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Europe and its Borders. A Mental Mapping Study with Secondary School Students from Central Berlin

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Abstract

Recent experiences with mass migration moved the debate on borders to the forefront of debates in society and schools. Students might have had very different experiences with borders, particularly in super-diverse urban environments. Nevertheless, research on students' knowledge of European borders is relatively modest. This paper aims to make a first contribution to exploring lower secondary students' mental representations of Europe both in academia and schools. Using mental mapping as a method, the study explored how 45 students in central Berlin represented Europe and its borders. The results show alarmingly limited knowledge of Europe and the European Union. Also, Europe as a cluster of nation-states seems to be the dominating perception. Consequently, borders of nation-states dominate the representations. Using the diagnostic utility of mental maps, the study also uncovered alarming results on students' spatial cognition and map skills.

Keywords: Mental Map, Europe, Berlin, Germany, Borders, European Union (EU), Perception

1. Introduction

Recent migration in Europe moved borders to the forefront of debate. Along with the European Union's external borders, the permeability of internal borders also suffered several changes. Depending on their spatial mobility, students are expected to have gained quite heterogeneous experiences with borders. Thereby, experiences may range from crossing a body of water and encountering the external border to being confronted, for the first time, with a border in a previously symbiotic Euroregion where spatial reminders of nation-state borders were symbolic at best. Therefore, some questions students may ask themselves are what borders are, what types of borders exist, what their location is, and what they separate.

This paper aims to explore lower secondary students' mental representations of Europe and its borders using mental maps. The following section (2) first looks into representations of Europe both in academia and schools in light of

mental mapping. The subsequent sections are dedicated to the operationalization (3), results (4), and discussion (5). Some conclusions (6) close the paper.

2. Representations of Europe

While Regional Geography is one of the subdisciplines most impacted by change, its relevance remains uncontested, particularly for school Geography.

One of the core questions tied to Europe, of moderate interest also in academic Geography, is its spatial definition. As Schultz (1999) points out, the prevailing delimitation follows physical-geographical entities and categories. For example, the coastline and the Ural Mountains in the East constitute a traditional spatial marker that prevails in certain contexts. Naturally, following physical-geographical entities and concepts requires a realist and, to a certain extent, materialist mindset, given the existence of perceivable space by humans and other living creatures regardless of their sensory capabilities.

Alternative conceptualizations come from Human Geography and argue that Europe is mainly a perceived entity resulting from (social) construction. Schultz (2003) stresses the political dimension of such (re)negotiated definitions, as vividly exemplified by the debate concerning the 2004 and 2006 enlargement of the European Union and the ongoing debate on whether Turkey and, following the Russian invasion, even Ukraine is part of Europe. Such arguments often return to the materiality of European space, measuring, using different delimitations, the relative position of a particular country in Europe (Schultz, 1997).

Other debates address Europe's internal division. In the reading of Eis and Moulin-Doos (2018), there are myriad ways to approach Europe, in general, and the European Union, in particular. On the one hand, integrationists perceive Europe as a successfully progressing process aiming for the United States of Europe. On the other hand, voices are calling for diversity within and across sovereign national states.

Particularly challenging is European regionalization, given its need to consider both internal and external avenues to dissect, divide, and (re)construct a spatial entity. Based on national indicators, EUROSTAT offers different ways to view the European Union. In contrast, commissions on geographical names, as Jordan (2005) points out, tend to use cardinal points as the best way to regionalize the continent.

While academic debates easily grasp the complexity of policy and discuss it within and across disciplinary boundaries, (Geography) teachers often struggle with teaching Europe. For Schultz (1997, p. 2), it is clear that "[t]here are no spaces, spaces are produced." Moreover, Schultz (2003) concludes that neither Geography nor any other school subject has the agency and task to deliver a specific definition of Europe's territoriality. Each teacher's job is to discuss the multiple ways of defining Europe. According to Rolfes and Uhlenwinkel (2013), such stances express the transition from an essentialist perspective on space toward constructivist paradigms.

Schultz's (2003) suggestion aligns with Wardenga's (2002) four space concepts widely used in German Geography Education. Based on the development of geographic scholarship on space in the German tradition, Wardenga (2002) defines four types of space concepts. Space as container refers to an essentialist perspective of space more rooted in the descriptive geographical tradition, while space as a system of spatial relations links back to network- and system-based approaches heavily relying on quantitative methods. Originating from Human Geography, space as a category of sensory perception expresses the subjective turn closely tied to debates revolving around the body and materialities of human experience. Finally, constructed spaces embrace the social constructivist approach widely represented by post-structuralist and post-modern "schools of thought".

In light of these developments, Schultz's (2003) position sets the emphasis on constructed space and also embraces the subjective change rejecting any agreement of an objective delimitation of the continent.

A glance at materials included in teachers' magazines and textbooks shows that educational media used in Geography classrooms indeed use quite heterogeneous conceptualizations of Eu-

rope. While Budke and Schindler (2016) emphasize multiple definitions and delimitations, urging teachers to encourage students to find their definition and spatiality of Europe (perception and construction), textbooks are more diverse. Some textbooks (e.g., Fleischfresser et al., 2017) also encourage students to use various criteria to explore various regionalization of Europe. In contrast, other textbooks (e.g., Eck et al., 2017) confront students with multiple ways to regionalize Europe; however, the tasks tend to focus on a common regionalization.

Several studies showed the political dimension of representing Europe in textbooks. For example, Bagoly-Simó (2013) explored how textbooks of an international selection portrayed former socialist countries a quarter of a decade after the fall of the Iron Curtain. Usually, textbooks held on to a clear East-West division and remained ignorant of geographical structures and processes during post-socialism. Similarly, textbooks actively tell a narrative of belonging and othering, serving political purposes (Schultz, 1997) when arguing for their place in the "civilized" or "Western" world. Another study by Fink and Bagoly-Simó (2013) looked at textbooks published in former socialist countries and identified complicated regionalizations negotiating Romania's pertinence to Central Europe rather than accepting it as part of the Balkans.

Despite their central role in Geography Education (Bagoly-Simó, 2021), textbooks only indicate how the curricular prescription can be interpreted. Classroom teaching and learning may differ dramatically, particularly because of students' previous knowledge. Therefore, the next section will examine how students represent and view Europe.

3. Mapping Europe

Human Geography developed an interest in mental mapping both as a method and as a spatial representation in the 1970s and 1980s. Along with studies carried out with adults, a series of empirical studies also focused on children's mental mapping (e.g., Hart, 1979; Matthews, 1985) and general mapping skills (e.g., Blaut and Stea, 1971; Synder et al., 1976).

Geographic explorations based on mental maps mainly remained within the psychological framework defined by Piaget and Inhelder (1975) and showed particular interest in the stages of cognitive development supporting map skill development and representation in the shape of mental maps. Piaget and Inhelder (1975) argued that children initially adopt an egocentric perspective, only being able to view and represent the world from their own perspective and position, remaining unable to establish any references to spatial relations and scale (topological stage). The subsequent projective stage, which Reinfried (2006), based on Catling (1978), divides into a projective a and projective b substage, already confirms the ability to interconnect relative locations based on both ego- and allocentric perspectives. Also, children tend to develop a sense of spatial categories, which they often represent using symbols (e.g., streets, houses). Still, representations are strongly pictographic. Finally, the Euclidean stage corresponds to an abstract spatial imaginary and can only be expected, according to the original model, starting at age twelve. Several studies (e.g., Piaget and Weil, 1951) delivered proof of spatial and conceptual inclusion–also strongly tied to age.

Despite its dominance, along with Piaget and Inhelder's (1975) model, several scholars explored mapping within cognitive development–Stückrath (1963) having reached a significant impact in the area of mental mapping.

One of the most controversial elements of cognitive development models was their handling of age. While Piaget and Inhelder (1975) tied the stage of cognitive development to age, Barrett et al. (2006) argue that age is merely an essential variable among many others instead of being the decisive factor of cognitive development. In an experimental setting, Bourchier et al. (2002) showed students' ability to solve complex tasks at a much younger age than established models indicated. Concurrently, there is proof of older students failing to solve tasks expected at a much younger age. More specifically, evidence (Spencer and Darvizeh, 1981; Blaut, 1997) started emerging as early as the 1970s showing that children comprehended aerial views at the age of two and could even produce simple maps at the age of three (Blaut,

1997). Moreover, Winkler-Rhoades et al. (2013) showed that some children might spontaneously and independently use geometric information to locate objects in a 3D setting.

Along with experimental settings, studies also used naming tasks to retrieve mental maps, mainly through drawing (cf. Scoffham, 2019). Research questions may require students to draw free-sketch maps (Bagoly-Simó, 2012a, 2012b) or use blank maps containing basic information, such as an outline or political units. Following data collection, data analysis habitually contrasts the mental maps with official cartographic representations and, often, evaluates them based on pre-defined categories (Harwood and Rawlings, 2001). Thereby, personal and additional information collected via a questionnaire or loud thinking may facilitate the constitution of categories. Consequently, various sets of variables are described as influencing, for example, topographic knowledge (Barrett et al., 2006). Some of these are the socio-economic background (Jahoda, 1962), the country of residence, sex (Barrett and Farroni, 1996), traveling experience, knowledge of cartographic representations, and the type of formal education experienced (cf. Barrett et al., 2006; Scoffham, 2019).

Traditionally, in Geography Education, mental maps served diagnostic purposes. For example, Chiodo (1993) analyzed, based on three sets of mental maps collected at the beginning, middle, and end of the semester, how a World Regional Geography class impacted students' topographic knowledge. While other studies attempted to explore students' knowledge of music genres across the United States (Shobe and Banis, 2010) or their representations of their home region, country, or continent (e.g., Wiegand, 1994; Schniotalle, 2003; Schmeinck, 2006; Bagoly-Simó, 2008, 2012a, 2012b), topography and comparisons with habitual cartographic representations preserved their framework role.

Reviewing such studies, Taylor (2018, p. 93) criticized that such "[…] studies tend to be large-scale surveys, highlighting knowledge of location and spatial configuration, […] rather than in-depth explorations of a broader range of understandings about places". Despite such a diagnosis maintaining a certain validity, several studies prioritized the variety of students' representations, emphasizing their subjectivity.

Looking at Europe, Schniotalle (2003) explored, using mental maps, primary students' representations of Europe. Additionally, given its operationalization as an intervention study, the results also served to look into topographic knowledge development. Some of the central findings are island-like representations of less known spaces and a stronger emphasis on Western Europe (in a broader sense) at the expense of former socialist countries of the East.

Lakotár (2005, 2006) and Bagoly-Simó (2008, 2012a, 2012b) also spotlight subjectivity and individual representation when exploring how students in former socialist countries and Germany viewed regional, national, and continental structures. Eastern European students displayed more detailed topographic knowledge and a stronger emphasis on Western Europe.

Finally, Seidel and Budke (2019) focused on Europe's external border as a spatial construct and combined mental mapping with interviews. The 41 participating students from the Ruhr area mainly focused on state borders; however, in their drawings collected in the aftermath of the interview, they mainly represented the European Union and, in light of the upcoming Brexit, viewed the United Kingdom as a non-European country. This also applies to Turkey. Germany, its neighbors, Italy, and Spain, dominate the mental maps.

Several of these studies clearly emphasize that mental maps are just one of the possible representations of children's mental imagination (Götz and Holmén, 2018) of Europe. Drawing skills clearly have a limiting effect (Schniotalle, 2003), as do methods mainly relying on written or oral communication (Gieseking, 2013).

4. Method and Sample

One of the ways to explore lower secondary students' mental representations of Europe and its borders is mental mapping. Therefore, the operationalization of this exploratory study rests on a free-sketch mental mapping study (cf. Bagoly-Simó, 2012a, 2012b; Gieseking, 2013).

The sample consisted of 45 eighth-grade students (aged 14–15) attending a super-diverse secondary school located in central Berlin. Data

collection took 45 minutes and was carried out on February 15, 2020. Prior to data collection, political maps of Germany and the world generally on display in the classrooms throughout the day were removed. Students first received the overall information that data collection was independent of any assessment, anonymous, and only processed by the researchers. After providing students with A4 blank sheets, the researchers reminded the students to work individually and remain quiet. The task was to represent Europe in 45 minutes.

Apart from the occasional question and the need to remind certain students to refrain from collaboration, data collection occurred as planned. The only incident involved one student blurting out, audible to the whole group, having forgotten to draw Russia.

Data processing consisted of manual processing and close reading. First, based on Piaget and Inhelder's (1975) model, all maps were initially clustered. In a subsequent step, the focus shifted to internal and external borders.

5. Results

The presentation of our main findings first classifies the 45 mental maps into four types (5.1). The subsequent subsections turn to matters of content by looking into Europe's internal structure (5.2), emphasizing internal (5.3) and external borders (5.4).

5.1 Challenging Spatialities

The first interpretative step led to four main types of mental representations that showed an unequal distribution across the sample (n=45).

The first type of mental map–*floating islands*–entailed individual countries and spatial units mainly represented as detached entities. This least popular representation (n=3) primarily focused on Germany and its neighbors. Some maps contained other countries like France, Turkey, or Bulgaria. Others also added regional entities, such as German federal states (e.g., Saxony) at the nation-state scale. Despite the information scarcity, the students also aimed to consider the spatial distribution and the countries' relative locations. As shown in Figure 1, they preferred a combination of pictographic representation with additional detailed textual explanation. In essence, the students worked with a rudimentary legend; however, the pictographic representation failed to encode relative distance. Also, all mental maps include borders clearly delimiting spatial entities.

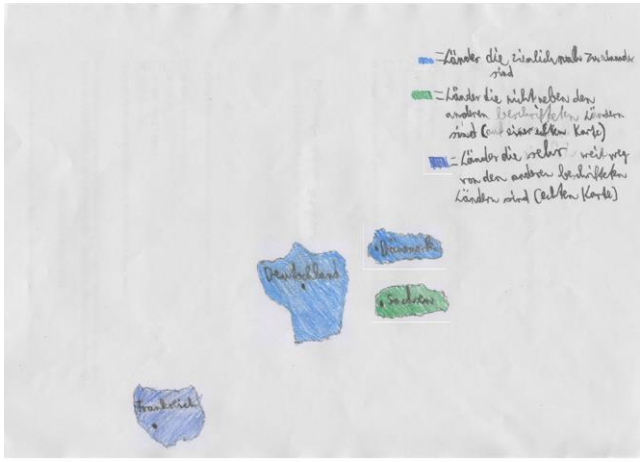

Figure 1. *Floating islands*–example of a type one mental map. Source: student's representation.

Figure 2. *Country clusters*–example of a type two mental map. Source: student's representation.

Country clusters is the label that best describes the second type (n=7) of mental maps based on their content. Representations constituting the second cluster entail groups of bordering countries. Most maps place Germany at the center, adding directly neighboring countries along the border. The representations also tend to include other countries (e.g., Turkey, Bulgaria, cf. Figure 2). Nevertheless, such countries remain detached islands despite their shared border. There is a certain improvement in the

handling of relative location as students strive for a map-like reproduction. Legends tend to offer additional explanation concerning, for instance, similarities, such as common languages spoken in selected countries, and hardly differ from those included in the maps clustered in the first type. Another common trait is the inclusion of borders, which clearly delimit the represented countries as spatial entities, albeit lacking any resemblance to the actual border.

Most mental maps (*n*=21) belong to the *Container*, the third type of representation encountered in the sample. While the prevailing elements remain clusters of countries represented as entities separated by borders, all maps incorporate these islands into a grander structure that also exhibits a boundary. The island clusters vary in size and detail, and blank spaces connect the islands, in most cases, void of any denomination. As in the previous cases, students strived to represent a certain relative location-mostly rather unsuccessfully. Also, there are apparent mismatches between the individual countries' represented and actual shapes. Overall, the mental maps are less wordy, particularly the legend entailing a straightforward chromatic encoding. Often, these representations remain lacunar, as witnessed by the countries left unassigned to European regions (Figure 3). Borders remain the only means to demarcate national and (unnamed) continental space spatially.

Finally, *Europe* constitutes the fourth and most distinct type (*n*=14) of mental maps encountered in the sample. In their general presentation, the maps resemble habitual political maps often used in Geography classrooms. Students combined the continental and national scales, mindful of relative location and spatial configurations (shapes, coastlines). Some maps show the ambition to reproduce differences in spatial extension as well. Representations belonging to the fourth type further include water bodies surrounding Europe. One of the strongest inconsistencies encountered in the maps concerns the legend. While students seem to strive for thematic maps (e.g., European Union, Figure 4), representational challenges, such as some Mediterranean islands' political situation, induce a second layer to the legend. Most mental maps show an evident lack of understanding of the legend's central role and its types, and the role of borders remains unchanged.

Figure 3. *Container*–example of a type three mental map. Source: student's representation.

Figure 4. *Europe*–example of a type four mental map. Source: student's representation.

5.2 Structure

The previous subsection indicated the main focus on nation-states and a specific selectivity of represented countries in three of the four cases. This section looks into the main anatomic layer of the sample, namely the distribution according to nation-states.

Computed across the sample (*n*=45), the countries mentioned in at least three-quarters of all maps were Spain, France, Germany, Poland, and Russia (Figure 5). Countries counted in at least 40 percent of all maps are Germany's direct neighbors, except for Italy, Portugal, Greece, Turkey, and the Nordic Countries. In contrast, most former socialist countries found their way into 39 percent of all maps, at best. The least mentioned (<10%) are former Soviet

Republics and Western Balkan countries.

The internal division goes hand in hand with borders (a preferred tool used in all four types of mental maps). Internal borders seem to be an important element of internal structure, so that the following subsection will turn to their discussion.

5.3 Division–Internal Borders

Borders of nation-states are the only tool students use to express spatiality and spatial division. Matters of regionalization, along various criteria, rest on chromatic encoding explained in a more or less wordy way in the legend. The sample contains a surprising variety of regionalization attempts.

The most common criterion to express diversity on the continent is language (24%), followed by membership in the European Union (15%). Less popular (11%) are cardinal points as regionalization criteria.

Some students decided to opt for additional criteria to express disparities. Some of the most exotic representations divided Europe into poor and rich countries or differentiated between developing countries and those with a free government under the law.

Looking beyond the internal division gives further insight. Therefore, the following subsection turns to Europe's limits in the form of its external borders.

5.4 Limits–External Borders

Europe only takes shape in the third and fourth types of representations. Thus, most of the mental maps included in the sample delimit Europe from other spatial entities.

Third-type mental maps entail a rather abstract border representation without any resemblance to the continent's outline, while their counterparts included in the fourth type remind us of both the coastline and the major distribution of European countries.

The prevailing border type is delimiting nation-states producing, in sum, the European borders. Students tend to be clear about the political status of European islands, mainly those in the Mediterranean without nation-state status.

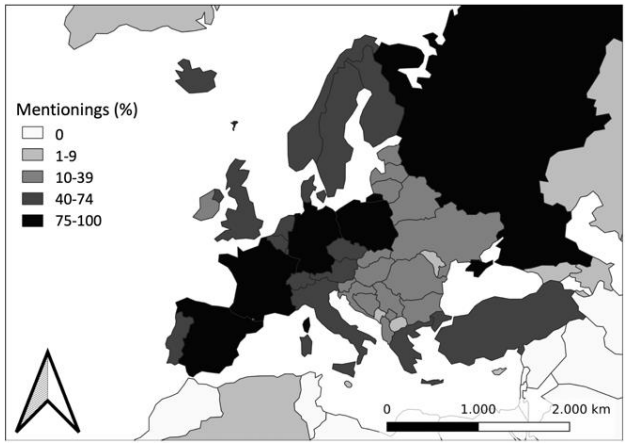

Figure 5. Frequency of country mentioning across the sample (*n*=45). Source: Authors' elaboration.

Students often use the legend to code different ways to regionalize Europe (e.g., according to cardinal points or spoken languages) instead of connecting the countries in question using borders. In addition, students seem to systematically leave the European Union unrepresented, as both its mentioning and internal borders are missing from the maps.

The most exciting dimension of external borders remains connected to Europe's East and South-East. Third-type maps delimit Europe; however, they mostly leave the neighbors (including the water bodies) unnamed. In rare cases (Figure 6), students denominate selected countries as located at the external border. However, in most cases, they leave the Eastern and South-Eastern borders open (Figure 7).

In a rare representation at the global scale, one student opted to use the name Eurasia refraining from distinguishing between the two continents (Figure 8).

If represented, Africa is the only continent occasionally located on maps, Algeria being the only explicitly mentioned country.

6. Discussion

The results of this exploratory study offer a first insight into the mental maps of Europe eight-graders in Berlin might nurture. While many other avenues could be explored, the discussion will examine six main aspects.

First, mental maps can help diagnose both topographic knowledge (e.g., Chiodo, 1993; Bagoly-Simó, 2012a, 2012b) and spatial cognition skills (e.g., Wiegand, 1994). Therefore, based on the four types of mental maps identified in this sample, rudimentary topographic skills accompany equally modest proof of spatial cognition. Most mental maps reflect a more or less developed projective stage, with some maps entailing elements of the Euclidean stage (Catling, 1978; Reinfried, 2006). Overall, the mental maps are proof of poorly developed spatial thinking skills combined with what seems to be minimal map skills. The core indicator of rudimentary map skills is the challenge dealing with the legend constitutes for most students. It seems alarming that such basic cartographic knowledge required to decode the map, let alone interpret it (Bagoly-Simó and Binimelis, 2022), requires substantial work in the middle of grade eight (data collection carried out in February). While age certainly factors in as one of the myriad variables, failing to diagnose stages of cognitive development at age 14-15 that other students reportedly achieve, on average, at least five years earlier is alarming (Spencer and Darvizeh, 1981; Blaut, 1997; Bourchier et al., 2002; Barrett et al., 2006).

Second, moving into representations of Europe, the students' mental maps primarily show a cluster of nation-states. In some cases, and strongly depending on students' knowledge of the legend, specific categories, such as the spoken language, economic prosperity, cardinal points, major regions (e.g., Scandinavia), or the type of political system, may offer a more nuanced picture of the continent. Students obviously use nation-states (political entities) as their primary framework and may add additional variables. However, in contrast to previous curricula detailing European climate zones, vegetation types, population density, migratory movement, or economic development, only to name a few, are missing from these representations.

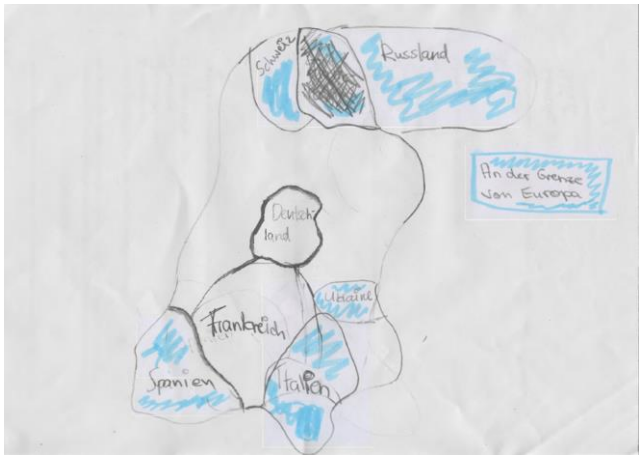

Figure 6. Countries located on Europe's external border. Source: student's representation.

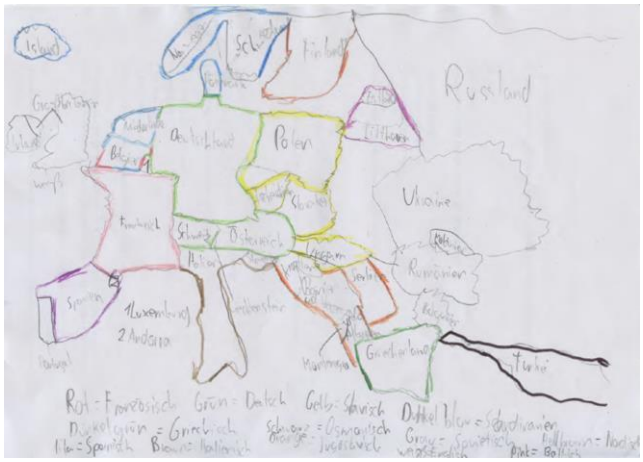

Figure 7. Open Eastern border. Source: student's representation.

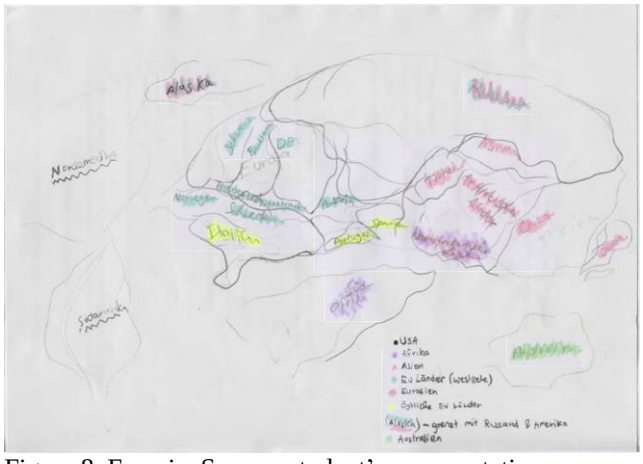

Figure 8. Eurasia. Source: student's representation.

As data collection happened in 2020, the participants belong to the second cohort of students who studied Social Science *(Gesellschaftswissenschaften)* instead of Geography as an independent subject in grades 5/6. Like the former independent subject, Geography, Social Science also prescribes Europe as a topic; however, the focus shifted much stronger towards a historical and political perspective. Unsurprisingly, the multiple ways of constructing Europe, as Schultz (2003) demands, are missing from the maps. The data collected in this study alone only allows, at this stage, to formulate the hypothesis according to which students were exposed to a much smaller diversity of "Europes" than they used to in the independent subject. A similar hypothesis could be formulated concerning the frameworks leading to the shocking level of spatial cognition and map skills in grade eight.

Third, based on the sample, the European Union only plays a marginal role in mental representations. However, cursory knowledge concerning Brexit, presumably from daily life, impacted the mental maps. Students perceive and work with Europe as a cluster of nation-states instead of the idea of the United States of Europe (Eis and Moulin-Doos, 2018). Considering the structure of most maps and those described above, a possible explanation might be the limited or even lack of information on spatial entities, particularly those concerning the European Union, that students are exposed to.

Fourth, the mental maps collected in this study reinforce the already diagnosed preference of traditional "Western" Europe over former socialist countries and Soviet republics (cf. Schniotalle, 2003; Bagoly-Simó, 2008, 2012a, 2012b). Unlike Schniotalle (2003), who expressed hope for a different perception and representation of the East within two decades, the results presented here second Hemmer and Hemmer's (2021) findings of over two decades (1995-2015) showing students' lower interest in Eastern Europe. While Russia appeared in a considerable number of representations, the impact of the unfortunate incident during data collection (cf. section 4) remains unquantified.

Fifth, the most convenient interpretation of our sample might suggest that the representation of Europe's Eastern border challenged most students. However, all representations focus on clusters of countries enclosed by national borders constituting the Northern, Western, and Southern coastline. Missing representations of Africa in most maps could also indicate a lack of knowledge of where the continent ends, and something else begins. Most maps, including those pertaining to type four, indeed display a clear idea of political borders in the East, while none mention the Ural as a demarcation. Furthermore, the missing spatial delimitation of the European Union as well as the missing representation of cross-border collaboration (Euroregions), further suggests an overall lack of information on borders and spatial extension. The results rather suggest a state of knowledge poverty instead of multiple possibilities to define Europe's Eastern border (Schultz, 2003).

Finally, the evidence presented in this paper indicates that both parents and teachers seem to fail students concerning spatial thinking development and map skill acquisition. As studies repeatedly showed (Spencer and Darvizeh, 1981; Blaut, 1997; Bourchier et al., 2002; Barrett et al., 2006; Scoffham, 2019), both require exposure to cartographic representation along with lexical and procedural knowledge, ideally regularly applied to novel situations (exercise, transfer)–as is the case with Mathematics and first language.

7. Conclusions

This study aimed to explore the mental representation of Europe and its borders by lower secondary school students living in a superdiverse metropolitan area.

Data collection preceded the global Covid-19 pandemic; however, data collection was restricted by the first administrative measure of school closures. While the sample (n=45) is comparable with those of other studies, the ambition of this paper was to look at the individual representations more in detail instead of generating a representative sample (Taylor, 2018). Also, some limitations also arise from the operationalization exclusively resting on drawings.

Along with their contribution to academic research, this exploratory study bears some importance to curriculum designers and teachers alike.

The results paint an alarming picture of students' spatial thinking and map skills. Following previous evidence (Barrett et al., 2006; Scoffham, 2019) and recommendations, parents and teachers must actively support students in both areas. Eight graders participating in this study seem to be dealing with a backlog of at least five years. Possible explanations could be found in Berlin's educational policy that keeps map skills at a bare minimum during the first four years of primary education (cf. Bagoly-Simó and Binimelis, 2022) and also abolished any progression in the area by introducing the interdisciplinary subject of Social Science *(Gesellschaftswissenschaften)*. Future studies should urgently look into diagnosing spatial thinking skills (also affecting Mathematics) and exploring the weak points of the 2015 curricular reform and its implementation.

The apparent lack of basic knowledge of Europe and the European Union (traditionally covered in Geography in grade 5 or 6) shows that exploring Europe as a topic in the interdisciplinary subject of Social Science clearly failed to expand the disciplinary perspectives (none of the mental maps entail for example, historical conceptualizations) and, concurrently, deprive students of multiple regionalizations and definitions originating both from Human and Physical Geography.

Along these lines, an interdisciplinary subject could have addressed the reduced student interest in Eastern parts of the continent by compensating preferences specific to Geography through knowledge from History. The consequences are dramatic, given the current political situation in Eastern Europe. It requires further exploration of what additional knowledge beyond their representations is reflected in students' mental maps of Eastern Europe. This seems particularly ardent given the ongoing framing and construction in media affecting the entire continent.

The results presented in this study indicate an unavoidable necessity to return to deep geographic knowledge to better comprehend the world students (will) shape over the following decades. Rather than refraining from teaching students possible conceptualizations and delimitations of Europe, teachers should very much teach several ways to approach Europe, including their criteria. Coexisting perceptions alone (Schultz, 1997, 1999, 2003) might cater to current educational policies' needs; however, students deserve more than dialectics. While myriad ways to define Europe may exist, their relevance to and acceptance in various contexts may vary considerably. Acknowledging and accepting concurring perspectives by simultaneously negotiating the limits of common understandings remains essential for every society built on robust citizenship. Therefore, (Geography) teachers and curriculum designers might want to reflect on revisiting the subjective turn and remind themselves of the freedom and responsibilities each individual holds and bears for society.

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