Red Parties and Blue Parties. The Politics of Party Colours: Use and Perception of Non-Verbal Cues of Ideology

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Colours are a central feature of the political arena. Parties use colours to forge distinctive brand images and group allegiances. Colours are used in campaigns and become culturally associated with movements and ideologies. This paper analyses how political parties use colours and how individual voters respond to them. I collect new data on the colour hues in party logos in advanced industrial democracies and show that party families adopt more similar colours the more ideologically cohesive. More generally, a correlation exists between ideological positioning on a left-right scale and hues on a colour spectrum. Colours are also used for practical differentiation, as shown by an increase in the range covered by new challenger parties. Given this patterns, we expect individual voters to attribute to colours strong context-dependent and culturally learned meanings, using them as a low-level heuristic for ideology. This hypothesis is tested in a survey experiment on subjects from the USA and UK (where Red and Blue have different connotations). The study has implications for our understanding of party-voter links. It will also inform party communication strategies and media reporting, since a choice of colours can have unintended effects.

It waved above our infant might,
When all ahead seemed dark as night;
It witnessed many a deed and vow,
We must not change its colour now.

In modern politics, ideologies and political positions are usually described both in academic and popular discourse by the language of left and right derived from the French revolutionary National Assembly. There is a second type of language, however, that is equally widespread and universally recognized to convey meaning about political ideology: that of colours. From ancient factions to contemporary parties, colours have been used by political groups in competition with each other to mark differences with the enemies, create allegiances with the group, reinforce loyalties between members. Parties have adopted one colour in their symbol, now part of their public image, they use it in the media and on
campaign material, it is everywhere at their conferences, leaders wear it on their ties and dresses, voters find it on the ballot paper. Colours are a central feature of any political arena, nevertheless, very little research exists that systematically studies their role in political competition and behaviour. This paper offers a first exploratory contribution on the topic, investigating how colours are used by political parties and how voters respond to different colour signals.

Colours correspond to different wavelengths of light perceived by human vision to be different when viewed under certain conditions (Fairchild 2013; Palmer 1999; Gegenfurtner and Kiper 2003). Colour vision is physiologically based on the interaction of light with the cone photo-receptors in the retina of the eye. Three different kinds of receptors (relatively more sensitive to the high, medium or low ranges of the visible spectrum) register inputs (commonly understood as red, green and blue information), which are then converted into output signals through an opponent process (in terms of red–green and blue–yellow oppositions) (Fairchild 2013). The millions of colours that human vision is able to distinguish are cognitively organised and classified by humans into a limited number of discrete categories which receive names in the language, with evolutionary patterns both of universality and culture relativity (Davidoff 1991; Brown and Lenneberg 1954; Berlin and Kay 1991).

A growing body of literature has been studying the effect of colour perception on psychology and behaviour (Elliot and Maier 2014). Specifically, colours are thought to have an effect through mechanisms grounded in evolution and biology or in learned cultural association. For example, the colour red is associated with dominance and aggression, linked to testosterone in male primates, and is perceived as threatening in competitive sport situations, possibly giving an advantage to a red-wearing individual or team (Hill and Barton 2005). However, its association with danger and failure can produce avoidance motivation and effects in achievement situations such as cognitive tests (Mehta and Zhu 2009). Moreover, individuals wearing red are perceived to be more sexually attractive (Elliot and Niesta 2008), but less able or intelligent (Maier et al. 2013). Conversely, blue and green, linked to the natural realms, can carry positive meanings of calmness and peace and have positive implications for performance or experience in other situations (Mehta and Zhu 2009).

Further research on the impact of colour has been conducted in marketing literature (Labrecque, Patrick et al. 2013). Colours influence consumers’ perceptions and behaviour, because of their embodied and learned meanings (Gorn et al. 1997; Elliot and Maier 2014). Therefore, companies use colours consciously, in product design and advertisement, in store environments, for their corporate logos, in the attempt of having desired positive effects. More generally, colours serve an important role in the establishment of brand identity and recognition. For example, blue is the most common colour used in company logos, because of its association with competence (Labrecque, Patrick et al. 2013). Consumers prefer products with colours that match their learned expectations (e.g. blue water), and can punish companies who deviate from established norms. How-
ever, differentiation can be beneficial when there is no strong market leader (Labrecque and Milne 2012). However, it is important to note that attitudes and behaviours are also influenced by context-free preferences, which show variation across cultures (Madden et al. 2000; Jacobs et al. 1991).

Despite the importance of colours in influencing individual perceptions and the attention paid by organisations and communication strategists, their use in the political realm has received limited attention. National flags represent one of the most important visual political symbols and one of the main examples of political use of colours. Cerulo (1995) finds that the choice of colour in flags is correlated with ideology and the position of the country in the world system; while citizens have been found to react to the presence of flags (Becker et al. 2011; Dumitrescu and Popa 2016). Others have observed how colours are used in social movements, where they become sources of orientation and expression of collective identities, used as frames both by the movements themselves and reflected by the media (Doerr and Teune 2012; Fine et al. 1998; Sawer 2007; Chesters and Welsh 2004).

The visual aspect of politics is now at the centre of a growing literature, which has focused on the non-verbal elements of electoral campaigns and representation, showing how the facial and physical appearance of candidates can influence voters (Bailenson et al. 2009; Sullivan and Masters 1988; Rosenberg and McCafferty 1987; Lenz and Lawson 2011; Mattes and Milazzo 2014), or how campaign advertisement can signal information (Sulkin and Swigger 2008; Schill 2012). These elements function as cues about valence and position for citizens, especially in contexts of low-information (Bartels 1996; Kuklinski, Quirk et al. 2000; Lau and Redlawsk 2006). More generally, party brands serve this similar heuristic function: voters cognitively and emotionally assign information and judgement to party symbols and labels, in turn developing partisan attachments and identities (Lupu 2013; Nielsen and Larsen 2014; Scammell 2015; Conover and Feldman 1981; Rahn 1993; Sanders 1988).

I argue that colours contribute in a fundamental way to the construction of these brands and identities in a political context, as they do in the market context. Their use is widespread, they have practical purposes, they form and reinforce solidarities, they acquire meaning. Research is needed to understand of parties use colours in their brands and communication strategies, as well as how perception of these colour signals might influence individual attitudes and behaviour.

In this article, I conduct a first analysis of colour uses by political parties. After an illustration of the theoretical background and hypotheses, I will describe the data derived from a collection of party logos. I will then present some first empirical results, showing how the choice of colours is associated with ideological positions and party families. After these exploratory analyses of data at the party level, I will propose a research design for a pre-registered an online survey experiment, which aims to study whether individual perceptions of political messages are modified by visual colour signals, thought to be short-cuts for partisanship and party brand.
In this section, I present the background and develop theoretical propositions, from which I derive a series of hypotheses. First, parties and candidates use colours initially for the purely practical purpose of identification and recognition. In this sense, the origins of party colours in political competition are the same as the use of colours on uniforms and flags in factional or inter-state war (Cerulo 1995). This mechanism of recognition is particularly important in contexts of low-information voting and high illiteracy. Therefore, we observe that candidates start to employ colour codes in their electoral campaigns, showing ribbons, rosettes and flags. Also, candidates and party lists are identified and coded with colours on official ballots, when voters are not able to identify parties by their name or label (Reynolds and Steenbergen 2006; Conroy-Krutz et al. 2016). With the strengthening of party organisations and the nationalisation of party systems, colour uses are also standardised, presented consistently across different electoral districts and over multiple elections, therefore starting to create a stable symbolic association between the party, and what the party stands for, and their colour.

Parties choose colours taking into consideration existing implicit embodied meanings and culturally associated meanings. For example, political elites who had links with aristocratic and royal families would refer to their traditional colours and their coats of arms; others would rely on the familiar colours of the national flag, to trigger immediate recognition and channel a patriotic sentiment.1 Others choose new colours with specific symbolic meaning: most famously, the socialist movement has consistently adopted red, metaphorically related to the colour of the blood of workers killed by state repression in the first episodes of the labour struggle and historically traced back to the French Revolution and the Paris Commune. The use of a colour contributes to the creation of a persistent party image, evoking sentiments of solidarity, group allegiance and party loyalty among its supporters. Colours become associated with organizations and ideas and therefore assume new meanings, which are socially learned and have long-lasting effects. For example, because of its association with socialist parties, red has been progressively dropped by conservative parties, who have become increasingly identified by blue. At the same time, yellow and orange have been favoured by Whigs, liberal and Christian-democratic parties, with some links to protestant non-conformist churches; while black, traditionally adopted by anarchist groups and in some cases also associated with the church because of the colour of the priest cassock, became in the 20th century the symbol of fascism. More recently, the emergence of Green parties out of the environmentalist movement represents one of the strongest new formulation of

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1 For example, the French monarchist right used white, while the British Tories used the red and blue from the Union flag.
an association between colour and political ideas.\(^2\)

When parties use colours, they attach meaning to them in the context of politics. Therefore, these associations become established and tend to remain stable over time. Moreover, other parties would normally follow existing established conventions, because of the mechanisms of recognition and identification in the electorate, thus contributing to the entrenchment of their meaning. Based on this theoretical assumptions and an overview of the historical background, I formulate the following hypothesis:

**Hypothesis 1** (Party Family Hypothesis). *Political parties of the same party family use similar colours.*

Party images are persistent and can change only slowly, therefore the use of colour by party families tend to be stable over time. Conversely to this function of identification, colours also serve a function of differentiation. In particular, new parties use new colours to mark differences with the old established parties and highlight the novelty of their platform. Generally, we can formulate the following hypothesis:

**Hypothesis 2** (Differentiation Hypothesis). *New parties adopt new colours, to differentiate themselves from the existing competitors.*

We can also expect that the choice of colour follows a trend in line with human vision and psychology, as exemplified by basic colour theory. The colour wheel in Figure 1 illustrate the idea: old party systems formed by a few parties

\(^2\) Because these associations are historically established and socially learned, they vary across cultures, but they are nonetheless present and important.
(conservatives, liberals, socialists) are represented by primary colours (blue, yellow, red). When new parties emerge, they adopt new secondary colours, expanding the colour space: environmentalist, populist and radical parties introduce green, purple, orange. Further hues are explored when fragmentation increases. Technological change in the production of dyes and inks is also likely to have played a role in the expansion of colour alternative (although this is beyond the scope of this article): from traditional paint offering only a limited palette at low costs, to modern inks allowing a greater range, to digital print that can cover the whole colour space and produce high-value greens and magentas, now adopted by new social-liberal parties.

Moving from a small discrete set of distinct colours, where the function of differentiation was easily fulfilled by a few primary opposites, to a full colour space, where every hue is potentially available to parties, opens the issue of how colours (and parties) are related to each other. I argue that relations between colours, their similarities and oppositions, embedded in human perceptual vision and cognition, are transferred to the political arena and inform their choice and use. Specifically, I hypothesise that party families not only adopt distinct colours, to distinguish themselves from each other, but they also mark differences and similarities, by following familiar patterns in colour relationships, well represented in spatial colour theory. The hypothesis that there is a relationship between colour space and ideological space is illustrated in Figure 2:

**Hypothesis 3 (Spatial Hypothesis).** Colour hue and position on a spatial policy dimension are correlated: more right-wing parties use colour with lower wavelength (i.e. away from red).

The existence of this spatial relationship would also imply that the more ideologically dispersed a party family, the more varied the colours of its parties, or that the more distant a party from average spatial position of the party family, the more likely it is to have a different colour.

If political parties use colours with consistent patterns in the construction of stable party brands, we expect individual voters to have learned to associate those colours to specific parties and broader ideological families. That is, colours in

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3 While party colours are normally stable and new colours are usually introduced by new parties, old parties can also choose to innovate and diverge from tradition strategically to signal change and accompany an evolution in platform or ideology. For example, Tony Blair replaced red with purple in the first party conferences of New Labour, while the Italian Democratic Party has been using green and orange, to signal distance from its communist predecessor. As a testament to the strength of these associations, and highlighting the need for differentiation, Chesters and Welsh (2004) describe some of the reasoning behind choices during the Global Forum Movement protests in Prague in 2000: ‘It was agreed that where possible the colours assigned to the marches should avoid familiar political associations, thereby confusing the authorities and creating ambiguity around what might otherwise become fixed expressions of particular collective identities.’

4 It is also possible to speculate that red has been favoured by left-wing popular movements because red paint was traditionally the least expensive and most accessible, while blue, traditionally expensive, was exhibited by nobles and conservatives.
political messages and images are used as low-level heuristic and affect voters as non-conscious primes, carrying meaning as such, or reinforcing (or confounding) verbal political content. A general hypothesis can be formulated as follows:

**Hypothesis 4 (Individual-Level Effect Hypothesis).** *Individuals perceive colour cues and evaluate political content accompanied by colour cues consistently with the associated partisan meaning of the colour.*

Finally, although we expect the culturally learned associations to have a stronger effect, it is possible that colours also have a residual effect independent from the political context, via biologically-based psychological mechanisms, e.g. of attraction/avoidance. Since these theoretical suggestions are still under-explored and the empirical evidence does not point in a single direction (Elliot and Maier 2014; Maier et al. 2013)—for example, red could have an embodied meaning of danger and threat, thus triggering avoidance, or of power and arousal, thus triggering attraction—I will not develop any testable hypotheses on these possible effects, although there could be some exploratory contribution in the final results.\(^5\)

**Data and Methods**

I collected new empirical data on the uses of colours by political parties. While colours can be employed for political purposes in a series of different situations, from canvassing material to television advertisements, to the attire of party leaders, I focus on the official party logos, which, I argue, are the most representative...
component of a party visual strategy or brand. I gather an extensive data set of party logos for 159 political parties in 17 Western European countries, a selection based on the cases included in the 2014 Chapel Hill Expert Survey data set (Bakker et al. 2015). Since the associations between colours and political parties and ideologies are theorised to be culturally learned and bounded, for now I limit the study to Western Europe, because of its homogeneous political culture and party systems and families which share similar origins and characteristics (von Beyme 1985). Moreover, it ensures a consistent and comparable measurement of the variables relating to ideology. Nevertheless, the set will be later expanded to parties in other Western Non-European and Central European countries.

In order to generate data measures that can be analysed, I conduct the following procedure. The raw data of party logos are loaded as raster images. I perform a \( k \)-means clustering function on the pixel information and extract three main dominant colours for each image (Cariou 2015). Colour sections occupying a small portion of the image are removed (Area < 0.05; usually contour lines or minor details). I also remove colour sections with a low chroma value (Chroma < 0.06; i.e. white and black in backgrounds or contour lines). The hue value of each colour portion—a total of 246 units—is used as the measure of party colour, the dependent variable. Figures 3 and 4 show an example of

6 It must be noted that the colour of the party logo differs, in some cases, from the one customarily associated with a party. For example, the German Christian Democratic Union (CDU) is traditionally represented by the media and electoral offices by the colour black, while the party uses orange in its logo and campaign material. Consistently with the idea of colour use as a choice by political parties (whether informed and strategic or automatic because of cultural association), I argue that the colour of their logo is the variable of greater interest. Voters will be exposed to orange more, although they might have learned the association with black because of the longer history.

7 Specifically, the data include the following countries: Austria, Belgium, Denmark, Finland, France, Germany, Great Britain, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland.

8 Hue is a radial measure. In order to obtain a linear approximation, the value is translated by 330 degrees, thus optimally locating the break point in the empty area of space between red and purple.
the data, using the case of the Swedish party system: Figure 3 shows the logos of all major parties (it is also worth noticing how colour is the most and almost only distinctive element in the logos, while most of them use similar symbols with images of flowers and only a few include the identifying letter or name); Figure 4 plots the corresponding hues extracted from the logo of each party.

Additionally, a control dummy variable is included if a specific use of colours is due only to the presence of a national flag in the party logo. The relative size of the colour section is also available as a further additional control. The data is based on the logos used by the parties currently or in the last available election. It is therefore a static cross-section. Although beyond the scope of this article, a study of the changes of logos over time would also bring interesting results, because of their strategic use by political parties.

The main independent variables to describe the ideological characteristics of political parties are party family (von Beyme 1985) and a spatial position on a left–right dimension (Downs 1957). Both are taken from the Chapel Hill Expert Survey (Bakker et al. 2015). These estimates by country experts have been extensively used and their reliability tested. Compared to the main alternative based on the coding of party manifestos by the Comparative Manifesto Project (Budge et al. 2001; Volkens et al. 2015), expert surveys offer a more static measure of policy position, which is more suited to describe the party ideology in relation to the idea of a stable party brand, as opposed to policy platforms that vary in the short term of an electoral cycle (Budge 2000; McDonald et al. 2007). Data on the age of political parties, based on the year of their official foundation, is taken from the European Election Database and integrated with individual country sources.

Focusing on the spatial hypothesis, it will be tested through an Ordinary Least Squares (OLS) regression model of this form:

$$H_{ijk} = \beta_0 + \beta_1 P_{jk} + \beta_2 S_{ijk} + \beta_3 F_{ijk} + \gamma_k + \epsilon_{ijk},$$

(1)

where $H_{ijk}$ is the hue of the colour portion $i$ in the logo of party $j$ in country $k$, $P$ is the policy position of the party on a left–right dimension, $S$ is the size of the colour portion in the party logo as a proportion of the image, $F$ is a dummy for the presence of a national flag or the use of national colours, $\gamma_k$ is the country fixed effects term and $\epsilon$ the error term.

9 The coding of the national flag control dummy is conservative: for example, the red of the Swiss socialist party logo is attributed to the Swiss flag.

10 For example, the British Conservative Party, while in recent times always associated with the colour blue, did not have a codified logo for a long part of their history, later adopting the symbol of a blue torch. More recently, under the leadership of David Cameron, the logo has been changed to a green oak, symbol of stability but aimed at supporting the short-term pivoting of the party towards environmental issues. While the symbol has remained, the colour has soon been changed to the Union flag or different shades of blue.

11 The European Election Database is prepared and made available by the Norwegian Centre for Research Data (NSD)
Empirical Results

In this section I present descriptive results and exploratory findings on the relationship between colours and parties. First, I illustrate how the choice of colour in party logos is consistent within and between party families. The plots in Figure 5 show evidence that there is a relationship between party family and colour hue. The relationship is statistically significant (ANOVA: $F(10, 209) = 4.211, p = 0.000^{***}$). The colour hues that are prevalent in the logos of parties are what we expected from the anecdotal accounts of the party families. Socialist parties and the communist and radical left use red almost exclusively. Green parties use shades of green, as do centrist agrarian parties. Conservative parties adopt mostly a blue colour. Instead, other party families on the right are more varied. Both Christian-democratic parties and liberal parties are divided between the use of yellow and orange, traditionally associated with their political ideology, and blue, typical of a mainstream right. This bimodal distribution is consistent with the characteristics of those party families, which include both smaller centrist and centre-left parties and larger mainstream centre-right parties. The populist radical right, another family without a coherent ideology, is equally divided. Moreover, parties with no clear political ideology (regionalist parties, or parties that are not aligned with traditional families) show the highest variance. Therefore, from this illustration we can observe that the party families which are ideologically and organizationally more diverse tend to use a more varied
Empirical Results

Figure 6: Three kinds of Venstre (literally translated as 'left'): (a) the Swedish Venstre (socialist party, left), (b) the Norwegian Venstre (liberal party, centre) and (c) the Danish Venstre (liberal-conservative party, right). While the three parties use the same name (with a spatial meaning), their ideology can be inferred more correctly from the colour of their logo.

Figure 7: Relationship between colour and party age. Dotted lines for socialist, conservative, liberal and green party families. (Caveat: I measure party age, not age of party logo, which could have been changed.)

In Figure 6, I describe one case, to illustrate the importance of colours as cues for ideology. The figure shows the logos of three parties in Scandinavian countries: (a) the Swedish Venstre, a socialist radical-left party; (b) the Norwegian Venstre, a radical-liberal centrist party; (c) the Danish Venstre, a liberal-conservative party and main party of the centre-right block. The three parties are radically different from each other, they belong to different party families, they occupy different positions in the political spectrum and within the structures of government coalitions in their respective party systems. They share the same label, which means 'left' in all three languages (for some, a legacy of the origins of the party systems in the limited suffrage of the 19th century). However, their logos can be easily distinguished by their colour, which is consistent with what their party family uses across countries. In this case, the party colour conveys more ideological information than the party label.

I look at the Differentiation Hypothesis in Figure 7. It shows that older parties, founded in the 19th century, from traditional mainstream party families (e.g. socialist, conservative), use exclusively the red and blue primary colours. As new parties emerge (e.g. agrarian, liberal, Christian-democrats), they adopt new colours (green, yellow, orange). In recent years, larger sections of the colour spectrum have become occupied, and new colours (including purples and magentas) are used, especially by new challenger parties and younger party families. Older party families tend to remain loyal to their colours, although
Empirical Results

there are some trends of differentiation, with newer socialist and conservative parties more likely to adopt different colours than their older sisters. New liberal parties, in particular, seem to be less attached to the traditional yellow and orange. It must be noted that the data is imperfect, since it captures the age of the party, but it does not contain information on when the current party logo was first introduced. Parties do change their logos, although complete overhauls are rarer.

To investigate the relationship between colour and ideology more precisely, I now focus on party positions on a spatial dimension. Correlations are shown in Figure 8 and the results of a linear regression are shown in Table 1. There is a significant relationship between the spatial position of a party on a left–right scale and the colour of its logo: more right-wing parties use colours with higher hue values (or lower wavelengths). The relationship is stronger when controlling for the size of the colour section in the party logo and for the presence of a national flag. It is stronger also when the sample is limited to the main colour of each party logo. Country fixed effects are included and results are robust to different measurements of the main independent variable (mean position over a longer series or left–right position based on manifesto data).

In terms of magnitude of the effect, a change in policy position of 2 points (on a 10-point scale) is correlated with a change in hue of 30–40 points (on a 360-point scale), which represent a definite change in discrete colour (e.g. from red to orange).
Empirical Results

Table 1: Regression results

<table>
<thead>
<tr>
<th></th>
<th>Hue</th>
<th>Left–Right Position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Left–Right Position</td>
<td>11.83***</td>
<td>14.42***</td>
</tr>
<tr>
<td></td>
<td>(1.95)</td>
<td>(1.90)</td>
</tr>
<tr>
<td>Hue</td>
<td></td>
<td>0.01***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.001)</td>
</tr>
<tr>
<td>Size</td>
<td>9.64</td>
<td>-106.94**</td>
</tr>
<tr>
<td></td>
<td>(20.23)</td>
<td>(49.69)</td>
</tr>
<tr>
<td>National Flag</td>
<td>-27.15*</td>
<td>-41.02**</td>
</tr>
<tr>
<td></td>
<td>(15.34)</td>
<td>(20.35)</td>
</tr>
<tr>
<td>Constant</td>
<td>69.60***</td>
<td>115.34*</td>
</tr>
<tr>
<td></td>
<td>(11.82)</td>
<td>(64.19)</td>
</tr>
<tr>
<td>Country Fixed Effects</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>246</td>
<td>246</td>
</tr>
<tr>
<td>N</td>
<td>246</td>
<td>156</td>
</tr>
<tr>
<td>R²</td>
<td>0.08</td>
<td>0.15</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.08</td>
<td>0.08</td>
</tr>
<tr>
<td>Residual Std. Error</td>
<td>93.93</td>
<td>94.02</td>
</tr>
<tr>
<td>F Statistic</td>
<td>22.22***</td>
<td>2.09***</td>
</tr>
</tbody>
</table>

*p < .1; **p < .05; ***p < .01
Clustered standard errors by party logo.
Model 3 includes only one main colour for each party logo.
Left–right position is from CHES 2014. Results robust to different measures.

A large part of the spatial effect is likely to be driven by party family, although policy position and party family are correlated and difficult to disentangle completely. In Figure 9, I look at the relationship between left–right policy position and hue by party family. Using smaller subsets of cases, results are less robust, however, some weaker indications of a similar relationship between position and hue can be observed within individual party families (but not all).

Figure 9: Relationship between colour hue and left–right position, by party family.
Experimental Design on Individual Perceptions of Colour Cues in Political Messages

Motivation and Research Question

Colours are an integral part of the brand image of political parties. Parties use them in their campaign material and they appear every time a visual message is shown to the electorate, from party logos directly printed on ballots, to print and television advertisement, to what party leaders wear in election debates. As an example, Figure 10 shows cover and pages of the manifestos of the British Labour and Conservative parties published for the 2015 General Election. Manifestos set and publicise the policy platform that parties strategically put forward; their textual content have been analysed extensively to study party positions and ideology (Budge et al. 2001). From the images we can observe how these policy platforms are visually framed with the party colours: statements and proposals are always accompanied visually by red and blue. While this is true for a publication that voters rarely read, the use of colours is even more widespread in the more popular campaign advertisement.

Moreover, we have established that the choice of colour follows established patterns, it is consistent within party families across countries and it correlates with ideological positions more broadly. Voters are exposed to party colours. Party colours are associated with specific party brands, families and ideologies. Thus, based on these expectations, we can ask the following research question: are individual perceptions of political message affected by the use of colours? And more specifically: do citizens infer ideological positions from colour cues? In this section I describe the design of an online survey experiment aimed to test this Individual-Level Effect Hypothesis.
Experimental Design

The experiment is structured as follows: individual respondents will be presented with a series of policy statements. Statements vary in their directional political orientation and can be broadly defined as left or liberal, centrist or neutral, and right or conservative. Subjects will be asked to evaluate the ideological orientation of the policy statements, rating them on a seven-point left–right (or liberal–conservative) scale.

The randomised manipulation consists in modifying the colour of the background where the policy statements are visualised. The treatment will be the assignment of red and blue backgrounds. The two colours are chosen because of their widespread and established use by political parties at opposite ends of the political spectrum. They are also the most commonly tested in psychological experiments in other fields. The colour hue will be manipulated, while the chroma and lightness values are kept constant, to ensure that any effect will be due to the specific change in hue and not other variation (Elliot and Maier 2014). Grey will be used as control (a white stimulus would be confounded by different lightness). An example of the type of manipulation is shown in Figure 11.

Furthermore, respondents will be asked a series of questions on demographics, partisanship and their self-placement on the same ideological scale. Additionally, there will be questions to determine subject exclusion, such as checks for colour-blindness or blindness to the purpose of the experiment.

The experiment employs a $3 \times 3$ factorial design, with randomised variation

**Table 2:** Summary of the experiment $3 \times 3$ factorial design and theoretical expectations for pairs of verbal and non-verbal stimuli

<table>
<thead>
<tr>
<th>Content:</th>
<th>Red</th>
<th>Colour:</th>
<th>Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left</td>
<td>Interacting</td>
<td>Control</td>
<td>Interacting</td>
</tr>
<tr>
<td>Neutral</td>
<td>Colour-only</td>
<td>Control</td>
<td>Colour-only</td>
</tr>
<tr>
<td>Right</td>
<td>Interacting</td>
<td>Control</td>
<td>Interacting</td>
</tr>
</tbody>
</table>
of the policy content of the political message (left/neutral/right) and of the colour frame (red/grey/blue). It is summarised in Table 2. The model for the experiment can be stated as follows:

\[ Y_{ij} = \mu + C_i + P_j + C_i \cdot P_j + \epsilon, \]  

(2)

where \( Y_{ij} \) is any observation for which the first factor (colour) \( X_1 = i = \{ \text{red, grey, blue} \} \), and the second factor (policy content) \( X_2 = j = \{ \text{left, neutral, right} \} \); \( \mu \) is the general location parameter (mean); \( C_i \) is the effect of being in block \( i \) (of the colour factor) and \( P_j \) the effect of being in the block \( j \) (of the policy content factor); \( \epsilon \) is the error term.

**Hypotheses and Expected Outcomes**

The general hypothesis is that colour cues are perceived by individuals and have an effect on their evaluation of policy statements, consistently with the expected association of the colour with a partisan brand and ideological position. For example, a policy statement framed in red will be evaluated as more left-wing in a political context where red is commonly associated with left-wing politics.

When the colour and content match, they reinforce each others and the evaluated position should be more extreme or less dispersed. When the content is neutral, the pure effect of the colour cue would be tested. When the colour and content are opposite, we should expect ambiguity or one cue prevailing, with no prior expectation. An example of the set of expected outcomes, for a political context where red is associated with the left and blue with the right, is illustrate in Table 3. I expect respondents to evaluate policy statements framed in red on average more to the left, and those framed in blue more to the right, compared with statements framed in grey as controls. A purely speculative graphical representation of the expected outcomes is shown in Figure 12, for an easy glance of the type of hypothesised relationships (the actual values shown are not meaningful).

Additional tests will be run to explore whether partisanship affects the relationship: people with stronger partisanship might hold a stronger learned association between party and colour. Moreover, expected outcomes may vary across countries, as I discuss below.

**Table 3:** Expected results of how respondents would evaluate policy statements given the treatments, if red is associated with left and blue with right

<table>
<thead>
<tr>
<th>Content:</th>
<th>Colour:</th>
<th>Red</th>
<th>Grey</th>
<th>Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left</td>
<td>Strong Left</td>
<td>Left</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td>Weak Left</td>
<td>Centre</td>
<td>Weak Right</td>
<td></td>
</tr>
<tr>
<td>Right</td>
<td>?</td>
<td>Right</td>
<td>Strong Right</td>
<td></td>
</tr>
</tbody>
</table>
Setting and Sample

The experiment will be run on two groups of subjects: the first group will include respondents living in the United Kingdom, recruited from the online sample of the Centre for Experimental Social Sciences (CESS) at Nuffield College, University of Oxford; the second group will include respondents living in the United States, recruited using Amazon’s Mechanical Turk (MTurk). The platform offers several advantages and allows to run experiments in a relatively inexpensive and accessible way (Berinsky et al. 2012; Huff and Tingley 2015). Moreover, no interaction between the randomised treatments in the experiment and the sample characteristics should be expected. The sample size for each group is planned to be of 500 subjects. Subjects who are colour-blind or who could guess the purpose of the experiment will be excluded.

Recruitment of subjects from the two different countries allows a better test of the hypothesis because of the different association between colour and ideology. While the United Kingdom follows the pattern observed in other Western European countries, where red is associated with the left and the Labour Party and blue with the right and the Conservative Party, the association is reversed in the United States, where red is used to describe the right and the Republican Party and blue to describe the left and the Democratic Party. The colour–party association in the United Kingdom is well established. In the United States it has been adopted in the political discourse, and in academic and media discussions, with a particular focus on the debate on polarisation, however, it does not fully permeate political campaigns, where candidates and parties still use both colours, because of their significance with the national colours and the U.S. flag. The particular nature of American parties and of the American party system can perhaps explain this weaker association. However, there is some
indication that the parties are starting to internalise the terms and adopt the colours both visually and as labels of their organisations.\textsuperscript{12}

Based on this description of the situation, we might expect different outcomes between the two groups. If results follow the party–colour associations in both countries, with opposite directions between the American sample and the British sample (red: conservative/left; blue: liberal/right), the hypothesis of culturally learned meanings would be strongly supported. On the other hand, it is possible that colours have an effect in the case of the U.K., where the association is more established, and not in the U.S.A., where it is not yet fully established and not universally shared or adopted by the parties. Instead, if colours have the same effect across countries, the culturally learned hypothesis would be rejected, while there could be a suggestion that colours might have deeper embodied meanings and that other psychological mechanisms are in place.

\textit{Summary}

The proposed experiment will test whether evaluation of the ideological position of political statements by individuals is affected by the background colour shown, with randomised manipulation. The experiment will be run as a survey on two groups of 500 subjects each, recruited online in the U.K. and the U.S.A. The analysis plan will be pre-registered and made available in the Center for Open Science online repository before data collection and data analysis, with ethical approval by the University of Oxford.

\textbf{Conclusion}

In this article, I observe that the use of colours is widespread in politics. I theorise that they serve practical purposes of differentiation and communication, but with persistent association they acquire political meanings, which become part of the shared social discourse and influence individual attitudes and behaviours, as well as their use by parties. Firstly, I collect new data on party logos in

\textsuperscript{12} The current use of red–Republican and blue–Democrat is widespread in today’s American political discourse, however, it is a recent development. It came into force especially since the 2000 presidential election, when discussions about the Electoral College in the Bush-Gore contest made colour-coded electoral maps popular with the general public. Before that, the use of the two colours varied, with either blue–Republican and red–Democrat pairs, because of historical links with the Unionist North and because of the European link between red and the left; or following a rule according to which the incumbent party would be coded in blue and the challenger in red; or simple alternation. The origins of the new norm in 2000 are debated: it has been suggested anecdotally that Republicans were assigned red by major media outlets because they were the challenger party, or because it was visually more appealing to have states in the middle of the country painted red, or simply because both started with ‘r’. In any case, it is indicative of how colour associations can become part of the public imagination, even when originally based on fortuitous decisions.
Western European countries to create a measure of party colour use and I present descriptive evidence in support of the hypotheses of a correlation between colour use and party family and spatial ideology. I find that party families tend to share the same colour, except those whose parties are cross-nationally more diverse and less ideologically cohesive. Secondly, I propose an experiment design to test whether individual voters actually perceive colour cues in relation to ideology and whether they respond in meaningful and expected ways, due to the learned association of colour with parties and political meanings.

This is a first attempt at shedding light on the role of colours in party politics and political psychology. Further research on this topic can expand the scope of this analysis to parties in non-Western countries and it can collect more precise archival data to study longitudinal change in colour use, in order to investigate potential strategic calculations or specific causal mechanisms. Moreover, perceptions at the individual level can be further explored with additional experiments, utilising different outcome measures, treatments or interactions.

This study has some important implications. It contributes to our understanding of parties and of the interaction between parties and voters, focusing on the under-explored aspect of non-verbal communication and signals, in relation with party brands, ideology, and heuristic mechanisms.

Moreover, the evidence can directly inform social and political organisations on the possible effects of the colours used in their messages. For example, it would teach us whether a party can convince some voters that it has changed policy platform just by changing the colour of their logo and campaign material. It would also advise non-partisan, governmental and media organisations to use colours carefully in relation to political matters, because of their implicit meanings. For example, it would help us knowing whether the uninformed decision by American media to assign blue and red to the Democratic and Republican parties after 2000 has had any unforeseen lasting effects on the party images and on public opinion.

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