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Political icon and role model: Dimensions of the perceived 'Greta effect' among climate activists as aspects of contemporary social movement leadership

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Abstract

The 2019 Fridays For Future global climate strikes were extraordinary protest mobilisations in many respects, both in terms of size, age composition and the absence of a specific external triggering event. To properly understand it, one must account for Greta Thunberg's leadership role in the mobilisation – the 'Greta effect'. We contribute to such an account by linking the 'Greta effect' on individual mobilisation to theories of political iconicity and political role models. Empirically, we use unique data from two waves of international surveys of participants in European Fridays For Future protests – on 15 March and 20–27 September 2019 – demonstrating that the perceived individual impact of Greta differs considerably among those who were mobilised in climate strikes. Through multilevel regression analysis, we furthermore show that (a) young women were especially prone to have been inspired and mobilised by Thunberg as a role model and (b) subjectively assessed mobilising influence by 'Greta' – in her capacity as a political icon – is positively related to protest participants' instrumental motivation, sense of solidarity and collective identity. We argue that our results contribute to a better understanding of informal social movement leadership in contemporary political mobilisations.

Keywords

Fridays for Future, Greta Thunberg, political icon, role model, protest survey, school strike for climate, social movement leadership

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Introduction

Compared to other areas of social movement research, movement leadership has received relatively limited attention (Morris and Staggenborg, 2004). Usually, the focus has been on the features of the leaders rather than their practice of leadership (Ganz and McKenna, 2019) and there is very little systematic knowledge about how individual activists are affected by prominent leaders in their movement. Strikingly, the micro-dynamics of individuals' protest mobilisation have been theorised for a long time (e.g. Klandermans and Oegema, 1987) and while the role of networks, frames, efficacy, emotions and mobilising structures are well examined (van Stekelenburg et al., 2019), the analytically distinct role of leaders in these dynamics is almost entirely overlooked. A better understanding of the meaning of social movement leadership becomes particularly pertinent as online forms of mobilisation become increasingly prominent and lead to global coordination of collective action on an unprecedented scale. While this is typically connected to non-hierarchical and decentralised forms of organising, this does not necessarily imply that leaders become less important, although their forms of influence may differ from leaders of formal and hierarchical organisations. A striking example of leadership in contemporary global protest mobilisation is Greta Thunberg and Fridays For Future (FFF).

On 20 August 2018, the then 15-year-old Greta Thunberg began her initially three-week uninterrupted school strike, positioned outside the Swedish National Parliament Building in Stockholm. The school strike, intended to demonstrate the meaninglessness of going to school when the world as we know it is about to be destroyed by global warming, was eventually joined by young people from an increasing number of locations worldwide. After the initial three weeks, the school strike limited itself to Fridays, giving rise to the FFF movement that quickly managed to mobilise several waves of globally coordinated protests, beginning with the Global Climate Strike on 15 March 2019. This event was unique because it was not preceded by a specific precipitating event such as an international summit (Cassegård et al., 2017; della Porta, 2007; Hadden, 2015; Owens, 2013). There were also strikingly high proportions of 'newcomers' among the global climate strike activists (de Moor et al., 2020a, 2020b). News media and some scholars quickly referred to Greta Thunberg's school strike as a trademark of a new climate mobilisation, and the sudden wave of youth activism was explained by a 'Greta effect' (Watts, 2019).

That there is indeed some form of 'Greta effect' is supported by research based on a national representative survey of adults in the US, which demonstrates that those familiar with Greta Thunberg show higher intentions to participate in climate change-focused collective actions (Sabherwal et al., 2021). However, that study does not measure actual participation in FFF and other studies show fewer mentions of Greta among FFF activists than one might expect (Díaz-Pérez et al., 2021; Martiskainen et al., 2020). Some climate-strike participants even distance themselves from the feminised public image of the FFF (Sorce, 2022). There are, in other words, strong indications that the strength and character of the 'Greta effect' vary not only within country populations but also among climate activists. However, little is known about *how* it varies, and even less about what it means for protest participants to become inspired and mobilised by Greta. To address these knowledge gaps, we will theoretically develop what we argue are the key components of Thunberg's mobilising role, and empirically investigate how they play out among FFF participants.

We contend that Thunberg's impact should be theoretically understood as a combination of her eventual *political iconicity*, uniting people globally, and her acting as a *political role model*, especially for young female participants. Empirically, we explore these aspects through an analysis of a unique internationally comparable survey dataset on 3947 participants in the 15 March and 20–27 September FFF protests in 22 cities in 15 European countries. In contrast to prior one-country studies drawing samples from the entire population, our dataset on actual FFF participants makes it possible to identify, and account for, variation both within and between events and locations.

Our results show that the perceived impact of Thunberg's leadership among climate strikers is far from uniform within the mobilisation. It varies considerably both between countries and events, as well as among participants in a single protest. A regression analysis of our protest survey data further demonstrates that different degrees of perceived influence by Greta correlate with participant characteristics

in ways that support our theoretical interpretations. Youths and young women appear more likely to identify with Thunberg as a role model based on their shared traits. We argue that Thunberg's role model status also explains some participants' higher determination and the sense that their protest can have an impact. Furthermore, we demonstrate a positive correlation between, on the one hand, perceived influence by Greta and, on the other hand, a general sense of collective identity with others in the movement and a tendency to regard one's participation as an expression of solidarity. This arguably represents how the political icon 'Greta' functions as a unifying symbol for the movement.

Two mechanisms of social movement leadership

While young women and girls are often celebrated as community leaders (Taft, 2011), there is traditionally a scarcity of women in high leadership positions within social movements (Robnett, 1996). The FFF is an exception. Its original website was started by a woman (Janine O'Keefe) and there are many local young female leaders in different countries (e.g. Adélaïde Charlier, Kyra Gantois, and Anuna de Wever in Belgium, Luisa Neubauer in Germany, Marie-Claire Graf in Switzerland, and Hilda Nakabuye in Uganda). However, it was Greta Thunberg who led the transnational movement *by example* and acted as a de facto leader in several respects. She was an *articulator* of movement demands and a *mobiliser* of movement participants (Gusfield, 1966). Thunberg exercised typical leadership practices such as relationship-building and storytelling (Ganz, 2010). She arguably filled both the role as a *symbol* of the movement and in some sense also a *decision-maker*, influencing the direction of the movement (Turner and Killian, 1972). However, Thunberg did not speak as a representative of a distinct formal organisation but as herself based on the moral standing – even iconic position – that she had acquired. Leading and mobilising by example as a role model *and* as an iconic figure, is what we argue has been most distinct about Thunberg's leadership role in FFF, as we develop further in the following two theoretical subsections.

'Greta' as a political icon

The reception of Thunberg's speech on 23 September at the 2019 UN General Assembly signified that her position had become more than a spokesperson. Millions viewed her speech, and it contributed to climate protests of unprecedented scale across the world on Friday, 27 September. In less than a year, Thunberg had developed into what can be described as a *political icon* of crucial importance for the climate movement to mobilise globally, independent of UNFCCC climate summits as uniting events (Olesen, 2022). Alongside many other young women, such as Malala Yousafzai and Nadia Murad, Greta Thunberg had become a symbol of 'young female heroism' (Bergmann and Ossewaarde, 2020), which departs from the pattern identified by Prestholdt (2019) that global 'icons of dissent' have tended to be male.

Drawing on the works of, among others, Durkheim (1995) and Alexander (2011), Olesen (2015) developed the notion of global political icon as a subcategory of *global injustice symbols*.[1] Building on Durkheim's (1995) theorisation of symbols as representing something sacred to the collective, condensing collective meanings and values, Olesen (2015) argues that symbols thereby 'connect individuals and groups with society and the social' (p. 6). Injustice symbols highlight morally wrong actions or – more to the point in the case of Greta as a potential injustice symbol – unjust *in*action. In Olesen's (2015: 41) theoretical framework, a *political icon* is 'an image or person that embodies and symbolises a period, an event, or a set of values'. In practice, images and persons typically come together in specific photographs or artistic renderings of the person, reproduced on banners, clothes, pins, etc. While the physical individual herself can be conceptualised as the *background person*, the icon is, in a sense, a collectivised individual as a symbol for collective values. Recent media analyses demonstrate that media presented Greta Thunberg as exceptional, heroic, and iconic (Bergmann and Ossewaarde, 2020; Ryalls and Mazzarella, 2021), even though it is clear that political icons are seldom perceived unanimously and are often contested. Like Malala Yousafzai (Olesen, 2016), Thunberg has been a subject to ongoing attempts at *de-iconisation,* that is, attempts to deprive the background person of her iconic status (Daniel and Graf, 2020).

While studies currently proliferate on the contentious formation, negotiation, and dissemination of political icons (Alexander et al., 2012; Olesen, 2015; Prestholdt, 2019), the importance of social movement leaders' symbolic capital (Nepstad and Bob, 2006), and the construction of public characters (Jasper et al., 2020), little empirical work analyses the ways icons have been constructed and received among protest activists. Building on the Durkheimian notion that symbols connect individuals to a collective – as well as drawing some of their power from collective rituals – we argue that an essential measurable individual correlate of perceived influence by Greta *as a political icon* should involve a heightened sense of shared collective identity with *other* protest participants. Being mobilised by a symbol representing a collective and its values should also increase the sense of belonging to that collective (Schatz and Lavine, 2007) and, conversely, a higher sense of identification with a collective should also imply a greater affinity with its icons. These arguments run counter to Ryalls and Mazzarella's (2021) concern that Greta's individual iconicity might downplay the need for collective mobilisation. Symbols contribute to a shared sense of community not by having the same meaning to all individuals but precisely by being shared while making diverse interpretations possible (Cohen, 1985). Nevertheless, with the sense of having a shared political concern comes *solidarity* with other members of the imagined community (Saunders, 2008), also extended to other groups evoked by the injustice aspect of the icon. In other words, Greta's iconic status can be expected to heighten FFF participants' sense of solidarity towards each other. In symbolising the younger generation which is to a larger extent victimised by the effects of climate change, she arguably comes to represent solidarity among children and youth, as well as solidarity by older generations towards the younger. This represents two common objects of solidarity, in capturing either the support *within* an in-group or *towards* a comparatively disadvantaged out-group (Wahlström, 2016). In Waterman's (1998: 235–238) terms, solidarity would for young participants imply primarily a 'solidarity of common interest and identity', while for older participants mainly the 'restitution' aspect of solidarity, an acceptance of responsibility for historical wrongs.

In sum, we have two hypotheses about what should characterise FFF participants for which Greta performs the function of a mobilising political icon:

Hypothesis 1. A stronger sense of shared collective identity with the other protesters is positively correlated with a higher perceived importance of Greta.

Hypothesis 2. Participants who are more strongly motivated by solidarity also perceive a higher importance of Greta.

Greta as a role model

The position of Greta Thunberg as a spokesperson of the movement and background person for 'Greta', the political icon, does not exhaust what she represents to the FFF mobilisation. Crucially, Thunberg demonstrated that a young women can exercise political agency. In that capacity, she can also be a *political role model* (Campbell and Wolbrecht, 2006; Wolbrecht and Campbell, 2017), especially for other youths and, more specifically, young women. Being a role model is analytically distinct from Thunberg's iconic status because the background person Greta Thunberg demonstrates what is possible to others who want to follow in her footsteps. While the icon is something beyond an ordinary individual, a role model shows what is attainable for other 'mortals'. Consequently, in media depictions, there tends to be an ambiguity between 'Greta Thunberg as the hero and role model' (Bergmann and Ossewaarde, 2020: 21). While positions as political icon and role model are not mutually exclusive, not all icons are role models, and not all role models have iconic status.

In an overview of role model research, Morgenroth et al. (2015) identify three distinct functions of role models: '(a) they show us how to perform a skill and achieve a goal – they are *behavioural models*; (b) they show us that a goal is attainable – they are r*epresentations of the possible*, and (c) they make a goal desirable – they are *inspirations*' (p. 467, italics in original). In a social movement context, these three

functions could be translated to (a) demonstrating possible *repertoires of contention*, (b) increasing a sense of individual *political efficacy*, and (c) increasing alignment with the role model's *framing* of a political issue.

The first two functions relate to the argument that female political leaders demonstrate opportunities for women to succeed in politics and bolster women's usually low levels of political ambition (Lawless and Fox, 2015). For example, in a recent study, Campbell and Wolbrecht (2019) demonstrate how political candidates and the outcomes of their election campaigns (e.g. the one of Hilary Clinton), as well as the role models in the family, increase the protest potential among young women in the US. Also, Liu and Banaszak (2017) have shown that a higher proportion of women in high political positions (cabinet ministers) increase women's participation in peaceful demonstrations. Having a young girl as a front figure of a protest movement should have a similar effect and increase the likelihood of female protest activism. Media narratives of 'how Greta became an activist' could aid young women in constructing a social identity as a climate activist and indicate various trajectories to becoming one (Taft, 2011). Recent research has demonstrated that the presence of women political role models influences the protest propensity of other women and girls (Campbell and Wolbrecht, 2019; Liu and Banaszak, 2017). However, we are aware of no studies investigating participant perceptions of a woman role model within a specific protest campaign or how it correlates with the characteristics of the protest participants. We already know from descriptive reports that the Global Climate Strike activists are unusually likely to be young women (de Moor et al., 2020a, 2020b) and the fact that they are school striking indicates that Thunberg has functioned as a behavioural model – they use the same action repertoire. However, we also expect that young women mobilised in FFF are more affected by Greta, compared to other protest participants.

Political efficacy is usually analysed via its two dimensions – internal efficacy is closely related to ideas of personal competence (I am able to), and external efficacy reflects perceptions that one has a voice in politics (I have a say) (Wolak, 2018). Considering that Morgenroth et al. (2015) emphasise role models' capacity to increase *motivation* and the sense of attainability among the *role aspirants* – those for whom role models are a source of inspiration and target for emulation – we argue that perceiving Greta as a role model should boost activists' perceived political external efficacy. Greta might have functioned as a representation of the possible in changing role aspirants' *self-stereotyping* as having the capacity to take action for the climate and, to some extent, the limited effect that *external barriers* (such as school regulations) had on her activity. This way, role aspirants in the FFF campaign could also be expected to have higher internal efficacy – in the sense of confidence in their capacity to act politically (see also Sabherwal et al., 2021). Therefore, the analysis focuses on the combination of motivation and political efficacy.

However, people very different from a potential role model might not be affected by the 'inspiration' of the model to the same degree as those very like her (Asgari et al., 2012). In other words, identifying with the role model in some respects increases the sense that the role model's achievements are attainable. In the context of FFF, one might expect young and women participants, and even more so young women, to gain a heightened sense of efficacy from Thunberg.

Lastly, whereas the central part of role model research concerns personal educational and career goals, we argue that the inspirational function of a role model such as Greta Thunberg translates into adopting the political goals and *collective action frames* articulated by the role model. According to Morgenroth et al. (2015), this is mediated by the degree to which the role model is regarded positively. Adopting the role model's goals also increases the *motivation* of the role aspirant to reach these goals.

In sum, we have two additional hypotheses about what should characterise FFF participants for which Greta has become a role model:

Hypothesis 3. The higher the degree of perceived political efficacy and motivation to struggle for the campaign goals, the more strongly participants perceive themselves to be influenced by Greta.

Hypothesis 4. Youth and women participants will experience a stronger perceived 'Greta effect' since sharing (approximate) age and gender facilitates identification with her as a role model.

Methods

The protest survey method

The data analysed in this study comes from two waves of a protest survey of FFF protests on the 15 March and on the 20 or 27 September 2019 (details about both events in Tables A1 and A2 in the Supplemental Appendix, and in two reports – de Moor et al., 2020b; Wahlström et al., 2019). Our data covers 15 countries and 22 cities ($N = 3947$), which provides us with a variety of geographical areas covered – southern Europe (Italy), northern Europe (Denmark, Finland, Norway, and Sweden), continental Europe (Austria, Belgium, Germany, the Netherlands, and Switzerland), and Eastern Europe (Czech Republic, Hungary, Poland, and Romania), as well as the UK. Thus, we consider that our results should be relatively well generalisable to European climate strike activists.

These surveys adhered to the sampling method initially developed by Walgrave and colleagues (Van Aelst and Walgrave, 2001) and later established in the international research programme *Caught in the act of protest: Contextualising contestation* (CCC) (Walgrave et al., 2016). Whereas the CCC method prescribed handing out postal surveys during demonstrations, the FFF surveys used flyers with individual IDs and web links/QR codes leading to an online survey that the protest participants could fill in at home. In other fundamental respects, the FFF survey followed previously established standardised procedures to minimise sampling bias and control for non-response bias. The survey sampling procedure was designed to give each participant in a demonstration an equal chance of receiving a survey flyer. The research teams start by estimating the size of a demonstration. Then intervals of rows, and individuals in rows, are calculated to accomplish an even distribution of max 1000 flyers. The interviewers are split into teams, each led by a 'pointer' who keeps track of the counting and indicates whom the interviewers should approach with flyers. The primary purpose of this is to circumvent interviewers' tendency (deliberate or not) to avoid potential respondents who, for any reason, seem less 'approachable' or likely to accept a flyer. While typically over 90% of those approached will accept a survey, a much lower proportion (usually 20%–30%) responds to it. Hence, there is a risk of non-response bias. Therefore, a subsample is drawn by doing a short face-to-face interview with every fifth person given a flyer. Because very few refuse to respond to these questions, this sub-sample can be used as a baseline to identify non-response bias in the online survey. Comparing the face-to-face and online respondent populations, the only consistent response biases that we could identify were that online respondents, on average, tended to be somewhat older, and a lower proportion identified as 'pupils or students'. The latter correlation disappears when controlling for age. The likely age bias should be kept in mind, especially when interpreting our descriptive data.

A problem particular to the FFF protest survey was the expected high proportion of schoolchildren in the protests. Since most participating countries have ethical regulations of minimum age for independent, informed consent to participate in research – typically 14 or 15 years – the teams had designed ways of obtaining consent from parents. For example, in Sweden, parents had to sign a consent form and post or email it to a contact person in the research team, who then emailed a separate link to a web survey that – unlike the ordinary web survey – did not block minors from participating. The study has passed ethical vetting by relevant institutions in those countries where that was required (e.g. the UK).

Surveying a sample of climate protest participants makes it possible to ask detailed questions about participation in a particular protest to a sufficiently large sample of respondents to draw statistical conclusions. In a survey directed to entire national populations, only a tiny fraction of respondents can be expected to have participated in a particular protest campaign. Further, a protest survey reaches respondents before too much time has passed to provide accurate answers. However, the limitation of our strategy of sampling protest participants is the lack of opportunities to compare participants with non-participants. However, this data allows us to study the *distribution* and *character* of the perceived 'Greta effect' by comparing protesters who regarded Greta as important for their participation with protesters who regarded her as less important.

Operationalisation of variables

The focal variable in our study is the perceived individual (positive) influence by Greta Thunberg, which was operationalised by two survey questions: *To what degree would you say that Greta Thunberg has… (a) made you more interested in climate change? (b) affected your decision to join the Climate Strike on [date]?* The questions had the response alternatives: *Not at all; Not very much; Somewhat; Quite; Very much;* and *I do not know who she is.* These two questions roughly correspond to the effects of what is commonly termed *consensus mobilisation* – building support for a political issue – and *action mobilisation* – mobilising people to take political action on the issue (Klandermans, 1984). Still, we do *not* aspire to measure the objective causal influence of Greta Thunberg's actions on people's decision to protest, but rather to capture variations in how protesters consciously connect their engagement to Greta, the *perceived* influence. Figure 1 summarises answers to these questions and shows that 13% to 21% of the global strike participants did not consider Greta important for their interest in climate change or participation in the protest. Those who responded 'I don't know who she is' were excluded from the analysis since there should be different mechanisms behind not knowing about Thunberg and knowing about her while not feeling particularly affected by her. Still, it is noteworthy that 4% of the respondents in the 15 March survey and 2% in September 2019 opted for such a response alternative (de Moor et al., 2020b).

To simplify the analysis, we use these two questions to create an index ranging from 2 to 10 (Cronbach's alpha 0.74 in March, 0.71 in September, and 0.72 for the total). Figure 2 presents the index's (our dependent variable) distribution across the studied cities and waves, and shows clearly that the perceived importance of Greta varies significantly not only across cities – compare Bern (5.024 [±0.144]) and Stockholm (6.830 [±0.191]), but even across the waves for the same city. It

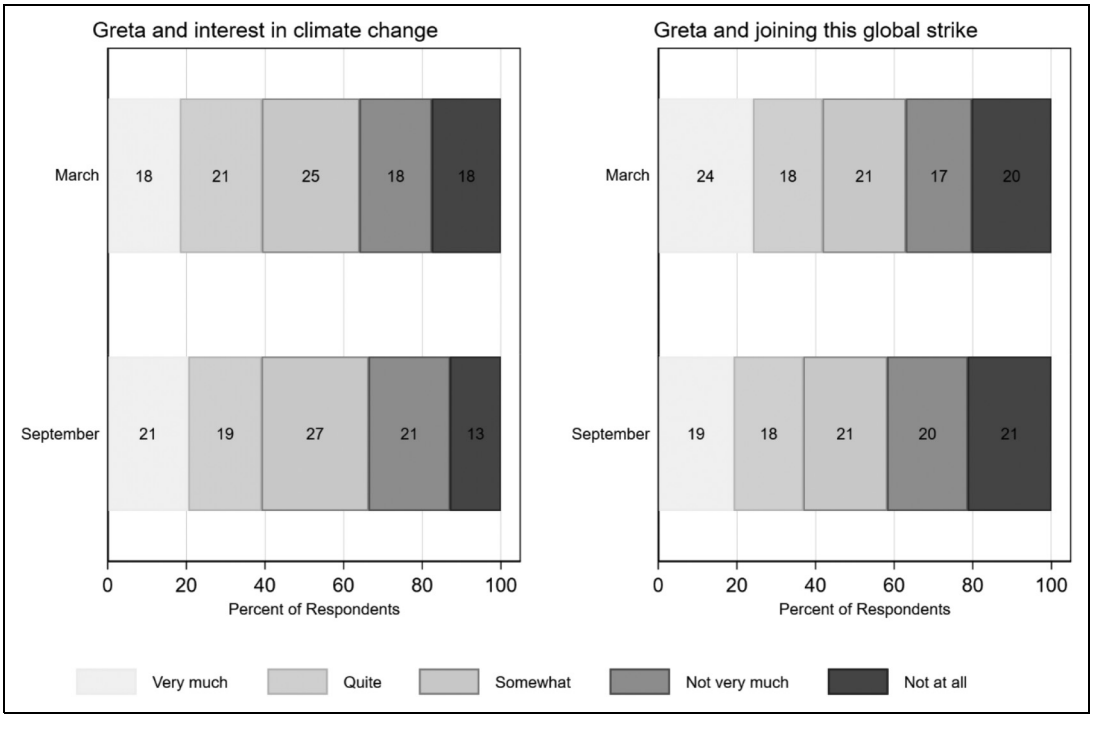

Figure 1. Distribution of two questions measuring the 'Greta effect' across two survey waves.

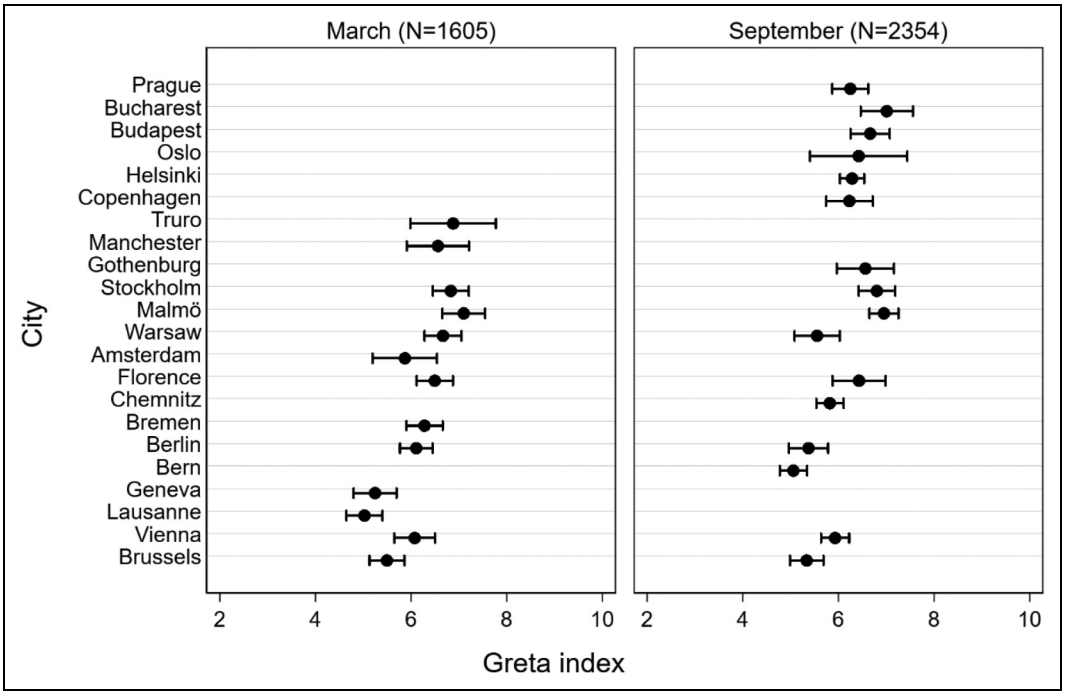

Figure 2. Distribution of Greta index across cities and by two survey waves.

was, on average, 6.667 [±0.195] for Warsaw in March and 5.55 [±0.238] in September. The country differences are also remarkable from the respondents' open answers to a question about why they joined the strike. While, on average, 1% of all respondents mentioned Greta by name, in Sweden, the percentage was four. No respondent spontaneously mentioned Greta Thunberg when articulating their motivation to join the protest in the Czech Republic, the Netherlands, Norway, Romania, and the UK.

We include several theoretically relevant independent variables. There is reason to expect that age has a nonlinear relationship with the Greta index – the youngest age cohort is more likely to perceive a strong 'Greta effect', whereas there is little reason to assume a continuous reduction the older people become. Hence, we use age groups in the analysis. Age was calculated from respondents' year of birth and categorised into four age groups: <20, 20–35, 36–65, and >65. The youngest age group, comprising respondents from 11 to 19 years of age, represents literally the narrowest age span but admittedly comprises great internal differences. However, broadly speaking, members of this category share crucial experiences of still attending some form of schooling and are therefore analytically interesting as potential school strikers. For gender – respondents were given three options: man, woman, and other, the latter of which included the option to complement it with an open-ended response. As de Moor et al. (2020a, 2020b) noted, there were extraordinarily many young people in the protests and an overrepresentation of women (and girls) participants.

The responses to the following question measured political efficacy and motivation in relation to the climate struggle: *Below are two goals that are ascribed to this demonstration. For each goal, indicate how important you consider it and indicate to what extent you believe the Climate Strike demonstration will be effective in reaching it*. The statements were: *Politicians must fulfil their promise to stop global warming,* and *Global justice must be advanced through climate action*. The respondents were asked to rate the degree of importance and degree of effectiveness separately. This set of questions captures three

things: the *value* conferred by the individual to official movement frames, the perceived *efficacy* of the demonstration, and the *motivational strength* as a function of both of these measures taken together. The latter is based on the assumption that (instrumental) motivational strength results from a multiplicative relationship between held values and expectancy in realising those values (Klandermans, 1984; Simon et al., 1998).[2] According to this interpretation, the belief in the importance of a goal is only instrumentally motivating since it is backed up by a belief that an action will be effective. For the analyses, we calculate the strength of instrumental motivation by separately multiplying the sense of importance and the sense of effectiveness for each campaign goal and then taking the average of the square roots of the products[3]:

$$\frac{\sqrt{(Imp.\ Goal\ 1 \times Eff.\ Goal\ 1)} + \sqrt{(Imp.\ Goal\ 2 \times Eff.\ Goal\ 2)}}{2} = Strength\ of\ instrumental\ motivation$$

The resulting variable varies from 1 to 5, and the mean of 3.913 does not vary much across the cities or waves.

As a complement to this more complex measurement of motivational strength, respondents also indicated their degree of determination to participate in the protest, ranging from *Not very* (1) to *Very much* (5). About 91% of the respondents in March stated that they were quite (4) or very much (5) determined; 90% said the same in September.

The sense of shared collective identity with other participants was measured with the question: *To what extent do you identify with the other people present at the demonstration?* Only 5% were not at all or not very much identified with other people in March and September.

Solidarity is measured via respondents' degree of agreement (1–5) with the statement: *I participated in the demonstration in order to express my solidarity.* The question thus focuses on solidarity as a self-identified incentive for participation, rather than solidarity as a general feeling or outcome of participating (cf. van Troost et al., 2013). However, the question does not specify an object of solidarity and we cannot know for sure the degree to which each respondent's understanding of the term corresponds to the various theoretical meanings of the concept (Wahlström, 2016). Nevertheless, in the light of our discussion in the theory section and the discursive context of the movement, we assume that in this context solidarity is primarily directed towards children and youth (or a sense of mutual support protesters in this category), given FFF's focus on these groups as victims of climate change.

The analysis also includes three control variables. First, because 'experienced' climate activists should be less likely to join the strike due to the perceived effect of Greta (since they are more likely to be already engaged in the issue and to be part of already existing mobilising networks), it is essential to account for protest participants' prior political activism. This is measured via a question asking whether the respondent has been active in politics during the last 12 months (e.g. contacted politicians, signed a petition, taken part in direct action, or used violent forms of action). While in March 2019, 6% of the survey-responding protest participants had not done any political action during the past year, in September this had expectedly dropped to 3.5%. The September respondents were asked if they had filled in our questionnaire in March. The 12 respondents who were excluded from the analysis.

Second, considering that the 'Greta effect' might be smaller in countries with their own young female leaders of the FFF movement, we have included a dummy variable indicating the presence of such a leader. Based on the information from the FFF website and news coverage of the strikes, we coded Belgium, Germany, the Netherlands, and the Czech Republic as having a domestic young female mobiliser that we deemed functionally similar to Thunberg.

Finally, we have included a dummy indicating the September strike to differentiate between March and September events. While it is plausible that the broader impact of Greta, like other political icons,

should wax or wane over time, we found no reason to expect a specific direction that her perceived impact would change among the climate protesters. Table A3 in the Supplemental Appendix provides a descriptive overview of all included variables.

Table 1. Factors explaining variation in Greta effect, multilevel models with fixed effects ($N = 3947$, 22 cities).

	Model 1	Model 2	Model 3	Model 4	Model 5
Gender (male = baseline)					
Female		0.219**	0.219**	0.218**	0.707***
		(0.0759)	(0.0759)	(0.0759)	(0.144)
Other/no answer		0.322	0.327	0.327	0.843***
		(0.178)	(0.178)	(0.178)	(0.252)
Age (under 20 = baseline)					
20–35		−0.939***	−0.931***	−0.935***	−0.582***
		(0.0965)	(0.0972)	(0.0972)	(0.157)
36–65		−0.685***	−0.677***	−0.681***	−0.153
		(0.0999)	(0.101)	(0.101)	(0.161)
Over 65		−0.844***	−0.837***	−0.843***	−0.154
		(0.167)	(0.167)	(0.167)	(0.243)
Determination		0.164**	0.165**	0.166**	0.164**
		(0.0508)	(0.0508)	(0.0508)	(0.0507)
Sense of shared collective identity		0.322***	0.322***	0.321***	0.319***
		(0.0460)	(0.0460)	(0.0460)	(0.0459)
Strength of instrumental motivation		0.795***	0.792***	0.794***	0.777***
		(0.0627)	(0.0628)	(0.0628)	(0.0628)
Solidarity		0.117**	0.117**	0.116**	0.115**
		(0.0430)	(0.0430)	(0.0430)	(0.0429)
Prior political action		0.403*	0.407*	0.411*	0.375*
		(0.180)	(0.180)	(0.180)	(0.180)
September dummy			−0.0688	−0.0694	−0.0865
			(0.0990)	(0.0988)	(0.0987)
Domestic young female leader				−0.595	−0.603
				(0.337)	(0.340)
Interaction					−0.447*
Female # 20–35					(0.191)
Female # 36–65					−0.784***
					(0.193)
Female # older than 65					−1.161***
					(0.322)
Other/no answer # 20–35					−0.940*
					(0.427)
Other/no answer # 36–65					−0.706
					(0.445)
Other/no answer # >65					0.522
					(1.588)
Constant	6.157***	0.587	0.622	0.784*	0.560
	(0.130)	(0.369)	(0.374)	(0.382)	(0.386)
City level variance	0.323**	0.485*	0.500*	0.456*	0.466*
	(0.111)	(0.163)	(0.169)	(0.157)	(0.161)
Individual level variance	5.508***	4.818***	4.818***	4.818***	4.793***
	(0.124)	(0.109)	(0.109)	(0.109)	(0.108)
Log-likelihood	−8993.109	−8745.155	−8746.311	−8744.962	−8732.721

Note: Standard errors in parentheses, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

The correlates of varying perceived 'Greta effect'

We test the four hypotheses about the perceived 'Greta effect' using a multilevel fixed-effects regression model, in which the levels are individuals (level 1) nested within cities (level 2). The results of our analysis (see Table 1) support all four hypotheses. Starting with the two *political icon*-related expectations, the perceived influence of Greta was positively related to identification with the other protesters present, hence a shared sense of collective identity. The relationship remains when we control for variables such as gender and age, which we expected to have an independent effect on the social identity of the participants. The second hypothesis about being motivated by solidarity finds some support, but the relationship between the responses that protesters came to the demonstration to express solidarity and the perceived importance of Greta was relatively small. In addition, 'solidarity' may have somewhat different meanings for different participants, and the higher values among older protest participants could imply that they are commonly motivated by a concern for the younger generations.

Concerning the *role model* effect, the results corroborate our third hypothesis as those who have higher instrumental motivation and determination to participate in the protests tend to perceive higher importance of Greta. Hence, as expected, a higher degree of perceived political efficacy relates to a higher perceived 'Greta effect'. Also, there is clear support for the fourth hypothesis: young people (under 20) perceive Greta as more important for their mobilisation – all regression coefficients of other age groups are negative compared to the below 20 baselines. Further, female respondents report a higher perceived 'Greta effect' than respondents with male or other gender identities.

The control variable of prior political participation had a weak positive relationship with the perceived importance of Greta. This is unexpected, as our initial assumption was that Greta would impact mobilisation primarily for first-timers. Instead, those who had taken part in politics before had a somewhat higher perceived 'Greta effect'. The protest wave (September vs. March) and having a domestic young female leader of the FFF had no significant relationship with the perceived Greta effect. While

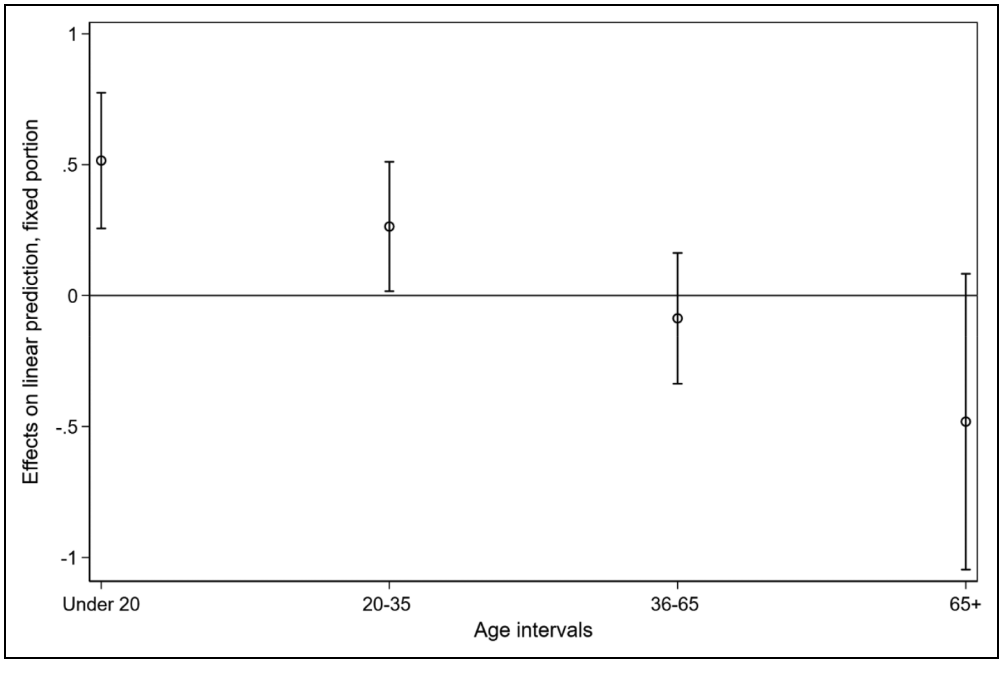

Figure 3. The conditional marginal effect of female gender identity over age groups (male and others as baseline)**.** Other variables at their mean, $N = 3905$, 22 cities.

we cannot measure it precisely, it is likely that in those countries, the general role model effect is more significant because young women could 'follow' the example of Thunberg and their own specific young female activists. We also ran the analysis at the country rather than city level, and all other effects remained almost the same, while the effect of 'domestic young female leader' increased. It is significantly negative, suggesting that Greta had less importance in countries with their own female front figures for the FFF (or at least that the local front figures mobilised a substantial share of participants for whom Greta was not very important).

Finally, we also tested a possible interaction effect of age and gender identity on the perceived importance of Greta (Table 1, Model 5, a simplified illustration on Figure 3). Indeed, respondents younger than 20 and with a female gender identity are significantly more likely to perceive the Greta effect than older respondents with the same gender identity.

Concluding discussion

We theorised that Greta Thunberg played two crucial roles in the climate movement in 2019: political icon and role model for those who mobilised – and those who were mobilised in – the Global Climate Strikes. Using data collected during two major global climate strikes – in March and September 2019 – we demonstrated that there is support for our assumption that Greta Thunberg not only has had the function of a spokesperson for the FFF campaign but also became a unifying political icon and a role model for many protest participants. Whereas our data does not allow us to directly assess the mobilising effect of Greta on the population at large, our results build on prior studies that relate the 'Greta effect' to collective efficacy (e.g. Sabherwal et al., 2021). Our analysis shows that the individually perceived level of impact by Greta among those who were mobilised is correlated with a number of participant characteristics in ways that support our theorisation of how a young female political leader can mobilise global protest both as an icon and as a role model.

The study provides empirical support to Olesen's (2015) theory of political iconicity, as possibly the first to investigate the scope and character of a political icon's importance among participants in a protest campaign. A stronger subjectively experienced 'Greta effect' – or likelihood to say that one has become interested in climate issues or participating in the strike because of the inspiration of Greta Thunberg – was associated with higher importance of solidarity for mobilisation, as well as identification among protest participants, by extension their sense of community. These patterns indicate that a movement leader's iconic status may indeed be a crucial element in mobilising large numbers of participants in a global protest campaign, contributing to a sense of cohesion and common purpose among people with no prior personal ties.

Activists – especially female activists under the age of 20 – may also regard Greta Thunberg as a role model, showing what is possible and politically desirable and how to struggle for political goals. Maybe not every young girl can expect to talk about climate politics to the UN, but as a role model, Thunberg has demonstrated the power of persistent collective struggle (and that you could even break some rules in the process). In our sample, age and gender were correlated with a perception of higher influence by Thunberg, and this, in turn, was associated with higher determination and instrumental motivation for participating. Time will tell if Thunberg's role model effect will be consequential beyond the contemporary climate mobilisations and politically empower the young women of today in their adult lives and (political) careers.

As we have mentioned above, the statistical correlations in our data between protesters' perceptions of having been influenced by Greta and other characteristics do not in themselves provide information about the character of causal connections, if any. In the case of Greta's iconicity, we argue that the most plausible interpretation is that our measures of perceived influence on the one hand and solidarity and collective identity are best conceived as two sides of the same coin – different aspects of the meaning of functioning as a political icon. In causal terms, one could both imagine that the perceived importance of a common icon could boost some participants' sense of collective identity and solidarity, while the latter factors might conversely influence the individual salience of 'Greta' as an icon for the collective to which one belongs. As regards Thunberg as a role model, we believe that there are reasonable

theoretical grounds to expect that the higher perceived 'Greta effect' expressed by younger women among the protesters shows that this group is more prone to be inspired by her in this way. To the extent that perceived influence by Thunberg works as a proxy for regarding her as a role model, it is reasonable to assume that a 'role model effect' is a causal mechanism behind some participants' higher determination and instrumental motivation to participate. Acknowledging her influence could mean regarding her as a role model, which heightens belief in the movement's cause and the determination to pursue it. We find no credible reason for a converse causal relationship – that participants with higher determination and instrumental motivation would be more prone to acknowledge Greta's influence.

An additional issue is if protesters' perceived mobilising influence by Greta provides any information about the degree to which Thunberg 'actually' made them more interested in climate change or affected their decision to join the Climate Strike. The naïve assumption of a direct correspondence between these phenomena is undermined by other possible factors affecting participants' responses, such as desired self-presentation, unreliable memory, and the degree to which the actual reasons for our actions are even transparent to us. However, it would be equally untenable to assume that perceived influence had no relation to actual influence. We, therefore, argue that our results regarding the perceived 'Greta effect' on protesters can be used for formulating hypotheses in future studies about the actual mobilising effects of young female leaders. The broader generalisability of our findings should also be assessed through further exploration of mobilisations beyond the European context because the female role model effect may vary in different regions (Liu, 2018).

In conclusion, our study reveals and elaborates on some aspects of movement leadership in micro-mobilising processes in contemporary global protest campaigns. Leaders acting as role models may have the capacity to mobilise categories of people who usually are not very active in protests – in this case, young women and girls – while iconic leaders are associated with the collective identity and cohesion of the movement. These mechanisms have not been accounted for in standard models of protest micro-mobilisation and represent a novel and important path of inquiry. Thunberg's leadership and mobilising influence in FFF can be regarded as an extreme – and potentially even paradigmatic – case (Flyvbjerg, 2006), in terms of its global scale, Thunberg's gender and youth, and salience of iconic and role model elements in her leadership. It is thus appropriate for taking initial steps in theorising neglected aspects of movement leadership but does not provide a firm basis for assessing the generalisability of our findings to leadership in other protest campaigns. Therefore, we hope that this inspires future studies exploring the effect of political icons like 'Greta' also on the behaviours and attitudes of the broader national populations. In that context, the uniting effect of political icons and how they might amplify existing antagonisms should be discernible.

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Supplemental material

Supplemental material for this article is available online.

Notes

1. Our terminology of symbols and icons is only superficially similar to – and should not be confused with – the pragmatist philosopher Peirce's (1932) distinction between three kinds of signs: icons, indexes and symbols.
2. Note, however, that measuring motivational strength this way does not account for expressive motivation or moral obligation (cf. Wahlström, 2016). Note also that instrumental motivation in this context does not imply personal gain but rather a decision to take action in order to effect change.
3. The reason for taking the average of the added square roots is to produce a scale in the same range (1–5) as the variables of which it is composed. This way, the values of the scale are also compressed into a more even distribution over the scale range.

References

Alexander JC (2011) *Performance and Power*. Cambridge: Polity Press.

Alexander JC, Bartmanski D and Giesen B (2012) *Iconic Power: Materiality and Meaning in Social Life*. New York: Palgrave Macmillan.

Asgari S, Dasgupta N and Stout JG (2012) When do counterstereotypic ingroup members inspire versus deflate? The effect of successful professional women on young women's leadership self-concept. *Personality and Social Psychology Bulletin* 38(3): 370–383.

Bergmann Z and Ossewaarde R (2020) Youth climate activists meet environmental governance: Ageist depictions of the FFF movement and Greta Thunberg in German newspaper coverage. *Journal of Multicultural Discourses* 15(3): 267–290.

Campbell DE and Wolbrecht C (2006) See Jane run: Women politicians as role models for adolescents. *The Journal of Politics* 68(2): 233–247.

Campbell DE and Wolbrecht C (2019) The resistance as role model: Disillusionment and protest among American adolescents after 2016. *Political Behavior* 42: 1143–1168.

Cassegård C, Thörn H, Soneryd L, et al. (eds) (2017) *Climate Action in a Globalizing World*. Abingdon: Routledge.

Cohen AP (1985) *The Symbolic Construction of Community*. Milton Keynes: The Open University.

Daniel A and Graf P (2020) Ikone oder hassbild? Greta Thunberg und die Fridays for Future-Bewegung. *Femina Politica* 29(1): 150–156.

della Porta D (2007) *The Global Justice Movement: Cross-national and Transnational Perspectives*. Boulder: Paradigm Publishers.

de Moor J, De Vydt M, Uba K, et al. (2020a) New kids on the block: Taking stock of the recent cycle of climate activism. *Social Movement Studies* 20(5): 619–625.

de Moor J, Uba K, Wahlström M, et al. (eds) (2020b) Protest for a future II: composition, mobilisation and motives of the participants in Fridays for Future climate protests on 20–27 September 2019, in 19 cities around the world. DOI: 10.17605/OSF.IO/ASRUW.

Díaz-Pérez S, Soler-i-Martí R and Ferrer-Fons M (2021) From the global myth to local mobilization: Creation and resonance of Greta Thunberg's frame. *Comunicar* 68: 35–45.

Durkheim E (1995) *The Elementary Forms of Religious Life*. New York: The Free Press.

Flyvbjerg B (2006) Five misunderstandings about case-study research. *Qualitative Inquiry* 12(2): 219–245.

Ganz M (2010) Leading change: Leadership, organization, and social movements. In: Nohria N and Khurana R (eds) *Handbook of Leadership Theory and Practice: A Harvard Business School Centennial Colloquium*. Boston: Harvard Business Press, 527–568.

Ganz M, McKenna E (2019) Bringing leadership back in. In: Snow DA, Soule SA, Kriesi H, et al. (eds) *The Wiley Blackwell Companion to Social Movements.* 2nd ed. Chichester: John Wiley and Sons Ltd, 185–202.

Gusfield JR (1966) Functional areas of leadership in social movements. *The Sociological Quarterly* 7(2): 137–156.

Hadden J (2015) *Networks in Contention: The Divisive Politics of Climate Change*. Cambridge: Cambridge University Press.

Jasper JM, Young MP and Elke Z (2020) *Public Characters: The Politics of Reputation and Blame*. New York: Oxford University Press.

Klandermans B (1984) Mobilisation and participation: Social-psychological expansions of resource mobilization theory. *American Sociological Review* 49(5): 583–600.

Klandermans B and Oegema D (1987) Potentials, networks, motivations, and barriers: Steps towards participation in social movements. *American Sociological Review* 52(4): 519–531.

Lawless JL and Fox RL (2015) *Running from Office: Why Young Americans are Turned off to Politics*. New York: Oxford University Press.

Liu S-JS (2018) Are female political leaders role models? Lessons from Asia. *Political Research Quarterly* 71(2): 255–269.

Liu S-JS and Banaszak LA (2017) Do government positions held by women matter? A cross-national examination of female ministers' impacts on women's political participation. *Politics & Gender* 13(1): 132–162.

Martiskainen M., Axon S, Sovacool BK, et al. (2020) Contextualizing climate justice activism: Knowledge, emotions, motivations, and actions among climate strikers in six cities. *Global Environmental Change* 65: 102180.

Morgenroth T, Ryan MK and Peters K (2015) The motivational theory of role modeling: How role models influence role aspirants' goals. *Review of General Psychology* 19(4): 465–483.

Morris AD and Staggenborg S (2004) Leadership in social movements. In: Snow DA, Soule SA and Kriesi H (eds) *The Blackwell Companion to Social Movements*. Malden, MA: Blackwell Publishing Ltd, 171–196.

Nepstad S and Bob C (2006) When do leaders matter? Hypotheses on leadership dynamics in social movements. *Mobilization: An International Quarterly* 11(1): 1–22.

Olesen T (2015) *Global Injustice Symbols and Social Movements*. New York: Palgrave Macmillan.

Olesen T (2016) Malala and the politics of global iconicity. *British Journal of Sociology* 67(2): 307–327.

Olesen T (2022) Greta Thunberg's iconicity: performance and co-performance in the social media ecology. *New Media & Society* 24(6): 1325–1342.

Owens PB (2013) Percipitating events and flashpoints. In: Snow DA, della Porta D, Klandermans B, et al. (eds) *The Wiley-Blackwell Encyclopedia of Social and Political Movements*. Vol. III. Chichester: John Wiley and Sons, 1002–1004.

Peirce CS (1932) The icon, index and symbol. In: Hartshorne C and Weiss P (eds) *The Collected Papers of Charles Sanders Peirce*. Vol. 2. Cambridge, MA: Harvard University Press, 274–308.

Prestholdt J (2019) *Icons of Dissent: The Global Resonance of Che, Marley, Tupac and Bin Laden*. Oxford: Oxford University Press.

Robnett B (1996) African-American women in the civil rights movement, 1954–1965: Gender, leadership, and micromobilization. *American Journal of Sociology* 101(6): 1661–1693.

Ryalls ED and Mazzarella SR (2021) "Famous, beloved, reviled, respected, feared, celebrated": Media construction of Greta Thunberg. *Communication, Culture and Critique* 14(3): 438–453.

Sabherwal A, Ballew MT, van Der Linden S, et al. (2021) The Greta Thunberg effect: Familiarity with Greta Thunberg predicts intentions to engage in climate activism in the United States. *Journal of Applied Social Psychology* 51(4): 321–333.

Saunders C (2008) Double-edged swords? Collective identity and solidarity in the environment movement. *The British Journal of Sociology* 59(2): 227–253.

Schatz RT and Lavine H (2007) Waving the flag: National symbolism, social identity, and political engagement. *Political Psychology* 28(3): 329–355.

Simon B, Loewy M, Stürmer S, et al. (1998) Collective identification and social movement participation. *Journal of Personality and Social Psychology* 74(3): 646–658.

Sorce G (2022) The "Greta effect": Networked mobilization and leader identification among Fridays for Future protesters. *Media and Communication* 10(2): 18–28.

Taft J (2011) *Rebel Girls: Youth Activism and Social Change Across the Americas*. New York: NYU Press.

Turner RH and Killian LM (1972) *Collective Behavior*. 2nd ed. Englewood Cliffs: Prentice-Hall.

Van Aelst P and Walgrave S (2001) Who is that (Wo)man in the street? From the normalisation of protest to the normalisation of the protester. *European Journal of Political Research* 39(4): 461–486.

Van Stekelenburg J, Klandermans B, Walgrave S (2019) Individual participation in street demonstrations. In: Snow D, Soule S, Kriesi H, et al. (eds) *The Wiley Blackwell Companion to Social Movements*. Oxford: Wiley Blackwell, 371–391.

van Troost D, van Stekelenburg J and Klandermans B (2013) Emotions of protest. In: Demertzis N (ed.) *Emotions in Politics: The Affect Dimension in Political Tension*. London: Palgrave Macmillan UK, 186–203.

Wahlström M (2016) Why do people demonstrate on May Day? In: Peterson A and Reiter H (eds) *The Ritual of May Day in Western Europe: Past, Present and Future*. London: Routledge, 217–244.

Wahlström M, Kocyba P, De Vydt M, et al. (2019) Protest for a future: composition, mobilisation and motives of the participants in Fridays for Future climate protests on March 15, 2019, in 13 European cities. DOI: 10.17605/OSF.IO/XCNZH.

Walgrave S, Wouters R and Ketelaars P (2016) Response problems in the protest survey design: Evidence from fifty-one protest events in seven countries. *Mobilisation: An International Journal* 21(1): 83–104.

Waterman P (1998) *Globalization, Social Movements, and the New Internationalisms*. London: Mansell.

Watts J (2019) The Greta Thunberg effect: At last, MPs focus on climate change. *The Guardian*, 23 April, https://www.theguardian.com/environment/2019/apr/23/greta-thunberg (accessed 14 August 2023).

Wolak J (2018) Feelings of political efficacy in the fifty states. *Political Behavior* 40(3): 763–784.

Wolbrecht C and Campbell DE (2017) Role models revisited: Youth, novelty, and the impact of female candidates. *Politics, Groups, and Identities* 5(3): 418–434.

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