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Dual mediation and success of environmental protests in China: a qualitative comparative analysis of 10 cases

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ABSTRACT

Existing studies of protest outcomes have focused on the effects of organizational characteristics, disruptive tactics, and political opportunity structures. However, most studies, especially those situated in Western democracies, fail to adequately account for the paths to successful protests in authoritarian regimes like China because of the structural differences between the two types of regimes. By incorporating insights from studies of protests in China and communication studies, this article extends the political mediation model and argues that the success of protests is shaped by the tripartite relations among protest forcefulness, favorable political contexts, and media exposure. In face of joint occurrence of elite support and media exposure, large size of protest is sufficient, whilst large size and disruptive actions are required when media exposure is present but elite support is absent. This result shows that the effectiveness of protest characteristics is dually mediated by political and media conditions. This study not only enhances our understandings of protest outcomes in China but also brings scholarly dialogue between social movement studies and communication studies so as to enrich the literature of protest outcomes.

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It has been widely recognized that social movement (protest) outcomes are shaped by movement organizations' characteristics (Gamson, 1990; Olzak & Ryo, 2007), disruptive tactics (Button, 1978; Piven & Cloward, 1979), political opportunities (Kitschelt, 1986; McCammon, Muse, Newman, & Terrell, 2007), and political mediation process (Amenta, Caren, Chiarello, & Su, 2010; Giugni, 1998). However, theories on social movement outcomes in Western democracies hinge upon implicit assumptions regarding the political regimes of democracies and the professionalization of social movement organizations, and thus cannot offer a satisfactory explanation for protests in authoritarian regimes like China.

Protests in China usually lack organizational forces (Ho, 2007; Schwartz, 2004), and students of protests tend to explain the success or failure through the logics of the governments. One influential theory is the rational choice model in which costs and benefits of governmental concession are derived from the divided power structure

between the central and local governments, and their differential political concerns (Cai, 2008, 2010). Whether or not protesters can invite intervention from the central government becomes a crucial leverage in achieving success considering that the central government determines the political career of local officials. A recent study of government response to citizen demands also corroborates the impact of top-down oversight (Chen, Pan, & Xu, 2016). Although the rational choice model provides valuable insights, it has been criticized by Yang (2016) who points out that local governments often make concessions to environmental protests in spite of enormous economic costs. Therefore, students of protests cannot discuss costs and benefits in the abstract and need to specify under what circumstances a protest can achieve its intended outcome.

Studies of protests in China usually theorize the rationales undergirding the central government's tolerance of protests by stressing the instrumental functions of protests in identifying social grievances and monitoring local officials (Lorentzen, 2013) or the mass line ideological obligations (Tang, 2016). Empirical studies of protests show that a large number of participants, publicity such as hanging banners and chanting slogans, linking multiple grievances, mobilizing network-based resources, and gaining support from political elites increase the chances of success, but the effect of disruptive or violent actions is contingent (Cai, 2010; Chen, 2012; Yang, 2016). However, these studies are inadequate in two aspects. First, the majority of them theorize protests as a two-party game between protesters and the authorities, which fail to recognize the increasingly important roles of the media and journalists. This article contends that protests in China should be seen as a tripartite game among protesters, the authorities, and the media (and the public). Theories of protest outcome need to take media coverage into consideration because media-protest dynamics in China feature media and journalists as protest allies (Li & Li, 2017; Lin & Zhao, 2008; Zeng & Huang, 2015) instead of merely a part of government (Chen, 2012). Second, existing studies emphasize the linear and additive effect of one or several factors (except for Li, Koppenjan, & Verweij, 2016 from a public policy perspective). In reality, protest outcomes are not determined by one single factor but joint occurrences of conditions (Amenta et al., 2010; Cress & Snow, 2000). As Cress and Snow (2000, p. 1063) put it, 'there are multiple pathways leading to movement outcome attainment, and therefore unidimensional . . . approaches are misguided'. Along this line of reasoning, this article will look into the coincidence of factors leading to the success of protests.

This article attempts to extend the political mediation model, which contends that political contexts mediate the effectiveness of protesters' mobilization and strategies (Amenta, Caren, & Olasky, 2005; Amenta et al., 2010), by incorporating media coverage as another crucial mediating context. It is argued that the effectiveness of protest characteristics is mediated by political and media conditions. In regimes in which political support is difficult to attain and quiet containment of protests is common, media coverage is a mediation condition of great significance for the success of protests.

Empirically, this study contributes to a nuanced understanding of protest outcomes by systematically analysing 10 protests against the planning and construction of large-scale industrial plants in China, using the method of qualitative comparative analysis (QCA). In this study, protest outcome refers to whether protesters can successfully pressure local governments to cancel or relocate the controversial plants. As will be shown shortly, city- or region-wide protests against locally unwanted land use (LULU) projects have become

a particularly pressing issue in urban China. However, scholars have not reached a consensus on whether local governments are more or less likely to respond to environment-related grievances (Su & Meng, 2016; Yang, 2016), and the pathways leading to the success of environmental protests are still under-researched (except for Li, Homburg, de Jong, & Koppenjan, 2015; Li et al., 2016; Mertha, 2010). This study enhances our understanding of the relationship between the conditions and the outcome of protests in the context of an authoritarian regime.

Literature review and theoretical framework

Theories of social movement (protest) outcomes: experiences of western democracies

Studies in Western democracies show that social movement (protest) outcomes are shaped by organizational resources, tactics, and political opportunity structures (Amenta et al., 2010; Giugni, 1998). Organizational and tactical characteristics are considered to be crucial in achieving the goals of social movements (Tarrow, 1994; Tilly, Tilly, & Tilly, 1975). Gamson's (1990) seminal study of 53 social movement organizations in the United States reveals that bureaucratized, centralized and unfractionalized organizations with the use of disruptive tactics are more likely to succeed. A study of civil rights movement suggests that goal and tactical diversity increases the likelihood of achieving desired policy outcomes (Olzak & Ryo, 2007). Piven and Cloward (1979), on the other hand, contend that formal organizations offer little help in achieving the goals of protests for the poor, and disruptive tactics are the most effective means to achieve success because powerful groups are more likely to respond to the disruption of significant institutions in which they have stakes.

Social movement outcomes are also facilitated or constrained by political contexts (Kriesi, Koopmans, Duyvendak, & Giugni, 1995; McAdam & Boudet, 2012). The particular structure of the state and the system of alliances and oppositions provide political opportunities for social movements to succeed. A comparative study of anti-nuclear movements in France, the United States, Germany and the Netherlands reveals that the impacts of social movements can be explained by the policy input structure and state capacity (Kitschelt, 1986). A study of the women's jury movement in the United States demonstrates that gendered political opportunity, measured by the presence of female lawmakers advocating for jury reform, has a direct effect on the passage of inclusive jury law (McCammon et al., 2007). The outcome of anti-incinerator campaigns in England also depends on political opportunities such as local authority boundaries, alliance structures, and the changing policy imperatives (Rootes, 2006). As will be shown shortly, political contexts also matter for environmental protests in China.

More recent efforts have been made to combine multiple factors to explain social movement outcomes (Amenta et al., 2005; Cress & Snow, 2000; Giugni, 2007). In a study of the pension movement on US old-age policy, Amenta and colleagues (2005) propose a political mediation model which contends the effectiveness of movement mobilization and strategies is mediated by political conditions. It is found that only under favorable political conditions that the influence of social movements is possible. When short-term political conditions are favorable, mere mobilization is sufficient to produce policy

changes; when short-term political conditions are less favorable, assertive strategies are required to achieve similar outcomes.

Although existing studies provide insights for investigation into the causes of successful protest in China, a refined theoretical framework is needed for two reasons: first, most protests in China occur in a (semi-) spontaneous manner because formal organizations tend to steer away from politically sensitive activities; second, media exposure of protests plays an increasingly important role in shaping protest outcomes. Before developing a framework for this study, the next subsection will briefly review studies of environmental protests in China.

Environmental protests in china

With worsening environmental degradation and citizens' rising environmental awareness, environmental controversies have been a major source of large-scale protests in China. Opposition against LULU projects has emerged as a particularly pressing and contentious issue (Johnson, 2013a). Urban citizens resist the siting of hazardous facilities that are perceived as posing environmental and health risks to their neighborhoods. Meanwhile, environmental protection has been seen as dragging local economic growth and thus is reluctantly negotiated by local governments. The lack of effective interest articulation channels, such as decision-making participation or independent court system, has prompted citizens to engage in protests to make their voices heard (Li, Liu, & Li, 2012; Stern, 2013).

It is worth mentioning that environmental NGOs tend to stay away from participating in street protests as a strategy to survive in an environment where activities beneficial to the state are encouraged while the dangerous ones are controlled (Geall, 2013; Ho, 2007; Teets, 2014; Xie, 2009).¹ In the absence of organizational forces, citizens mobilize themselves through social media platforms such as Weibo and WeChat. Consequently, protests occur in a flash mob manner, quickly drawing a large number of participants but hard to sustain (Wei, Zhou, Wei, & Zhao, 2014).

Meanwhile, many environmental protests are tolerated by the Chinese authority (Tong & Lei, 2010), because protests are seen by the central government as an information-gathering channel to identify the dangerously discontented social groups and to monitor local officials (Lorentzen, 2013). Under the context of increasing complexity and pluralism, the Chinese state has given the societies more room to voice their concern in order to regain political legitimacy (He & Warren, 2011). Protests which do not directly challenge the regime are tended to be tolerated because of the moral responsibility rooted in the mass line ideology which implicitly stipulates that officials serve the interest of the masses in order to gain the support from the latter; in addition, this ideological obligation also leads to Chinese government's hyper-responsiveness to the public (Tang, 2016).

Situated in such a political setting, it is understandable why some environmental protests succeed in pressuring local governments to relocate or cancel the projects (Li et al., 2016). Some attribute the success to political opportunities derived from the fragmentation of power and the differentiated interests between different levels of governments and/or different government departments (Lieberthal & Oksenberg, 1988). In particular, the central government cares more about political legitimacy and is inclined to concede when protesters' demands are legitimate, whilst local governments'

motivation to concede is weak, unless they are pressured by the central, because legitimacy is not their primary concern and financial cost of concession mainly comes from local revenue (Cai, 2008). Political opportunities also originate from disgruntled officials and political elites who oppose a given policy and might become allies of protesters (Mertha, 2010). Others emphasize the agency of protesters. Of great significance are the emerging linkages and coalitions among residents, environmental activists, journalists, scientists, and government officials which enhance the momentum of protests (Bondes & Johnson, 2017; Sun, Huang, & Yip, 2017). However, the majority of these findings were from case studies, and systematic comparative studies are needed to ascertain the configurations of factors leading to successful protests.

A dual mediation model of protest outcomes

While existing literature has provided insights into understanding the influencing factors of protest outcomes, a nuanced framework is needed to explain the success of environmental protests in political settings like China. As mentioned previously, protests in an authoritarian regime tend to unfold in a spontaneous and short-lived manner in the absence of the coordination of civil society organizations. This means that students of protest outcomes need to critically re-examine factors associated with social movement organizations. Second, many studies have shown that both traditional and new media play a significant role in the development of protests (Bennett & Segerberg, 2012; Huang & Sun, 2016; Li & Li, 2017; Lin & Zhang, 2018; Liu, 2016; Zeng & Huang, 2015), but these insights have not been synthesized into the theories of protest outcomes which primarily posit protests as a two-party game between protesters and governments (Cai, 2010; Lorentzen, 2013; Tang, 2016). Third, given that local governments' response to social grievances is highly selective (Chen et al., 2016; Su & Meng, 2016), configurations of factors are required for successful protests. Based on this discussion, this article argues that the political logic to successful protests is more indirect and complicated than responding to citizens' voices.

Drawing on the political mediation model (Amenta et al., 2005; Giugni, 2007), this article develops a framework to explain the protest outcomes, integrating insights from studies of protest characteristics in China and protest-media dynamics. Protest outcome is jointly influenced by the tripartite relations of the characteristics of protests and the political and media contexts in which the protests unfold. The previous subsections have shown that political opportunities such as support from polity members play an important role in facilitating protest success (Cai, 2010; Chen, 2012). However, the effectiveness of protest characteristics is mediated not only by political but also media contexts. As Koopmans (2004, p. 367) points out, 'the decisive part of the interaction between social movements and political authorities is no longer the direct, physical confrontation between them in concrete locations, but the indirect, mediated encounters among contenders in the arena of the mass media public sphere'. By enlarging the scope of conflicts, media exposure grants recognition to protests mobilizes public support, and alters the power relations between protesters and local governments (Gamson & Wofsfeld, 1993). Media reports, together with the related online discussions, set a policy agenda, create social pressure on the authorities, and thus bring about policy response (Cai & Zhou, 2016; Li & Li, 2017).

In China, the commercialization and professionalization of the media industry have pushed the mass media to transform from the mouthpiece of the authorities to the actors of the fourth estate (Lei, 2016; Yang, 2010; Yang & Calhoun, 2007). Chinese journalists tend to report protests in a positive manner, and even involve in protests because their values are discrepant with official ideology (Lin & Zhao, 2008). News media and protests are thus mutually empowered, and journalists are powerful allies of protesters (Li & Li, 2017; Zeng & Huang, 2015). Although state control is still in place, media sponsored by the central government or by governments in other provinces do not subject to the discipline of the governments in provinces where protests take place and thus enjoy certain freedom in disclosing sensitive incidents (Qian & Bandurski, 2011). In addition, the eye-catching feature of protests and the close connections between journalists and environmentalists enhance the ability of the media to mobilize public support for protests (Mertha, 2010; Xie, 2009). Traditional media coverage can even legitimize anti-paraxylene (anti-PX for short) protests in the long run and lend protesters discursive resources to pressure local governments to concede because of its state-affiliation status (Liu, 2016).

Media coverage tends to coincide with the size of protests and disruptive actions and thus jointly influences protest outcome. Empirical studies have found that the size of protests not only increases short-term media attention (Amenta, Caren, Olasky, & Stobaugh, 2009; Andrews & Caren, 2010), but also sustains media agenda over a long term (Jennings & Saunders, 2019). Similarly, disruptive actions are able to attract media reports (Amenta et al., 2009; Jennings & Saunders, 2019), although contradictory evidence exists (Andrews & Caren, 2010). As the number of participants increases, disruption of daily routines and social institutions becomes more likely to occur, ultimately posing challenges to the powerful in maintaining social order (Della Porta & Diani, 2006). Previous studies of protests in China find that local governments are sensitive and more likely to respond to protests with large scales and high levels of publicity because these protests threaten social stability, demonstrate wide social support, attract the attention of media and the public, have the potential to invite intervention from the central government, and thus increase local authorities' costs of inaction (Cai, 2010; Chen, 2012; Lee & Zhang, 2013).

Disruptive actions are also an important characteristic of protests, especially for those lacking organizational resources or elite support. Disruptive actions can facilitate favorable outcomes (Chen, 2012, p.185; Gamson, 1990; Piven & Cloward, 1979), although contradictory or inconclusive evidence exists (McAdam & Su, 2002; Chen, 2012, pp.-161–164; Cai, 2010). For one, disruptive actions, as an escalation from peaceful protests and a defiance of public order, are less likely to coincide with elite support because they are illegitimate from the perspective of the authorities. For another, they might be effective if they can mobilize sufficient support before they are contained on the grounds of legitimacy deficit. Disruptive actions with a large number of participants increase the difficulties of quite containment and win time for media exposure which enlarges the scope of conflicts to exert an influence on the local authorities to concede.

Data and methods

Ten cases were chosen according to three criteria: first, the protests were targeted at the planning or construction of large-scale industrial plants; second, the protests occurred

between 2007 and 2016 because the first influential protest of this kind occurred in 2007 and the data used in this study were collected in 2016; third, key information of the protests was able to be collected through news reports and the internet. This study focused on one specific type of protests because it implicitly controls the issue at stake and the scale of protests (Yang, 2016), and helps calibrate the measures of key explanatory conditions (Ragin, 2008).

Data were collected through news reports, the internet and interviews. Relevant news reports were downloaded from Wisenews, the most prominent database on newspapers in Greater China. Keyword search (e.g. Maoming & PX) was used to identify news reports and 3,065 pieces of reports were downloaded. After filtering irrelevant ones, 1,258 news reports were manually coded. Narratives, stories and photos uploaded by protesters and residents to social media platforms were also collected to facilitate the interpretation of the results. Fieldwork in Kun Ming and Jiang Men was conducted, in July 2015 and July 2014 respectively, to obtain a holistic understanding of the cases. In total, eleven in-depth interviews were conducted with protesters, local officials, environmental NGO leaders, and local residents. Based on these data sources, a dataset was compiled for comparative analysis.

Qualitative comparative analysis was employed to systematically compare the 10 cases so as to ascertain the combinational expectations derived from the dual mediation model of protest success (Ragin, 2008). QCA is especially suitable for identifying the co-presence (or the lack thereof) of multiple conditions which is required to account for an outcome and whether there exist multiple routes to the outcome. It uses Boolean Algebra to find configurations of explanatory conditions which can lead to the outcome. This method has been successfully used in the studies of social movements (Amenta et al., 2005; Cress & Snow, 2000; McAdam & Boudet, 2012). This article used crisp set QCA because all measures were coded as binary (1 or 0). Analyses were conducted using fsQCA 3.0 (Ragin & Davey, 2016).

QCA requires the calibration of sets defined by the outcome and the explanatory conditions. In this study, *successful protest* is defined as follows: cases were coded '1' if the controversial projects were canceled or relocated, and coded '0' if continued.

Size of protest refers to the number of participants in protests. This information was collected primarily from mass media reports and thus is approximate. According to the State Council, protests with over 1,000 participants are regarded as major mass disturbances.² Thus, large protests with more than 1,000 participants were coded '1' and otherwise coded '0'.

Disruptive action was calibrated by whether violence or actions disrupting public order such as road blockade, property damage or attacks on police were reported (Della Porta & Diani, 2006). Cases with disruptive tactics were coded '1' and '0' otherwise.

Media exposure was calibrated by the number of news reports on the protests. Keyword search on Baidu news (<http://news.baidu.com>), one of the most prominent search engines and online news aggregators in China, was used to determine how many news entries covered the protest events as they unfolded.³ This method has been used by previous studies (Lin & Zhang, 2018), albeit limitations exist. The time window of keyword search was set between the controversial projects becoming public and the protests beginning to wane. Cases were coded '1' if the number of online news reports exceeded 100, and coded '0' otherwise.⁴

Support of political elites was measured by whether protests won open support from polity members, typically those of the National People's Congress (NPC) or the Chinese People's Political Consultative Committee (CPPCC). NPC and CPPCC are the institutionalized channels which aggregate local interests to the authorities, and NPC also plays a non-negligible consultative role in legislation (O'Brien, 1988). Cases with open support from NPC/CPPCC members were coded '1' and '0' otherwise.

Status of pollution was measured by whether the proposed site had been an industrial base and known for its high level of industrial pollution. Residents in severely polluted regions have higher levels of environmental concern because they are exposed to the detrimental effect of environmental degradation (Dunlap & York, 2008). And residents' suffering from environmental deterioration and resultant health harm has become a main cause of resistance in China (Johnson, 2013b; Lora-Wainwright, Zhang, Wu, & van Rooij, 2012; van Rooij, 2010). Cases were coded '1' if the proposed sites were known for industrial pollution and coded '0' otherwise.

Empirical results

Qualitative comparative analysis of necessary and sufficient conditions

Following the steps of QCA (Schneider & Wagemann, 2012), this article conducts a separate test of necessity prior to analysis of sufficiency. It first examines whether each of the five conditions can be regarded as a necessary condition of the success of protests. It finds that large size of protests and widespread media exposure are necessary conditions for successful protest with a consistency score being 1.00 (Table 1), whilst the other three conditions have a consistency score from 0.40 to 0.60, all of which fail to meet the criterion of 0.90 (Schneider & Wagemann, 2012, p. 278). Although media exposure tends to positively correlate with size of protests (Andrews & Caren, 2010; Jennings & Saunders, 2019), it is argued that the co-presence of the two matter: For one, large-scale protests do not necessarily attract high levels of media reports (e.g. the ZZ case in Table 2); for another, in absence of media reports, large protests might wane in a short span, and can be quietly contained by local governments before they become public events (Interview, 2014/12/05). In line with the political mediation model, the authors conducted a test of necessity regarding the compound condition of 'elite support OR disruptive action', and find that it is necessary for successful protests with the consistency being 1.00.

Truth table is used to show the relationship between configurations of conditions and the outcome (Table 2). It reveals two configurations leading to successful protests with a consistency score being 1.00, which suggests that the five conditions differentiate successful protests from unsuccessful ones and there were no contradictory cases.

Table 1. Analysis of necessary conditions for successful protests.

Conditions	Necessity consistency	Necessity coverage
SIZE	1.00	0.63
MEDIA	1.00	0.71
ELITE	0.40	1.00
POLLUTION	0.60	0.60
DISRUPTION	0.60	0.75
ELITE OR DISRUPTION	1.00	0.83

Table 2. Truth table.

Conditions					Outcome	Case	Consistency
Size	Media	Elite	Pollution	Disruption			
1	1	0	1	1	1	MM, NB, SF	1
1	1	1	0	0	1	XM, JM	1
1	1	0	1	0	0	DL	0
1	1	0	0	0	0	KM	0
1	0	0	0	1	0	ZZ	0
0	0	0	1	0	0	JJ	0
0	0	0	0	0	0	CD	0

Boolean minimization of the truth table reveals two paths to successful protests (Table 3). The first path is comprised of the co-presence of large size of protest, widespread media exposure, and public support from NPC/CPPCC members, as well as the absence of existing pollution and disruptive action. This path covers the cases of Xia Men and Jiang Men protests. The second path is comprised of the co-presence of large size of protest, disruptive action, widespread media exposure, and existing pollution, as well as the absence of public support from NPC/CPPCC members. This path covers the cases of Ning Bo, Mao Ming and Shi Fang protests. The solution coverage is 1.00, which indicates that the two paths cover all successful protests.

Comparison of the two paths shows that the co-presence of large size of protest and widespread media exposure appears in both paths, which is consistent with the aforementioned result of necessity analysis. Furthermore, the conditions of large size of protest and widespread media exposure are not only necessary but insufficient conditions of successful protests, but also a necessary part of sufficient conditions. Meanwhile, the success of protests is also contingent upon other conditions such as elite support, existing pollution, and disruptive action. These findings are consistent with the political mediation model which contends that in a less favorable political context more assertive tactics are required to achieve a favorable outcome (Amenta et al., 2005). In the following subsections, case studies of Xia Men and Ning Bo protests are used to elaborate the two paths.

Illustration of the first path to successful protests: the Xia Men case

The first path consists of the combination of the presence of large size of protest, widespread media exposure and support from political elites, and the absence of existing pollution and disruptive action. It highlights the tripartite interaction among protest size, media exposure and support from political elites like NPC and CPPCC members. These political elites are city residents and have a stake in the quality of the living environment; they also shoulder the responsibility of representing their constituents to protect their hometown from being contaminated by chemical industries. Moreover, NPC and

Table 3. QCA solution to successful protests.

Solution terms	Cases	Coverage	Consistency
SIZE*MEDIA*ELITE*pollution*disruption	XM, JM	0.4	1.00
SIZE*MEDIA*elite*POLLUTION*DISRUPTION	NB, MM, SF	0.6	1.00
[Solution]	-	1.0	1.00

CPPCC members have professional expertise and resources to heighten the salience of the issue. They have better access, through national congresses or open letters, to put the controversies on the policy agenda. The prominence of these political actors means that their appeals are not only more likely to gain the attention of mass media but also lower the possibility of violent confrontations. Widespread media exposure, in turn, encourages more social allies such as public intellectuals, key opinion leaders, as well as large number of local residents determined to guard their hometown. Together, these three sets of factors generate high levels of pressures for the local government.

This influencing mechanism is best illustrated in the case of Xia Men. A large-scale chemical plant was to be sited in Hai Cang development zone in Xia Men which would, upon operation, produce an annual output of 800,000 tons of paraxylene (PX). The project was approved by the National Development and Reform Commission (NDRC) and the construction began in November 2006. The news of construction was known by Zhao Yufen, a chemistry professor in Xia Men University, a member of the CPPCC, and a member of the Chinese Academy of Sciences (CAS). As a professional, Zhao was aware that PX is a hazardous chemical and carcinogen, the production of which may cause serious hazards on environment and health especially when it is located within a 5-km radius of the residential area of over 100,000 residents. Zhao first allied with five other CAS members to write a letter to the Xia Men government, suggesting a relocation of the plant. The officials of Xia Men government arranged a meeting with Zhao and her colleagues but did not reach an agreement. On 13 March 2007, Zhao mobilized other 104 CPPCC members to submit a collective plea of relocation during the CPPCC annual session. This collective plea brought the issue from the local to the national level and successfully attracted the attention of the central government. An official from the State Environmental Protection Administration (SEPA) expressed sympathy but stated that relocation is beyond SEPA's capacity. Later on, the NDRC sent a team to reassess the project, but concluded that the NDRC had no intention to stop or relocate it.

Although Zhao was not able to stop the project, she successfully made it a public issue. The collective plea signed by 105 CPPCC members was reported by China Youth News, which was then widely reprinted by various mass media and gained high levels of public resonance. A journalist, Yue Lian, published a series of commentaries in Southern Metropolitan Daily, a relatively independent commercial newspaper in China, questioning citizens' right to know and the right to participate in controversial environmental projects. Soon after, ordinary residents in Xia Men city joined the heated discussion in local online communities such as the Small Fish Community and the Bulletin Board System of Xia Men University. Emotional opposition against the project and the Xia Men government began to accumulate. In late May, a mobile text message emerged declaring that the operation of the PX plant amounted to putting an atomic bomb in Xia Men, and mobilizing people to participate in the protest against the project. The text message was circulated by millions of Xia Men residents in the following days.

Despite Xia Men government announcing its last-minute decision on 30 May to postpone the project, on 1 June residents marched through the city to Xia Men government demanding the cancelation of the project. It was estimated that the number of participants reached 2,000 at its climax. The protest proceeded peacefully and lasted for 2 days, which attracted widespread media attention from mainland, Taiwan and overseas. On 7 June, Yue Pan, deputy director of SEPA, announced in the press that a regional-

level environmental impact assessment was needed and the project would be reconsidered if it failed to meet the requirements of the assessment. Following the imperative of SEPA, Xia Men government spent the next 6 months conducting the assessment. When the project was rejected again by the majority of the residents in the ensuing public consultation, Xia Men government announced that it respected the will of residents and decided to relocate the project to Zhang Zhou city, Fu Jian province.

Illustration of the second path to successful protests: the Ning Bo case

The second path comprises the combination of the presence of large size of protest, disruptive action, widespread media exposure, and existing pollution, as well as the absence of elite support. In the absence of elite support, the second path requires not only the presence of a large size of protests but also disruptive action. The less favorable political context might have contributed to the disruptive actions, which were conceived by the protesters as more forceful or as a last resort to stop the hazardous projects. This path characterizes protests that occurred in traditional chemical industry districts where pollution had long been a concern to local residents. In the past, residents had to bear the pollution because of economic dependence. As the dependence weakens, residents are no longer willing to stand the pollution and voice their opposition in the face of the expansion of the plant. Plant expansion is different from siting of new ones in that 'scientific' reasoning plays a less important role, and thus there is usually little involvement of political elites and scientific experts. Local residents resist the chemical plants primarily based on their everyday experience and health harm in particular. For them, the most important leverage is the large number of participants and disruptive action, the concurrence of which is more likely to draw widespread media reports. As social influence scales up to the national level, the cost of repression becomes high, and the potential intervention from the central government pressures the local government to appease the protests.

The protest against the expansion of a chemical plant in Ning Bo city of Zhe Jiang province is illustrative of this scenario. The China Petroleum and Chemical Corporation (Sinopec) decided to expand the production scale of its Zhen Hai branch, located in the petrochemical economic and technological development zone in Zhen Hai district, northeast Ning Bo city, by 15 million tons of oil refining and 1.2 million tons of ethylene products which included 1 million tons of PX products. In the process of environmental impact assessment, the Environment Protection Bureau (EPB) required Sinopec to solve historical environmental problems, including relocating the affected villagers. After negotiation, Sinopec earmarked 9 billion Yuan for resettling the villagers. Relocation was great news for the villagers because this might be the only chance for them to move out of the polluted area. On 22 October 2012, about 200 Wan Tang villagers petitioned to the district government to be included in the relocation plan. The request was not accepted, and angry villagers launched a sit-in and blocked a traffic intersection to express their dissatisfaction.

The petition of Wan Tang villagers was reported by major web portals which aroused the attention of Zhen Hai residents who just realized that a PX project was being secretly pushed along by the local government. The project was less than 10 km away from Zhen Hai residential areas, and less than 20 km away from Ning Bo city center. During 23 to

25 October, 500 Zhen Hai residents joined the petition and blocked several main roads to express their opposition. Disruptive actions were reported by mainstream media such as People's Daily Online, Xinhua Newspaper Online, and BBC Chinese Online, and quickly got more than 100 reprints by various online media. In other words, the visibility of the Zhen Hai PX controversy had transcended from the local to the national level and caught the attention of the public. It became a hot topic in many online communities such as Sina Weibo. As a response, the local government employed various means to block the spread of information. On 24 October, the Zhen Hai district government issued a statement declaring that the project had met all the requirements of environmental protection.

Paradoxically, the local government's effort to contain the contestation pushed the protest to its climax and participants have expanded from Zhen Hai district to Ning Bo city. During 26–28 October, 5,000 residents gathered at Zhen Hai district government to protest. Reportedly, disruptive actions and violent confrontations between police and protesters broke out, and 51 people were detained. Though the local government attempted to control the information through disabling the function of sending pictures to Weibo, the large-scale protest was still reported by domestic and overseas mass media. Various stories ranging from corruption of local officials to a college student beaten to death spread online. Though some stories were later verified as rumors, at that time most people chose to believe them. Opinion leaders and celebrities expressed their support to Ning Bo people through Weibo tweets which were widely commented and reposted. Under such circumstances, Ning Bo government announced on 28 October that the PX project was canceled and the expansion project was suspended for further assessment.

Qualitative comparative analysis of protest failure

To present a holistic picture, this subsection analyzes the conditions leading to protest failure. The test of necessity shows that only the absence of elite support is a necessary condition with consistency being 1.00 (Table A1). Qualitative comparative analysis of protest failure reveals three paths (Table A2). The first path, covering cases of Jiu Jiang and Cheng Du, features the absence of four conditions (size, media exposure, elite support and disruptive action). The second path, covering cases of Da Lian and Kun Ming, consists of the presence of large size of protest, widespread media exposure, and the absence of elite support and disruptive action. This finding corroborates that the joint presence of size and media exposure is a necessary but insufficient condition to successful protests. The third path, covering the case of Zhang Zhou, is comprised of the presence of a large number of participants and disruptive action, and the absence of widespread media exposure, elite support, and existing pollution. Interestingly, although media exposure correlates with size of protest and disruptive action (Amenta et al., 2009; Jennings & Saunders, 2019), the co-presence of these two conditions does not necessarily coincide with high levels of media exposure nor guarantee the success of protests.

Concluding remarks

By critically examining the contexts in which protests occur, this article draws on the political mediation model and protest-media dynamics to propose a dual mediation model to explain

protest success in China. It argues that the effects of protest characteristics on protest outcome are mediated by political and media conditions. Specifically, in the absence of the leading role of social movement organizations, protests in China are mobilized in a flash mob fashion which makes the organizational capacity and resource mobilization largely irrelevant. The most crucial leverage of environmental protests lies in the visibility that transcends the locality in which a protest occurs and attracts widespread public attention. High levels of visibility signal that local governments fail to serve the people and to maintain social stability, whilst the widespread media exposure indicates that the local governments are unable to effectively contain protests' social influence. It not only decreases the possibility of repression from local governments which might otherwise backfire and attract further public outcries, but also increases the chance of intervention from the central government. Even though the central government cannot intervene in every successful environmental protest, high levels of publicity cultivate an atmosphere which indicates potential intervention, and thus pressure the local governments to make concessions as a preemptive measure to avoid prospect intervention from the central government or escalation into massive social disturbances.

The results of qualitative comparative analyses of 10 environmental protests reveal two paths to protest success, both of which support the argument that the effects of protest characteristics hinge upon the embedded political and media conditions. The first path shows that large protest size together with widespread media exposure and elite support as well as the absence of pollution and disruption plays a crucial role in pressuring local authorities to concede. In the second path, when gaining high levels of media exposure, the co-presence of large protest size and disruption can also contribute to the success of protests even though elite support is lacking. It seems that if protesters are able to gain support from political elites, success is plausible even though they only use modest tactics such as large-scale peaceful strolling; on the contrary, when elite support is lacking, disruption might be required to pressure concession. These findings lend partial support to the political mediation model (Amenta et al., 2005).

The results show that the coincidence of large protest size and widespread media exposure are necessary conditions of protest success. This finding highlights the significance of media exposure in pressuring local authorities to respond to the voice of the public and further corroborates that the effectiveness of protest characteristics is mediated by media conditions. In this sense, the tripartite relations among protests, political conditions and media conditions are a key to understanding protests in urban China, and a satisfactory theory of protest outcome not only needs to take into consideration of the multi-layered political structure (Cai, 2008), but also the unique relation of media being protest allies (Li & Li, 2017; Lin & Zhao, 2008). This is increasingly important given the continued commercialization and professionalization of the media industry, the improved field environments of critical news reports, and the gradually blurred boundary between traditional media reports and citizen journalism. Meanwhile, the empowerment effect of media warrants further scrutiny because media coverage might be censored or forced to take governments' sides (King, Pan, & Roberts, 2013).

These findings enrich the literature of LULU protests by highlighting the impacts of place-based characteristics on protest dynamics (McAdam & Boudet, 2012; Sun & Huang, 2018). It reveals that protests against LULU projects are partially driven by locally embedded situations and perceptions. Specifically, opposition against the siting of new LULU projects is derived by the perceptions of risks which to a large degree are

socially constructed by experts and the media. On the other hand, residents resisting the expansion of existing facilities are primarily associated with their past experiences and sufferings from pollution. These experience-based protest frames are more likely to emerge in traditional industrial districts when residents' economic dependence on industrial factories weakens as a result of economic restructuring and state-owned enterprise reform. This dynamic explains why the condition of pollution is a constitutive element in the second path. More generally, the impacts of issue-specific context on protest outcomes might be applicable to other issue domains. For instance, Tang (2016) found that labor conflicts are more likely to occur and be resolved in foreign firms. Yet, this argument warrants further investigation.

Some limitations are worth mentioning. First, although focusing on a particular type of protests can control the effects of issue-specific factors such as issue political opportunity and risk perception, it also constrains the generalizability of the findings. Further studies are needed to examine the explanatory power of the dual mediation model for other types of protests in China and authoritarian regimes in general. Second, this study only uses an overall measure of media exposure and has not differentiated different types of media such as traditional versus new media. Future studies are needed to evaluate the effects of various types of media exposure.

Notes

1. Environmental NGOs do engage in environmental activism using a variety of strategies; however, ENGO-initiated campaign differs significantly from street protests, and ENGOs seldom involve in the latter activities. This study focuses on environment-related street protests and thus will not review literature on ENGOs in detail. More discussions on the consultative authoritarianism model of the state-NGOs relations can be found in Teets (2014).
2. 'Grading Standards of Especially Major and Major Public Emergencies', available at: <http://sysaq.snnu.edu.cn/show.aspx?id=54&cid=30> (accessed 13 March 2018).
3. Baidu news aggregator, instead of Wisenews database, was used to reflect the report dynamics between traditional and online media considering the fact that the vast majority of traditional news reports were reposted by news portal websites.
4. The authors have consulted previous studies and decide that 100 is a sufficiently large number indicating widespread media exposure. For instance, among the three high-profile cases of contention studied by Lin and Zhang (2018), only one was reported by more than 100 repackaged news reports.

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Appendices

Table A1. Analysis of necessary conditions for protest failure.

Conditions	Necessity consistency	Necessity coverage
SIZE	0.60	0.38
~ SIZE	0.40	1.00
MEDIA	0.40	0.29
~ MEDIA	0.60	1.00
ELITE	0.00	0.00
~ ELITE	1.00	0.63
POLLUTION	0.40	0.40
~ POLLUTION	0.60	0.60
DISRUPTION	0.20	0.25
~ DISRUPTION	0.80	0.67

Table A2. QCA solution to protest failure.

Solution terms	Cases	Coverage	Consistency
~ELITE*~ MEDIA*~SIZE*~DISRUPTION	CD, JJ	0.40	0.40
~ELITE*MEDIA*SIZE *~DISRUPTION	DL, KM	0.40	0.40
~ELITE*~MEDIA*SIZE*~POLLUTION*DISRUPTION	ZZ	0.20	0.20
[Solution]		1.00	1.00