The Use of Colours in Historical Atlases

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ABSTRACT

The use of colour in cartography has received a great deal of attention for its capability to convey information in map-making ever since Jacques Bertin's famous *Sémiologie Graphique* (published 1967). Since most studies on the use of colour in cartography clearly highlight the communicative power of colour in cartography, it is interesting and surprising that the use of colour to convey messages beyond the declared one is not taken into consideration into these works. The possible attempt of cartographers to imply nationalistic propaganda by their use of colour and its analysis is left to books on cartographic propaganda, to studies on historical atlases, or to articles on thematic maps. To merge these two topics, an analysis of South Tyrolean-themed maps taken from the most important German and Italian historical atlases based on psychological, symbolic, and optical theories is given. The analysed atlases were been published between the end of the processes of national unification and the aftermath of the Second World War, the period in which the South Tyrol was most disputed between German and Italian nationalists.

Keywords: historical atlases, colours in cartography, nationalism, propaganda, South Tyrol, colour psychology, Germany, Italy, Putzger, Ghisleri

RÉSUMÉ

Depuis la publication du célèbre ouvrage de Jacques Bertin *Sémiologie graphique*, en 1967, l'usage de la couleur dans la cartographie suscite un intérêt considérable en raison de sa propriété de véhiculer de l'information dans la confection de cartes. Puisque la plupart des études sur le sujet soulignent clairement le pouvoir évocateur de la couleur en cartographie, il est à la fois étonnant et intéressant de constater que l'usage de la couleur pour transmettre un message, au-delà de l'énoncé, ne retienne pas l'attention dans ces travaux. La possibilité que les cartographes tentent de glisser des messages de propagande nationaliste dans les documents qu'ils produisent au moyen de la couleur et l'analyse de ces tentatives sont reléguées aux ouvrages sur la propagande cartographique, aux études sur les atlas historiques ou aux articles sur les cartes thématiques. Afin de fusionner ces deux sujets, les auteurs procèdent à l'analyse de cartes thématiques du Tyrol du Sud tirées des principaux atlas allemands et italiens, en s'appuyant sur la théorie psychologique, la théorie de la symbolique et la théorie optique. Les atlas analysés ont été publiés au cours de la période s'échelonnant de la fin des processus d'unification nationale au lendemain de la Seconde Guerre mondiale, au cours de laquelle les nationalistes allemands et italiens se disputaient le Tyrol du Sud.

Mots clés : Allemagne, atlas historiques, couleurs en cartographie, Ghisleri, Italie, nationalisme, propagande, psychologie de la couleur, Putzger, Tyrol du Sud

Introduction

The use of colours in cartography has been widely studied since Jacques Bertin's famous *Sémiologie Graphique* in 1967 (Bertin 1967). Bertin defined the basic cartographic means of expression as graphic variables. Out of these, colour is generally considered the most important for expressing spatial information in cartographic visualization (Štěrba and Bláha 2015). The use of colour makes it possible to display and convey a relatively large amount of information in a single map without decreasing its legibility and comprehensibility. Moreover, colour can be combined conveniently with other variables, such as the graphic signs that depict a border. Finally, colour is one of the principal enhancers of a map's aesthetic quality (Štěrba and Bláha 2015).

In this article, the use of colour to communicate political and nationalistic messages in the depiction of the south Tyrolean area will be proposed on the basis of analysis of the most important German and Italian world historical atlases from the end of the processes of national unification (Italy was unified in 1861 and Germany in 1871, but

Italy acquired its capital, Rome, only in 1870 – for this reason, the starting date used for this article is 1871) to the aftermath of the Second World War. All maps presented will have South Tyrol depicted. South Tyrol, an alpine territory located between the present-day Italian Autonomous Province of Trento and the Austria State of Tyrol, was ceded to Italy after the First World War at the Paris Peace Conference (1919), without a plebiscite and despite its German-speaking majority. As a border and disputed territory between the German and Italian worlds and nationalisms, South Tyrol received special attention from the atlases' authors, and for this reason, maps that depict it can be regarded as genuine workshops or test benches for new cartographical propaganda tools. For these reasons, the purpose of this article is to present and analyse the maps contained in historical atlases in which the use of colour is arranged to communicate nationalistic messages and at the same time to present the psychological, symbolic, and optical theories that provide the theoretical base for this type of cartographical analysis. It nevertheless needs to be said that the absence of any written source by the atlases' authors on the conscious propagandistic use of colours in their works makes it impossible to know conclusively exactly how the authors made colour choices.

State of the Art

Most studies on the use of colour in cartography, starting from Bertin's book, have focused on the effectiveness of colour for conveying information in map-making. These studies are mainly based on optical theories such as Isaac Newton's spectral colour theory (1666) and on optical and psychological theories such as those of J.W. von Goethe (1810) and Johannes Itten (1961), who devised seven methodologies for coordinating colours using the hues' contrasting properties. Studies based on these theories include those by Ambrose and Harris (2006), Bláha (2011, 2013), Brewer (1996), Chesnau (2006), Chesnau, Ruas, and Bonin (2005), Mersey (1990), Robinson (1967, 1995), Bláha and Štěrba (2014), and Štěrba and Bláha (2015). Itten's theory is also the basis of an article by Umberto Eco on *How Culture Conditions the Colours We See* (Eco 1985), which, although it does not debate the use of colour in cartography, examines the cultural aspects of colour as a symbol. Since studies on the use of colour in cartography clearly highlight the communicative power of colour, it is interesting and surprising that the use of colour to convey messages behind the declared one is not taken into consideration into these works. The conscious use of colour and its analysis is left to books on cartographic propaganda, such as Herb's *Under the Maps of Germany* (Herb 1997), to studies of historical atlases such as Wolf's *What Can the History of Historical Atlases Teach? Some Lessons from a Century of Putzger's Historischer Schul-Atlas* (Wolf 1991) and the books by Lehn (2008) and Schraut (2011),

or to articles on thematic maps such as *Nationalsozialismus und Schulatlas* (Kleinschmidt 1999). In these works, it is said that some maps' authors use colour as a tool to convey positive or negative emotions and opinions on the subjects depicted in the maps themselves. For example, it is very common in works on cartographic propaganda, thematic maps, and historical atlases to affirm that the colour red is used to depict subjects (such as states or ethnic groups) that are to be perceived as "positive" or "aggressive" and the colour green is used for subjects that are to be perceived as "negative" or 'passive." Expressions such as "the suggestive and appealing red of the German Reich space" (Kleinschmidt 1999, 55) or "the use of dynamic and aggressive red" (Lehn, 2008 183) can be found throughout both studies on thematic maps such as the article "Emmanuel de Martonne and the Ethnographical Cartography of Central Europe (1917–1920)" by Giles Palsky (2002) or the exhibition catalogue *Couleurs de la terre* by Pelletier (1998) and Lehn's and Schraut's works. Curiously, the reasons for regarding red as positive and aggressive, green as negative and passive, or blue as "peaceful" are rarely explained in these works. In the study of Lehn, optical reasons derived from Heller's book on the psychology of colours (Heller 1989) and from an interesting article by Riedenhauer on the function of colours in maps (Riedenhauer 1977) are cited (Lehn 2008, 99), along with the term "psychology of colors" (Lehn 2008, 183). Nevertheless, these optical and psychological reasons are not fully illustrated in Lehn's book and in the other works there are none: it almost feels as if the authors of these studies give colours something like an absolute symbolic meaning. This was especially true for ethnographic maps included in the atlases, since this kind of cartographical production has been particularly important and influential for nationalistic narrations and in pushing national aspiration in peace conferences. At the Versailles Peace Conference of 1919, for example, with the promotion of the principle of nationalities, ethnographic map forgery through the use of colour by the various central European nationalities was so common and widespread that the Great Powers had to prepare their own ethnographic documentation to counter it (Palsky 2002). The cartographic claims were so confusing and overlapping that a map created during the conference by putting all the presented maps together and colouring the areas that nobody disputed left almost all the Balkans in dispute (Crampton 2006).

Besides the use of colours in maps, the propagandistic value of cartography has been studied extensively in works such as *Texts, Hermeneutics, and Propaganda Maps* by Pickles (1992), *How to Lie with Maps* by Monmonier (1996), the already cited *Under the Maps of Germany* by Herb (1997), *Maps and Politics* by Black (1997b), who also wrote about the propagandistic use of historical atlases in his *Maps and History: Constructing Images of the*

Past (Black 1997a), *Magnificent Maps: Power, Propaganda and Art* by Barber and Harper (2010), and *Rethinking the Power of Maps* by Wood (2010).

Analysis of Maps

In this paragraph, the use of colour in single maps from some German and Italian historical atlases of the studied period will be analysed and commented on.

The first maps that will be presented are contained in the very first Italian historical atlas: the *Testo-Atlante di geografia storica generale e d'Italia in particolare* by Arcangelo Ghisleri (1889b). Ghisleri (1855–1938) was an Italian geographer, cartographer, school teacher, and politician and was among the founders of the Italian Republican Party (1895). He was a committed liberal nationalist and sought to create a "national" historical atlas, inspired by various non-Italian atlases – such as the Perthes, Kiepert, Mencke, Spuner, Labberton, and Droysen – but fitted for the Italian schools (Ghisleri 1889a). The need for a national historical atlas derived from the observation that Ghisleri felt that the German Spruner (used at the time in Italian schools) was "most inadequate for the development of our contemporary history, for it depicts Italy as an appendix of the German Empire!" (Ghisleri 1923, Introduction). In the very first edition of this atlas (Ghisleri 1889b), it is already possible to find some interesting colour maps contained in Plate 2 of the medieval section (Figure 1). The figure shows a composite plate in which there is no main map and in which there are different kind of maps: one historical-political map, three ethnographic maps, one confessional map, and even one geological map (which is a strange choice for a historical atlas, since this kind of atlas normally does not contain physical maps, but Ghisleri had a particular physical-geographical education). The two maps of interest for this article are, clockwise from top left, the second – "The Eastern Border of Italy" (*Il confine orientale d'Italia* in Italian) – and the sixth – "The Trentino" (*Il Trentino* in Italian). Both these maps are ethnographic and depict different and partially overlapping border areas of northeastern Italy with the adjacent countries, at the time divided between the Kingdom of Italy and the Austro-Hungarian Empire (both maps use the mostly fair 1880 Austro-Hungarian census as a source, but they arrange the data to overestimate the size of the Italian-speaking population). The areas depicted were then subjects of Italian nationalistic claims and were commonly referred to as *terre irredente* – "unredeemed lands." The justifications for these claims were historical, ethnographic, and geographical, the last of which was the most prominent and revolved around the concept of "natural border": these regions were claimed by Italy because they lay on the geographically Italian side of the Alps (i.e., they were on the Mediterranean side of the water drainage divide).

The natural border is not the topic of this article, but it is interesting to note that the drainage divide (*spartiacque* in Italian) is depicted on both these maps (for this topic see Gentile 2006; Cattaruzza 2007; Proto 2014), meaning that Ghisleri was able to blend together geographical and ethnographic features to enhance the propagandistic power of his maps. Another evidence for the fusion of geographical and ethnographical features can be observed in Ghisleri's choice of not colouring the high mountain areas (which he called "uninhabited mountains") with the adjacent population's hue in the *Trentino* map, with the result of graphically dividing the German-speaking population of South Tyrol from the other German-speaking areas north of the Alps. By this means he was able to present the German-speaking populations of South Tyrol as "linguistic intruders" in the Italian geographic and linguistic region. This cartographic expedient has already been noticed by Proto (2015) in two maps, both produced in 1915, by Cesare Battisti (1875–1916) and Achille Dardano (1870–1938) that depict roughly the same area. It is possible that the two authors drew inspiration from Ghisleri, since his atlas came first. The selection of colour for the ethnic groups depicted was consistent for the two maps: pink for the Italians, light yellow for the Germans, and light green for the Slovenes (which seems not to be divided from the Croats). This choice is quite peculiar because Ghisleri himself stated that he was fairly familiar with many foreign historical atlases, particularly the German ones, and that his work was inspired by them, as he confirmed it both in his atlas's preface, where he says that they were done by "the most erudite strangers" (Ghisleri 1889b), and in an article in the journal *Cuore e Critica* (Ghisleri 1889a): in the majority of these atlases (as in the *Putzger*), pink and red are used for the Germans and various shades of blue for the Romance-speaking peoples (among them the Italians). Consequently, the choice of Ghisleri is strange: why did he decide to use pink for the Italians and therefore go against colour conventions that, according to Jeremy Black, were already firmly developed after the introduction of chromolithography in the 1850s (Black 1997a, p. 50). One possible explanation is that he simply liked the pink colour better, possibly because he found it pleasing to his own eyes in the German atlases he knew, but it is also possible that his choice of colours was dictated by other evaluations.

Theories on colour symbolism and psychology were already well known if not popular at the turn of the century (nineteenth to twentieth), mainly thanks to the works of Frédéric Portal (1837), Wilhelm Wundt (1892, 1893), and Stefanescu Goanga (1912). The book by Portal was an analysis of the history of colour symbolism and the other two were experimental studies on the psychological and emotional response to colour and still today are the basis of modern psychological theories of colour
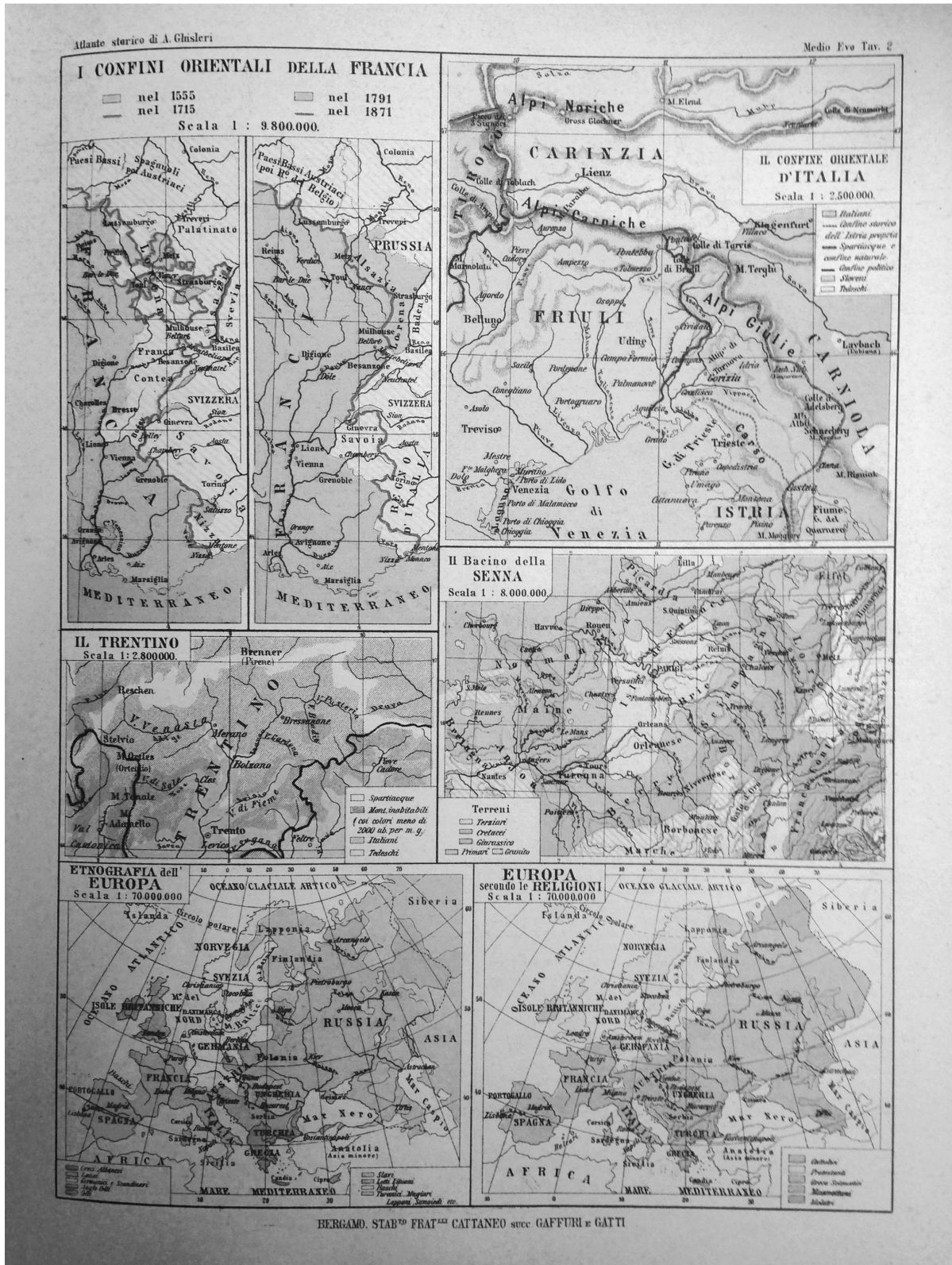
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Figure 1. Plate 2 from the medieval section of the *Testo-Atlante di geografia storica generale e d'Italia in particolare*, composed of one historical–political map, three ethnographic maps, one confessional map, and even one geological map. See in particular the use of colours to depict ethnolinguistic groups in *Il confine orientale d'Italia* and *Il Trentino*. *Source*: Ghisleri (1889b).

(Widmann 2000, II). It is also worth saying that the emotional value of colour was already analysed by Goethe in a chapter of his *Farbenlehre* at the beginning of the nineteenth century, which dealt with the "moral and sensitive action of color." This digression is necessary to illustrate how Ghisleri and other late-nineteenth- and early-twentieth-century historical atlases' authors could have been familiar with psychological theories of colour, and it is in this context that Ghisleri's choice of colours can also be explained.

In the classic psychological theory of colour, colour symbolism works in two radically different, but equally powerful ways: associative symbolism and emotional symbolism. Associative symbolism works by connecting specific colours or colour combinations with an object or an idea – for example, the flag colours of Italy represent the country itself – and it can be linked to colour conventions – for example, the use of pink or red to denote the British empire (Black 1997a, 50). Emotional symbolism, on the other hand, is linked to the physiologic reactions of the body to the colours; for example, exposure to vermilion causes an ergotropic (excited) response in a subject (Widmann 2000, IV).

Since the choice of colours in Figure 1 goes clearly against the colour convention of the time (as said before, in most historical atlases Ghisleri was familiar with, pink/red was used to depict German ethnicity and blue for Romance-speaking ethnicities), it is possible that Ghisleri selected the colours on the basis of emotional symbolism theory. This possibility is supported by the fact that, again per the classic psychological theory of colour, red/pink and its shades are linked to dynamic and vital attitudes via its association with vital essence, blood, fire, energy, power, dynamism, hostility, and aggression (Jung, von Franz, and Henderson 1964; Portal 1837). This seems to be particularly true when the dynamic red/pink is contrasted with green and blue, which are thus perceived as colours of immobility, formality, and rigidity. It is important to note though, that green and blue are not intrinsically negative in this theory, but acquire negative significance when contraposed to red. Moreover, contraposing red with blue is much less powerful than contraposing red with green (in a context where red depicts a positive element), blue being the colour of peace and calm, so that the combination can assume the value of aggressive vs pacific elements or even the juxtaposition of two relatively friendly elements (Lüscher 1949; 1969; Portal 1837). Yellow on the other hand, is intrinsically perceived as negative when contraposed to any other colour, for its association with both anger and lack of solidity (Lüscher 1974; 1977; Luzzatto and Pompas 1988). Ghisleri used a colour that is commonly associated with positive aspects to depict the Italian ethnicity (pink) and colours that are either perceived as negative when contraposed to red/pink, such as green for the Slavic ethnicities, or always

perceived as negative when contrasted to any other colour, such as yellow for the German ethnicity; for this reason, it is likely that he had at least some knowledge of the psychological theory of colour, and he used it to communicate hidden messages of nationalistic propaganda in his maps. It is also possible that Ghisleri saw the use of pink/red in the German atlases – whose authors are likely to have been to first to discover the use of red/pink to depict features that are to be perceived as positive, for both psychological and optical reasons (Lehn 2008, 99) – and understood its power and usefulness. Either way, the practice of counterposing map features (in this case ethnicities) using the psychological theory of colour was probably developed first by Ghisleri, since similar usage of colours in the *Putzger* can be observed only from the 1901 edition onward and was fully developed only in the 1930s editions produced during the national socialist regime, especially in the *Ostsiedlung* (east German colonization) maps (for more details see Larcher 2016 and Schraut 2011).

Another method of communicating messages in maps with colours is to link map features via colour similarity: two elements that are to be perceived as similar are depicted with similar colours. One clear example of this strategy can be observed in the evolution of a map contained in the famous *Putzgers Historischer Schulatlas*. Without entering the subject of the importance of this book in the history of the historical atlases (for more details see the works of Lehn 2008, Schraut 2011, and Wolf 1978, 1991), it is worth saying that the *Putzger* is the oldest German historical atlas still produced. The first edition came out in 1877, shortly after the unification of Germany (1871), and, after that, it totaled 104 editions until 2011. It was first authored by and named after the German cartographer, history teacher, Germanist, and school inspector Friedrich Wilhelm Putzger (1849–1913) and quickly became the most important and widely used historical atlas for schools in Germany. The success of this atlas was due to its low price and to its status of semi-official publication because of the strict connection between the publishing house (Velhagen and Klasing) and various ministries of education of several German states (including the important Prussian one). This atlas was dominant to the extent that it is possible to say that the *Putzger* and German history greatly influenced each other (Wolf 1991, 22). Given the importance of this atlas, propagandistic messages communicated with its maps could have had great significance and influence with the audience, especially with the young audience.

After this introduction, we can observe the second example (main maps from Figures 2 and 3), which is composed of the same map from two different editions of the *Putzger*: the *Völkerkarte von Mittel- und Südosteuropa* (Baldamus, Schwabe, and Ernst 1918) and the *Völkerkarte des mittleren Europa* (Baldamus, Schwabe, and Ernst 1923). Both maps'

Figure 2. Völkerkarte von Mittel- und Südosteuropa from *Putzgers Historischer Schulatlas*. Notice that the color used to depict the Rhaeto-Romance populations is the same as the one used to depict the Italians.
Source: Baldamus and others (1918).

Figure 3. Völkerkarte des mittleren Europa from *Putzgers Historischer Schulatlas*. In contrast to Figure 2, the color used to depict the Rhaeto-Romance populations has shifted to one more similar to that used for the Germans.
Source: Baldamus and others (1918).

captions can be translated as "Map of the People of Central [and Southeastern for the 1918 Version] Europe." As we can observe from both the titles and the figures, these are ethnographic maps again. The reason for the choice of analysing several ethnographic maps is that this kind of map is naturally favoured by the atlases' authors as a way to convey nationalistic messages by its own very topic – it is simple to claim regions for an ethnicity by painting its presence on them; moreover, the use of colours to depict different ethnicities demands the utilization of several different hues. Both maps depict the same territories and both maps use different shades of the same colours to depict ethnicities that are linguistically related: shades of pink for the Germanic ethnicities, shades of blue for the Romance ethnicities, and shades of green for the Slavic ethnicities (both maps use the Austro-Hungarian census, in this case the 1910 one, as a source for the Tyrolean area). It is worth noting that these maps follow the colour conventions that were initiated by the *Putzger*

itself. As said before, it is also likely that the development of these colour conventions, especially the usage of red/pink – colours commonly associated with positive elements – for the German ethnicity, could have been influenced by psychological theories of colour. This thesis is supported by the authors' choices to depict the Romance- and the Slavic-speaking ethnicities: The Romance-speaking ethnicities are painted in shades of blue, which, as said above, are "friendlier" to the pink Germans (as already noted by Kleinschmidt 1999) than the Slavic-speaking green shades. Again, this peculiar colour contrast and the usage of green to depict the Slavic-speaking ethnicities was not intended to be a unique case, but it was greatly reused and re-elaborated in the later *Putzger* edition, especially in the *Ostsiedlung* maps, in which colour contrast was employed to exacerbate the contrast between Germans and Slavs over eastern Europe (see Larcher 2016; Schraut 2011). What is interesting about these maps is not only the usage of colours

consistently with the emotional part of the psychological theories of colour, but also what changed in the choice of colours between the two editions: it is worth noting that at that time (in the aftermath of the First World War), South Tyrol was ceded to Italy. In the first map (from the 1918 edition), the same shade of blue is used for both the Italian and the Rhaeto-Romance (or Ladin) ethnicities, while in the second (from the 1923 edition), a shade of purple much more similar to the "German" pink than to the "Italian" blue is used for the Rhaeto-Romance. In this case, the authors used associative symbolism to try to link two populations, the Rhaeto-Romance and the Germans who had just been separated by the Versailles Peace Treaty (1919), which assigned the South Tyrol to Italy. This choice goes clearly against the colour convention of the map itself, which assigns various shades of the same colour to linguistically related ethnicities (Rhaeto-Romance is a Romance language, as is Italian), but the well-known loyalty to the House of Hapsburg – which was German-speaking – of the Rhaeto-Romance people of South Tyrol (Amiotti, Rosina, and Bearzot 2007, 108) was deemed to be more important by the authors. For this reason, the authors of the *Putzger* actively tried to claim the Ladin people as German-like with their use of colours. Finally, it can be noted how, regardless of the possible influence of *Putzger* on Ghisleri's work, pink is consistently used to depict the map-maker's own nationality (which is supposed to be the "positive" element) in both the *Testo-Atlante* and the *Putzger*.

Associative symbolism was already widely used in the *Putzger*. For example, in the editions published during the imperial period (1871–1918), Germany was either depicted with Prussian blue – acknowledging the hegemony of Prussia over the other German states – or with pink, not only on an emotional symbolism basis, but also because this was the colour used both for the Roman Empire and for various polities that was deemed as "German," such as the Frankish and the Holy Roman Empires, thus establishing a real chromatic *translatio imperii*. Finally, it is once more possible to appreciate the *Putzger*'s authors' usage of both emotional and associative symbolism again in the Ostsiedlung maps of the 1918 and 1923 editions. As we can observe in Figures 4 and 5, the colour used to depict the Slavic-speaking ethnicities switches from a "friendly" blue (1918 edition) to a "fiendish" green (1923 edition) and the area painted with the German pink in South Tyrol and in the adjacent Trentino and Veneto is greatly enlarged in the 1923 edition, as if the cession of the region to Italy could be criticized and underlined by highlighting – and even exaggerating – the presence of the German-speaking community.

Until now, only ethnographic examples have been presented, for the reason explained in the Introduction, but it is possible to communicate messages using colours in other kinds of maps. For example, in the "Weimarian"

editions of the *Putzger*, the colour red replaced Prussian blue to depict Germany, probably for both emotional and associative symbolism reasons: besides the positive value of red, the use of a colour other than Prussian blue was considered necessary to highlight that the new German Republic was a new state and not just a mere continuation of the old Prussian empire (Larcher 2016). In the depiction of South Tyrol in German and Italian historical atlases, it is possible to observe other usage of colour psychology besides the ethnographic maps in a pair of military maps from the *Atlante Storico* De Agostini, which was the standard Italian historical atlas after Ghisleri's. First published in 1923 and authored by the geographers Mario Baratta (1868–1935) and Luigi Visintin (1892–1958) and the historian Plinio Fraccaro (1883–1959), in its two form (*Piccolo Atlante* and *Atlante Storico*) the De Agostini remained the only Italian historical atlas after the death of Arcangelo Ghisleri (1938) until the publication of the *Atlante Storico Garzanti*, based on the German *dtv-Atlas Weltgeschichte* by Hilgemann and Kinder in 1966. It is worth mentioning that the atlas remained virtually unchanged after the Second World War and the transition to democracy: the 1933–34 edition (Baratta and others 1933–34), produced during the fascist regime, was the base of every "democratic" edition up until the 1977 one. This could be explained by the fact that even the Washburne commission, an allied committee that was set up to reform and democratize the Italian school system, guided by the American pedagogist Carleton Washburne (1889–1968), deemed all the atlas's editions as "authorized to be used" in the Elenco ufficiale dei volumi esaminati dalla Commissione per la Defascistizzazione (1944), except for the cover of the *Piccolo Atlante* by Fraccaro – which displayed the Italian fascist empire – and pages 24 and 27 of the third volume of the *Piccolo Atlante* by Baratta, in which the Italian expansionist ambitions were depicted. Of the few maps that changed in the first "democratic" edition of 1955 (Baratta and others 1955), the one in plate 65, *Il teatro della Guerra Italo-Austriaca 1915/18* (Figure 6), is the most interesting for a chromatic analysis. By comparing it with its counterpart in the 1933–34 edition, *Vittorio Veneto* in plate 21 (Figure 7), it is possible to notice how the depiction of the First World War changed between the fascist regime and the republican era. In the 1933–34 edition, the map depicts the Italian advance after the final battle of Vittorio Veneto, while in the 1955 edition, the map features the positions of the Italian and Austro-Hungarian armies before the last Austro-Hungarian assault in the battle of the Piave. It is arguable that the authors wanted to convey an aggressive message in the 1933–34 edition by showing the advance after the victory and a more defensive message in the 1955 edition by showing the theatre of the last enemy assault, in which the Italians were the defenders. These two messages were further reinforced using colour symbolism, in an associative way in the 1933–34 edition and in an emotional way

Figure 4. Ostdeutsche Kolonisation, *Putzgers Historischer Schulatlas*. Notice the color used to depict Slavic ethnicities. *Source*: Baldamus and others (1918).
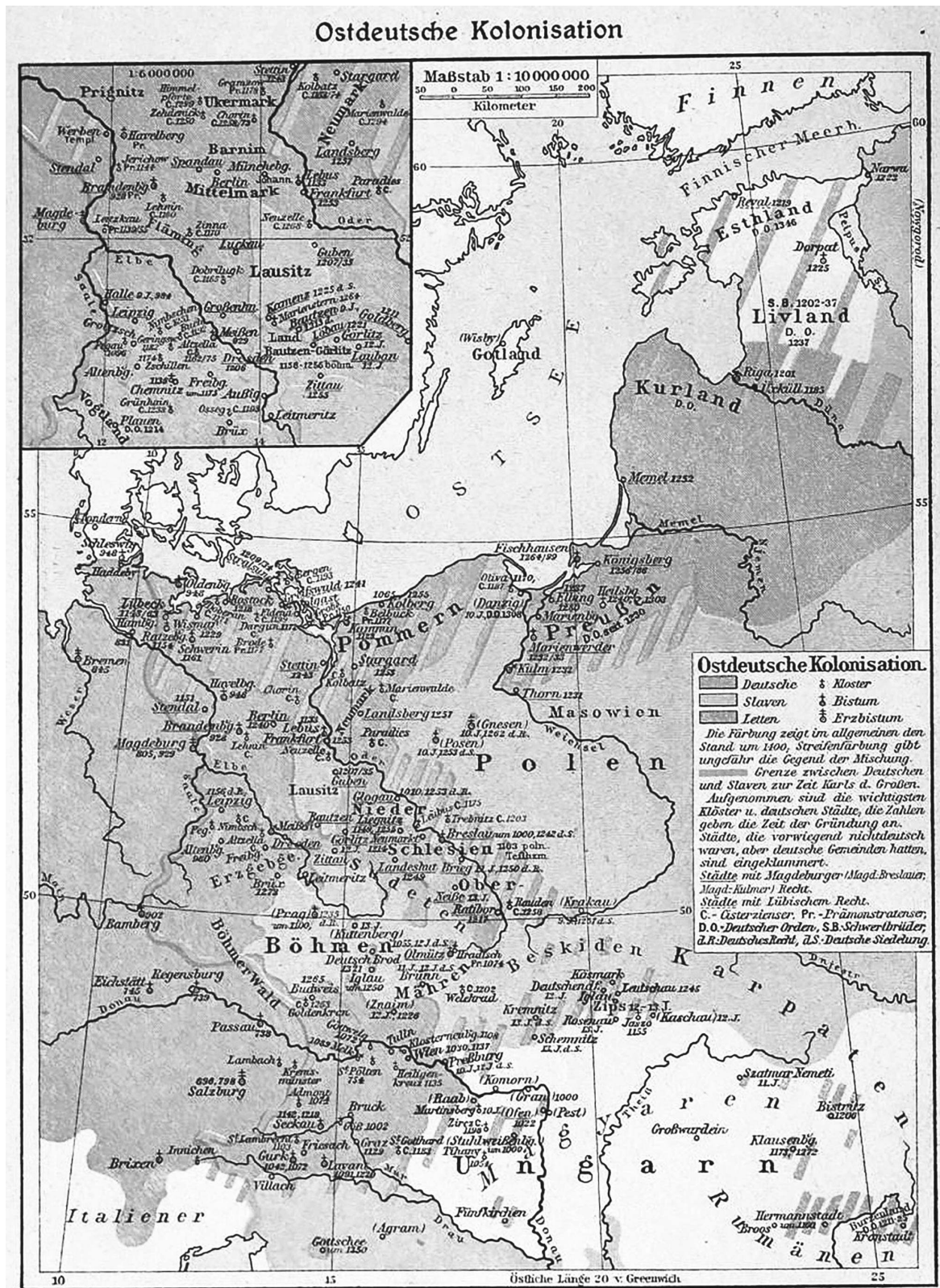
Figure 5. Ostdeutsche Kolonisation, *Putzgers Historischer Schulatlas.* Notice that the shift in color used to depict the Slavic ethnicities in this map from that in Figure 4.
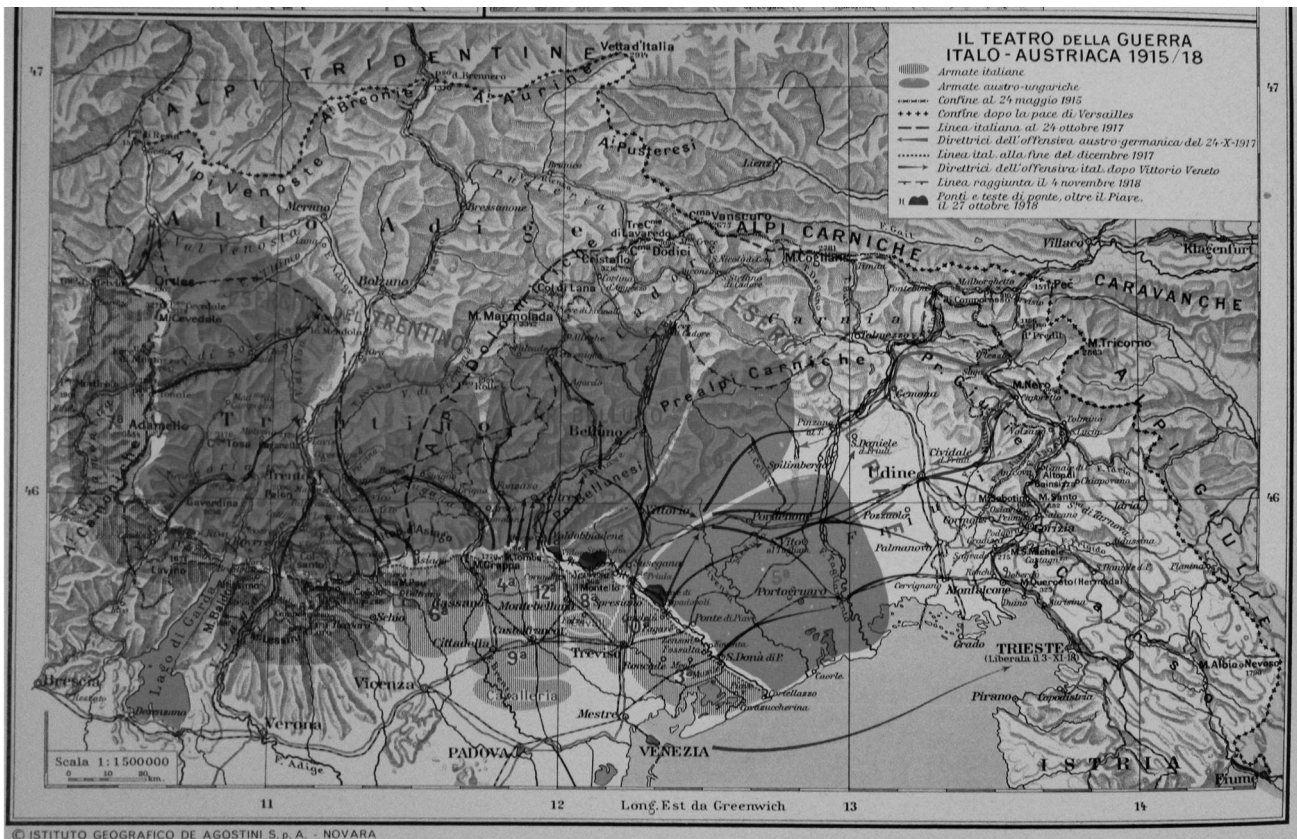*Source*: Baldamus and others (1918).

Figure 6. Il teatro della Guerra Italo-Austriaca 1915/18, *Atlante Storico De Agostini*. Notice the static representation of the war and the colors used for the Italian and Austro-Hungarina armies.
Source: Baratta and others (1955).

in the 1955 edition. In Figure 7 the Italian advance is highlighted using many different colours, which help the user to visualize the day-to-day movement of the armies, while in Figure 6 the aggressors, the Austro-Hungarians, are depicted with the aggressive pink/red and the defenders, the Italians, are depicted with the pacific blue. The map from the 1955 edition illustrates the flexibility of the usage of colour psychology in the historical atlases: in this case, the traditional positive role of red/pink is reversed and the colour is used for its aggressive – in a negative sense – value, while the pacific and calm quality of blue is used for its positive capability. It is also possible that the authors of the *De Agostini* were influenced by the numerous switches in the use of red and blue to depict the German armies that occurred in the *Putzger* between the end of the First World War and the Second World War and that helped communicate aggression or peace each time (see in particular the 1918, 1923, 1931, 1937, and 1942 editions).

Conclusion

The study of the use of colours in the maps contained in historical atlases is fascinating, given the propagandistic value of atlases as a *medium*, especially in a nationalistic

sense. The psychological theory of colour, both the associative and the emotional symbolism parts, has been a potentially helpful tool for analysing how colours could have been used by the authors of German and Italian historical atlases to convey hidden messages in their South Tyrolean maps. It is likely that some authors could have consciously used the colours according to these theories, given the large number of maps that were apparently drawn with very peculiar colour schemes, some of which I proposed in this article. Moreover, and as said in the Introduction, other scholars such as Verena Kleinschmidt, Sylvia Schraut, Patrick Lehn, and Giles Palsky have already noted some possible voluntary colour selections. Unfortunately, it is impossible to prove this beyond doubt, because there are no known written records of this use of colours by the authors of the atlases. It is also possible that some authors consciously used colour schemes even without knowing the psychological theory of colours, having personally observed the effectiveness of some colours' adjacency. That said, the use of colours in historical atlases was deemed of paramount importance, as reported in the preface of the 1923 edition of the *Putzger*: "even in the one page maps, until now printed with a minor quantity of colors, and for this reason less pleasant

Figure 7. Vittorio Veneto, *Atlante Storico De Agostini*. Contrast the aggressive use of many colors to depict the Italian advance after the battle with the static quality of Figure 6.
Source: Baratta and others (1933–34).

and clear, will now be treated with the same cure reserved for the two-pages maps, in both manufacturing and coloration."[1] Nevertheless, analysing the use of colours in the maps contained in the German and Italian historical atlases via the psychological theory of colour has greatly advanced and improved this research and the comprehension of the authors' intentions. Therefore, it is conceivable that the psychological theory of colour can become an important tool for better understanding and analysing the intentions of historical atlases' authors, at least for the atlases produced at the height of nationalism.

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Notes

1. "… die einseitigen Karten des Atlas, die bisher mit einer geringeren Zahl von Farben gedruckt wurden und deshalb weniger schön und klar wirkten, jetzt in der Farbengebung und auch in der Durcharbeitung den doppelseitigen Karten vollkommen gleichwertig geworden sind" in the original German version.

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