (E18). However, students also indicate the police must follow the law, "they have to do what is in the law" (E19) and "it is the same for them [the police]. If they do something [criminal] then of course they can also end up in prison" (E18).

When it comes to the funding aspect, the value tax is indicated when the students refer to how the police get money for their activities. When addressing this, students talk about

> Tax. Because if you live in the community, you have to pay tax, maybe every month or something like that. And some of that tax, some of that tax might go to (...) the police so they sort of, so they get money, they can, well, buy police cars and police equipment that they need and other stuff like that. (E26).

In relation to this, students also indicate an awareness that tax in relation to the police is part of a larger social mission of the welfare state, along with other social institutions such as schools and health care, "When you get your salary (…) [t]hen you pay a little to the state treasury and then the schools, the police, and the hospitals, get that money" (E27).

With regard to the funding aspect, there is an indication that the students also discern an incorrect value in relation to the police in a democratic welfare state. This value can be described as *self-financing*. "They [the police] make a lot of money (…) because if you drive too fast, they come, and you have to pay them money" (E7). The appearance of such a value can be seen as indicating that the students are somewhat aware that the police do need money to finance their activities, but they are not able to find the correct value within the context of the democratic welfare state. This indication of incorrect values in the students' responses might suggest that we are reaching the limit of the students' understanding of the police.

Looking at the excerpts from the student responses, this understanding could be argued to be more abstract and focuses on aspects and values that students find more difficult to identify and distinguish. The different values, such as tax and law, indicated in the students' answers, can be said to be at a greater distance from the actual existence and activities of the police and to have reached a more general social level, where the police are positioned as part of society's functions.

6 DISCUSSION

This study is based on four premises: a) Citizens' trust in social institutions is central to a well-functioning democracy (Dinesen, 2012; Rothstein, 2001, 2013; Rothstein & Stolle, 2008); b) the school has a crucial role when it comes to students' learning about these institutions (Biesta, 2011; Geboers et al., 2013; Osler & Starkey, 2006; Sandahl et al., 2022; Sant, 2019); c) schools are also expected to start working with this learning as early as when the children enter compulsory school at age seven (Swedish National Agency for Education, 2022); d) there is, therefore, a need for more educational research on how younger students (aged 7-9) understand central social institutions, such as for example the police (Hansen, 2020; Kenner, 2020; Löfström, 2019; Sandahl et al., 2022; Straub & Ravez, 2020).

By using a phenomenographic approach, our study has been able to show how Swedish students in Grades 1-3 (aged 7-9) understand the social institution, the police. The results, presented as an outcome space, start with a very concrete understanding that focuses on the distinguishable characteristics of the police, moving via an understanding that targets the various actions of the police to a more abstract understanding that centres on the role of the police in a democratic welfare state. In this way, we have contributed important knowledge regarding young students' understanding of social institutions and will, in the final section of the article, discuss how these understandings can be linked to teaching civics.

We have primarily outlined our study in relation to the research field of conceptual change. This field has focused mostly on concepts in mathematics and natural sciences but not so much on concepts from the social sciences, and perhaps least on concepts belonging to civics education (Lundholm & Davis, 2013). As the name of this field of research suggests, it is not only focused on understanding how students or others understand different concepts (although that is a basic prerequisite) but also on how it is possible to change peoples' understandings of different concepts (Halldén, 1997). Although we have not carried out a study that, through teaching, intends to change students' understanding of the police, the phenomenographic approach provides the opportunity to discuss teaching based on the type of results we have generated. It may, therefore, be appropriate to address this question in the concluding discussion. As mentioned earlier, phenomenography outlines that the basis for teaching is systematic variation regarding the aspects and values that are central (or necessary) to understanding the phenomenon (Marton, 2015). In our case, it is possible to claim that all the aspects and values that we found can be considered central to understanding the phenomenon of the police. This is because the aspects and values can all be described as important to be able to identify the police, what they do and what role they have. Consequently, all aspects and values found should be processed in a teaching sequence that intends to offer students as a rich picture (based on their peers' understandings) of the police as possible. Furthermore, phenomenography asserts that systematic variation should begin with the most elementary aspect and its values (Larsson, 2021). In our case, the teaching should then first focus on *the attribute aspect* with the different values *clothing, premises, means of transport*, and *equipment*. In this case, the teacher should direct attention to what distinguishes these four values, while the teacher makes the students aware that all values are attributes. Once this is done, the teacher can move on to *the activity aspect* with its different values, followed by *the governing aspect* and *the funding aspect* with their respective values. By pursuing such a systematic variation around each aspect and its values, the teacher has then offered the students an opportunity to understand the police in accordance with the outcome space. Possibly, if one wants to broaden the teaching to also include other

social institutions such as healthcare or the fire department, the corresponding aspects and values can be introduced around these institutions.

The main contribution of the study is that we have continued to build a foundation for developing civics teaching by empirically mapping young students' understandings of civics concepts (M. Björklund et al., 2022; Tväråna, 2018), an area that, at least from a European civics education research perspective, has been somewhat neglected (Hansen, 2020; Kenner, 2020; Löfström, 2019; Sandahl et al., 2022; Straub & Ravez, 2020). It would be advantageous for future research to include further similar studies targeting other concepts. There are, for instance, other important social institutions, such as healthcare, schooling, and the fire department. Charting young students' understandings of these phenomena is important in order to address how we, in the next step, should meet the students where they are when teaching about these social institutions. Furthermore, it is urgent to design and implement teaching interventions, based on mappings such as ours, with the intention of testing the didactic potential of this type of mapping to develop young students' understandings of central social institutions. These interventions would preferably have a phenomenographic approach, as within phenomenography, there is a clear teaching theory that can be tested. The overarching goal is to achieve an education in elementary school that works to promote knowledge about the important social institutions of democracy.

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