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Grassroots Image Management: Confucius Institutes and Media Perceptions of China

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Abstract

We propose a mechanism of grassroots image management to explain how rising powers craft an international environment more conducive to their interests. The aim is to promote the state's foreign policy goals by influencing the perceptions of ordinary foreign citizens. To test this mechanism, we examine the impact of China's Confucius Institutes (CIs). Using data from the Global Database of Language, Events and Tone (GDELT), we employ a quasi-experimental, spatial-temporal, approach which finds that proximity to an active CI significantly and substantively improves the tone of media reporting about events relevant to China in that locality. The finding is robust to different specifications and estimation strategies and is qualitatively consistent with results generated using household opinion data from the Afrobarometer survey. Our result suggests the importance of systematically examining perceptions at the popular level about rising powers in addition to focusing on elite attitudes to understand discursive change.

Keywords: *Soft Power, Norms, Rising Powers, Hegemony, China, Image, Spatial Analysis*

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Introduction

In the wake of China's phenomenal economic rise, questions about how the country is viewed abroad have preoccupied Chinese Communist Party (CCP) leaders. In a 2011 speech to the CCP Central Committee, then-General Secretary Hu Jintao argued that "…he who takes the dominant position in the cultural development has a strong cultural soft power and thus can be the winner in the intense international competition" (quoted in Hartig 2016, 670). In a 2014 address to the central foreign affairs committee, current CCP General Secretary Xi Jinping declared: "We should increase China's soft power, give a good Chinese narrative, and better communicate China's message to the world" (People's Daily 2014). Yet, the question remains: do the CCP's efforts at image management – or what it sometimes calls strengthening "discourse power" – actually work? Do they change the way that China is presented and perceived abroad?

These questions point to underlying theoretical debates about whether and how great powers can legitimize their grand strategies (Goddard and Krebs 2015) and/or hegemony (Allan et al. 2018) among foreign elites and publics. Rising powers are not only socialized into existing norms and institutional arrangements, but also seek to change them in ways that reflect their own growing influence (Pu 2012). Influential scholarship on questions of international ideological change and socialization has often trained its focus on the elite level or on international institutions (e.g. Ikenberry and Kupchan 1990; Owen 2010; Haas 2014). However, in line with recent work by Allan, Vucetic, and Hopf (2018), we argue that this represents relatively "thin" ideational influence insofar as it does not have a foundation in popular beliefs. The influence of a rising power's ideas do not remain isolated in elite circles or at the international level and the success of rising powers often stokes admiration, emulation, and/or fear in the publics of other states (Gunitsky 2017; Moller et al. 2017).

Inspired by existing theories of soft power, hegemonic norms, and ideological promotion, we propose a mechanism of *grassroots image management* to help explain how rising powers craft an international environment more conducive to their interests by

influencing how they are perceived by ordinary foreign citizens. Successful grassroots image management allows the rising power to subtly contest existing hegemonic ideas without directly challenging them in highly visible and confrontational ways. The logic is long-term and aims to influence public thinking in the hopes that the popular level "filters up" to political elites to reduce opposition to (or even facilitate support for) the rising power's agenda.

Using the Chinese case, this paper illuminates the means by which ascendant powers attempt to shape cultural and ideational discourse seemingly from the bottom up. In order to observe this mechanism at work, we use a quasi-experimental, geo-spatial, approach to examine the impact of China's Confucius Institutes (CIs), which are centres of cultural outreach that have spread across the globe since 2004. CIs constitute a major dimension of China's grassroots image management. More details will be provided below, but in sum CIs are partnerships between an arm of the Chinese education bureaucracy and foreign universities to facilitate the teaching of Chinese language and culture at the host university. There are now more than 500 CIs in more than 140 countries around the world. While CIs are presented as benign cultural outposts, the CCP clearly intends for them to shape a friendlier international environment for China. Indeed, in 2007, the global head of CIs, Xu Lin, remarked that they were the "brightest brand" in China's soft power repertoire (Edney 2014, 110; Callahan 2015, 225; Zhou and Luk 2016, 633).

Specifically, the paper draws on a geo-coded dataset of all CIs in the world to assess how the tone of media content about China changes (if at all) in areas where they are located. Measuring media sentiment in this way is an important link in grassroots image management as Chinese authorities have long sought to counter what they perceive as biased and negative foreign media coverage of China. If China's image is improving in a locality then this is likely to be reflected in media coverage about China in that locality. Using data from the Global Database of Language, Events and Tone (GDELT), the paper finds that proximity to an active CI improves the tone of media reporting about events relevant to China in that locality by about 6%.

The finding, which is robust to a number of different specifications and estimation strategies, has important implications for the way we view discursive change on the global level. It suggests the importance of systematically examining ideational change pertinent to rising powers at the popular level in addition to focusing on elite attitudes. Specific to China, it is one of the few scholarly efforts to systematically measure the effectiveness of CCP soft power globally and suggests that China is, indeed, increasingly shaping its image at the grassroots level in ways that will have implications for the future of international politics.

Global Discourse, Rising Powers, and Grassroots Image Management

The ideologies and narratives of powerful states do not stay contained within their borders. On the contrary, they exert influence internationally and shape both the international environment and the domestic discourses of other states. For example, the rise of fascist Italy and Germany had profound effects on the politics of interwar European states (Weyland 2017) while the ideological contest between the United States and the Soviet Union permeated just about every corner of the globe for decades (Westad 2005).

How does ideational influence happen? Perhaps most often, the mechanism is passive and based on diffusion or emulation. The example of a highly successful political system in a powerful state can exert a potent influence on other states to incorporate aspects of the exemplar's institutions or even to adopt that country's political system entirely (Gunitsky 2017; Moller et al. 2017; Fordham and Asal 2007). States with high levels of "prestige" can have outsized influence in shaping political values of other states (Ambrosio 2010, 386), while stigmatized states will find it difficult to exert such influence (Adler-Nissen 2014).

However, beyond relying on passive admiration, major states have several reasons to consciously propagate their domestic ideas abroad. In his study of forcible regime promotion, Owen (2010) distinguishes two reasons for doing so: internal and external security. The logic of internal security is to strengthen power at home. A positive image abroad can demonstrate to a domestic audience that the state's ideology and leaders are respected and admired overseas (Holbig 2011; Hoffmann 2015). Furthermore, an ideology

circulating internationally that runs counter to the state's legitimating narrative may be seen as a threatening to domestic control. This resonates with a "diffusion proofing" perspective in which states seek to halt the import of threatening ideas or practices by delegitimizing them at home and abroad (Koesel and Bunce 2013).

The logic of external security is to craft an international environment friendlier to the interests and values of the state (Owen 2010, 69). Here the state is trying to build international coalitions of like-minded states to alter the global balance of power in its favour. This means that the state increasingly sees its values reflected in the international system, which in turn helps "to set the standards by which regimes are judged" (ibid.). Promoting a regime's ideas can help it bring new states into its orbit and preserve or deepen linkages with already friendly states. The upshot is an external environment that is more conducive to the realization of the state's foreign policy goals and, by extension, a firmer foundation for domestic security.

Owen's analysis focuses explicitly on forcible regime promotion in the sense of direct intervention, but this is only the most extreme manifestation of a tendency for powerful states to externalize their ideas. States also employ more subtle means to improve internal and external security through promoting their values, ideologies, and norms abroad. Great power states actively legitimate elements of their grand strategies to foreign and domestic audiences (Goddard and Krebs 2015). They "cultivate their international image" to influence how they are perceived (Fordham and Asal 2007, 33). This can take the form of a relatively thin "stigma management" in which states cope with their negative image (Adler-Nissen 2014) to thicker attempts to secure ideational hegemony and shape world order (Allan et al., 2018).

Rising powers face an international normative environment in which their own ideas may be subordinate. They lack the status necessary to convert their preferred ideas into international norms (see Larson et al. 2014). Rising powers are more likely to be "norm takers" in the early stages of their rise because their material power and status are not sufficient to challenge the hegemon but can become more active "norm shapers" as their

power increases (Pu 2012). A part of this process entails subtly undermining dominant ideas to which it objects and nudging existing international norms closer to the rising power's preferred vision (Schweller and Pu 2011; Prantl 2014; Brazys and Dukalskis 2017).

While the focus on ideational change, norms, status, prestige, and socialization often lies at the elite level (e.g. Ikenberry and Kupchan 1990; Fordham and Asal 2007; Owen 2010; Haas 2014), Allan et al. (2018, 6) argue that such approaches "underestimate the power of mass beliefs." Shaping wider overseas public opinion about a state's identity and intentions constitutes a "stronger and more robust" form of hegemony in part because it constrains elite decision makers who find it difficult to consistently and obviously ignore public opinion in foreign policy formation (ibid., 8-11). Here we build on these theories of mass hegemony by proposing the mechanism of grassroots image management. Rising powers may not be prepared or willing to impose their ideological systems in the way that Owen (2010) analyses, and they may not yet be capable of attaining the deep hegemony that Allan et al. (2018) identify. Absent the ability or desire to mount a frontal assault on hegemonic ideas at the popular level, rising powers can opt for a subtler strategy of managing their image among foreign publics to minimize opposition to their foreign policies and, in the longer run, craft an enabling public opinion environment for their increased power.

How exactly do states manage their image at the popular level? The advent of "soft power" is the most well-known conceptual example of non-forcible ideological promotion (Nye 1990). The idea is to get others to do what you want them to do without co-optation or coercion. However, soft power as an analytical device has been criticized extensively for being conceptually indistinct, ignoring agency, and underestimating underlying dimensions of material power and coercion (e.g. Bially Mattern 2005; Roselle et al. 2014). Nevertheless, today's major power states, including the United States, China, and Russia, all use the language of soft power to some degree, albeit with different understandings of the term (see Edney 2014; Wilson 2015; Kiseleva 2015). Contrary to Nye's original idea, in the cases of

China and Russia, the concept of soft power is understood to be an explicitly state-driven enterprise to bolster the foreign policy objectives of the state (ibid.).

States operationalize soft power at least in part through "public diplomacy" that engages with foreign citizens to advance the state's interests and values (Sharp 2005, 106). The idea is to cultivate a positive image about the state by establishing a media presence abroad, engaging in cultural initiatives, funding visible material projects, and so on. The aim is to influence the "milieu factors that constitute the psychological and political environment in which attitudes and policies towards other countries are debated" (Melissen 2005, 15). However analytically unsatisfactory "soft power" is as a scholarly concept, the fact remains that states have incentives to promote a positive image of themselves abroad and take active policy steps to do so.

What ideas do states aim to promote or oppose? Given the decreased salience of grand transnational ideological battles in the post-Cold War era, the focus has turned to the dynamics of democracy promotion, democracy resistance, and what some call autocracy promotion (e.g. Bader et al. 2010; Burnell and Schlumberger 2010; von Soest 2015; Bank 2017). As the United States and European Union promoted democracy with renewed vigour in the 1990s and beyond, major authoritarian states like China and Russia did not stand still (Jackson 2010; Koesel and Bunce 2013). Given that China has risen during a period in which democracy was the hegemonic idea of political order (Allan et al. 2018), the question became how vigorously rising or resurgent authoritarian powers would reshape their external environment to mirror their values.

The emerging consensus of the autocracy promotion literature is that China does not have a coherent agenda to promote autocracies abroad as it rises (Tansey 2016; Yakouchyk 2018). At best, there is a goal of democracy prevention and status quo maintenance so as to preserve domestic control (Chen and Kinzelbach 2015). The more amenable the international public opinion environment is to the political perspectives of rising states like China, the more they can pursue foreign policy aims and the more secure they are domestically. Even if there is not a coherent project of Comintern-style ideological promotion

at work, rising states like China still have interest-based incentives ensure that their domestic political systems are looked upon favourably abroad (Fordham and Asal 2007; Owen 2010). Perhaps more importantly, a rising authoritarian state in an international system that prioritizes democracy has domestic reasons to undermine the image of democracy internationally. Indeed, it is clear that the CCP views Western-style democracy and human rights as existential threats to be guarded against (see, e.g. the leaked Document No. 9, available at ChinaFile 2013). In the next section and in light of this theoretical discussion, we turn to the CCP's efforts at grassroots image management to improve how China is perceived abroad.

Rising China, Externalizing Propaganda, and Confucius Institutes

Since at least 2007, the CCP has been on a mission to transform China's image abroad. As a rising global power wishing to transform the status quo through evolutionary rather than disruptive means (Ding 2010, 259), the CCP understood that China had strong incentives to more actively shape its international ideational environment. The result has been a clear push to externalize China's propaganda efforts. As Wang (2008, 261) put it: "In the past, China was passive and reluctant to express itself in international society. That time has now passed."

Along with China's economic rise came what the Chinese government calls the "China Threat Theory" (e.g. People's Daily 2018). The idea reflects realist thinking insofar as China becomes more powerful other states will be more likely to see it as a threat. One major way to counter such thinking is through a robust program of public diplomacy and external propaganda (Ding 2010; Zhao 2015). On this account, the CCP understands that China has a negative political image in the world and seeks to remedy such perceptions both by presenting a positive image of China and by refuting what it perceives as distortions (Hartig 2016, 661). The ultimate aim, according to Edney (2014, 77) is for the CCP to "ensure that its official discourse is articulated all around the world and to try to prevent rival actors from articulating discourses internationally that might undermine the official narrative of China's place in the world and thereby threaten Party-state interests."

Several CCP elites highlighted the importance of improving China's image abroad even before the more advent of the more internationally assertive Xi Jinping leadership (Shambaugh 2013, 209-216). For example, former Politburo Standing Committee member Liu Yunshan argued in 2009 that China's "communication capability" had to match its "international status" as a matter of urgency, continuing: "In this modern era, who gains the advanced communication skills, the powerful communication capability and whose culture and value is more widely spread is able to more effectively influence the world" (quoted in Barboza 2009). Chinese leaders see domestic benefits to a friendlier international opinion environment insofar as it affords China more latitude to orient its foreign policy toward achieving domestic goals. For example, Li Changchun, propaganda head and Standing Committee member from 2002 to 2012 argued in 2008 that it was necessary to "grasp hold of foreign propaganda work in the mutual connection between the international and domestic situations…[to achieve]…a more favourable international public opinion environment for the construction of an all-around well-off society" (quoted in Edney 2014, 76). Former director of the State Council Information Office, a major entity involved in external-facing propaganda, Zhao Qizheng, argued in 2006 that China's external propaganda efforts should "serve the country's reform and opening and social development" and that the "fundamental task of foreign propaganda work" was to create a "positive international public opinion environment for the building of socialism with Chinese characteristics" (quoted in ibid.).

Creating positive public opinion abroad is a challenge from the Chinese perspective because it faces what Wang (2008, 265) calls a "hegemony of discourse" insofar as Western media outlets and ideology shape opinion more than Chinese equivalents. Remedying this deficit is part of what Wilson (2015, 292) identifies as a CCP "conviction that a global competition is being played out in the cultural sphere, making it imperative to raise China's cultural soft power." As CCP General Secretary Xi Jinping put it in a 19 August 2013 speech to the National Propaganda and Ideology Work Conference: it is necessary to "…tell China's story well, disseminate China's voice well, and strengthen our discourse power

internationally" (China Copyright and Media 2013; see also Tsai 2017, 208; Brady 2015, 55-56).

The CCP has indeed devoted considerable resources to strengthening its international discursive power. In 2009, the government launched an initiative backed with financial investment of 45 billion RMB (about $6.6 billion) to bolster its external propaganda system (Brady 2015; Tsai 2017, 204). It cultivates elites to be "friends of China" and buys paid supplements in major international newspapers like *The Economist* or the *Washington Post* (Brady 2015). The CCP has invested in major media initiatives resulting in the global expansion of newspapers and websites like *Xinhua*, the *People's Daily*, and the *Global Times*. In 2016, the foreign-facing versions of China Central Television were relaunched as China Global Television Network (CGTN) in English, Spanish, French, Arabic, and Russian with a sleeker look and a clear intent to help disseminate a "Chinese perspective" on global affairs. The aim of such initiatives is to make the CCP's narrative about events widely available and easily accessible (Roberts 2018, 87).

A part of China's renewed emphasis on "telling its story" abroad has been the rapid expansion of its Confucius Institutes (CI) project (Paradise 2009; Pan 2013; Hartig 2015). CIs are arrangements on university campuses outside of China in which the university hosts Chinese language and culture instructors provided by China. There is variation in what CIs emphasize in each location, although the common thread that ties them together is the promotion of Chinese language and culture. Additionally, CIs frequently hold public events such as art exhibitions or Chinese New Year celebrations. The Chinese Language Council International, more commonly known as Hanban, launched the CI project in 2004. Hanban operates under the Ministry of Education, which in China's Leninist political structure is ultimately overseen by the CCP's Central Propaganda Department.

In this sense, it is clear that "CIs are not independent institutions, but agents of the state" and ultimately the CCP (Pan 2013, 26). CIs help "to communicate certain strategic narratives about China and its place in the world" under the guidance of the CCP (Hartig 2015, 248). With their emphasis on Chinese language and traditional culture, CIs can be

seen as “a cultural approach using benign activities to counter external pressures associated with the ‘China threat theory’” (Pan 2013, 29). Although in interviews “managers and directors of CIs would normally argue that CIs are not linked to China’s foreign policy,” at a more strategic level CIs are clearly linked to CCP’s larger foreign policy goals (Hartig 2015, 249-250). They are “part of a broader soft power projection in which China is attempting to win hearts and minds for political purposes” (Paradise 2009, 549). Indeed, the CCP leadership’s own statements and rhetoric emphasize that CIs are a tool of enhancing national influence abroad and creating a more conducive international environment to its interests (Zhou and Luk 2016, 629-630; Edney 2014, 110; Callahan 2015, 225; see also statements by CCP elites in Sahlins 2014, 3-7).

From China’s perspective, the theory of change for public diplomacy efforts like the CIs relies on a grassroots image management logic: influence public opinion in the host state so that this influences how the government interacts with China (Hartig 2016, 671). Or, as China’s Ministry of Foreign Affairs put it in 2004: “The basic goal of public diplomacy is to enhance exchanges and interactions with the public in order to guide and win the understanding and support of the public for foreign policies” (quoted in Zhao 2015, 176). There are two links to this grassroots image management logic. First, to influence public opinion to be more positively disposed toward China. Second, to let that public opinion “filter up” to influence elite policy to be more amenable to China’s interests.

While there has been some empirical work on outcomes related to the second part of the second question, namely about trade policy and travel flows associated with the presence of a CI (e.g. Lien et al. 2012; Lien 2013; Lien et al. 2014), there is surprisingly little empirical research on how CIs shape public perceptions of China (for a notable exception in this direction, see Custer et al. 2018). This is an important question given that public opinion (Rothschild and Shafranek 2017) and peer-to-peer shared perceptions of foreign policy issues (Kertzer and Zeitzoff 2017) are key elements in shaping a state’s foreign policy. If the CCP is able to actively influence public perceptions in other states about China, then this could be a powerful tool in achieving its foreign policy aims.

However, there is also the possibility that the CI project stokes backlash and ultimately undermines China's grassroots image management efforts. From this perspective, CIs are not seen an element of "soft" power insofar as they rely on inducements and have been involved in controversies regarding academic censorship (Zhou and Luk 2016). Even though many CI employees report no overt censorship, they admit that they clearly know the boundaries they are not supposed to cross and therefore avoid approaching them in the first place (Hartig 2015, 253-254). The CCP presents the CI project as an anodyne cultural initiative but if citizens in host states view it as an aggressive propaganda initiative by an authoritarian state, then the presence of CIs may backfire and damage China's reputation abroad. This possibility resonates with those who argue that China's authoritarian political system ultimately limits its ability to project effective soft power abroad (e.g. Shambaugh 2015, 107; Economy 2018, 221; Nathan and Scobell 2012, 318-342).

From China's perspective, a key aspect of improving its image is securing more favourable media coverage abroad. The CCP has long perceived that foreign media coverage of China is negatively biased (d'Hooge 2005; Wang 2008; Zhao 2015; Hartig 2016). As noted above, Chinese elites lament the dominance of Western media outlets and argue that China needs to take steps to remedy the imbalance (e.g. Wang 2008, 265; Xinhua 2016). The implication is that part of the reason for China's generally negative image abroad is distorted media coverage (d'Hooge 2005; Hartig 2016). The drive to change international perceptions partly explains China's recent expansion of flagship media brands like Xinhua, the People's Daily, China Radio, and CGTN (Bailard 2016).

However, the CCP also takes more subtle actions to influence the tenor of global media coverage about China, such as cultivating good relationships with journalists and promoting positive associations about China through efforts like the CI initiative (Brady 2015, 53-56). The media can be seen as a transmission belt for the "filtering up" of positive images of China from the grassroots level to elites. It is thus of pressing importance to know empirically whether CIs do what they are (in part) supposed to do by improving the image of

China at the grassroots level. If they do, then we are very likely to see that manifested in more positive media coverage about China in localities where CIs are present.

Data & Methods

To evaluate if CIs are an important foundation of China's grassroots image management, we examine their localized effect on media tone. While a few studies of CIs have mentioned briefly that they have not improved China's image abroad, these often rely on the highly aggregated and national-level Pew Global Attitudes Project or on anecdotal evidence. One notable exception is recent work by Eichenauer et al. (2018) which examines the effects of Chinese trade, aid and investment on national and subnational public opinion using data from the Latinobarometro survey. We take a comprehensive but more fine-grained approach that evaluates the influence of CIs on how China is portrayed in media reporting about events in the CI's immediate geographical area. If China's grassroots image management is to have a positive influence on how China is perceived, changes are most likely to be seen in reporting about China near the communities in which CIs are located and with which they engage.

Data

Our outcome data comes from the Global Database of Events, Language and Tone (GDELT) (Leetaru and Schrodt, 2013). This database algorithmically monitors traditional and web-based media from around the global in over 100 languages.[1] This data has been used in a number of recent studies ranging from spatial dynamics of the drug war in Mexico (Osorio 2015) to hunger and conflict in Africa (Smith 2014) or mobilization in the Arab Spring (Steinert-Threlkeld 2017). While the data has received both scholarly and popular criticism over the accuracy of its events data (Caren 2014), we limit our usage to the measure of media tone, "AvgTone", *Average Tone*. This metric ranges from -100 (negative tone) to 100 (positive tone), but the range of tone in our dataset is from -20.97 to 22.68. While examination of a sample of the news stories associated with these records found most to be

[1] https://www.gdeltproject.org/

reasonably coded, it is also clear that the GDELT algorithms are not perfect, both in terms of coding locations but also in terms of accurately portraying tone.[2] While we do not suspect that these measurement errors introduce systematic bias into our analysis, we address the issue in various ways in the robustness checks below.

To prepare the data, we collected all records containing public statements about China from January 1, 2000 to April 30th, 2018 from the GDELT 2.0 Event Database.[3] After removing records of public statements from inside China, we were left with a total of 315,923 media observations from 12,095 distinct geographic media tone locations over 220 months. As many of the locations of these public statements were nearly proximate, we merge all near locations into a single location for a total of 6,012 tone locations.[4] We then collapse the observations by month/year and location to generate an unbalanced panel of 38,922 instances of *Average Tone*. In order to ensure sufficient variation for the three referent categories in our analyses below, we only analyse those locations that had at least five observations of tone over the 220 months in the study.[5] The mean *Average Tone* of this collapsed measure is 2.91 with a standard deviation of 3.96. There is a clear time trend, with distinctive drops in the yearly mean from 2012 to 2013 and 2014 to 2015 which coincides with other measures of perceptions of China.[6]

[2] One clear example is a story regarding a fish kill as a result of silage effluent reported in the Connacht Tribune from rural Ireland. The story was attributed as to being about China, presumably because the paper notes the silage had entered the "Yellow River", a minor Irish tributary stream.

[3] Where our search parameters were left blank for Actor 1 Country and Type, set to "CHN" Actor 2 country and left blank for Actor 2 type, set to "01" for event code, and left blank for Event Quad Class, Event Country and Weighting.

[4] Caen (2014) also points out how GDELT will often code the same event at numerous locations that are very near. We used the ActionGeo_Fullname as our geographic indicator unit. This variable indicates the location of the public statement being made about China and is the best measure of local sentiment about China. GDELT documentation also indicates "is the best location to use for placing events on a map or in other spatial context" (GDELT Codebook, p. 5). Based on the cartesian coordinates of these locations, we merge locations such that there is a distance of at least 25km between all.

[5] This leaves us with a total of 25,171 observations across 1,207 locations. In this robustness checks we examine different sets of tone loactions. 3,734 of the city-level locations in the data have only 1 observation of AvgTone. We exclude these from the analysis in the robustness check as these locations have insufficient observations to populate all three of our referent categories (no CI, inactive CI, active CI). A location with only 1 observation of AvgTone could not possibly be coded as both "inactive CI" and "active CI".

[6] From 2011 to 2014 the percentage of respondents answering "Unfavorable" to the question "Do you have a favorable or unfavorable view of China?" rose substantially in a number of countries, particularly in the Western world, including from 61% to 91% in Japan, 36% to 55% in the United States, 26% to 38% in the United Kingdom, 37% to 44% percent in Brazil, and 25% to 28% percent in Russia.

Figure 1: Confucius Institute Locations and Media Tone

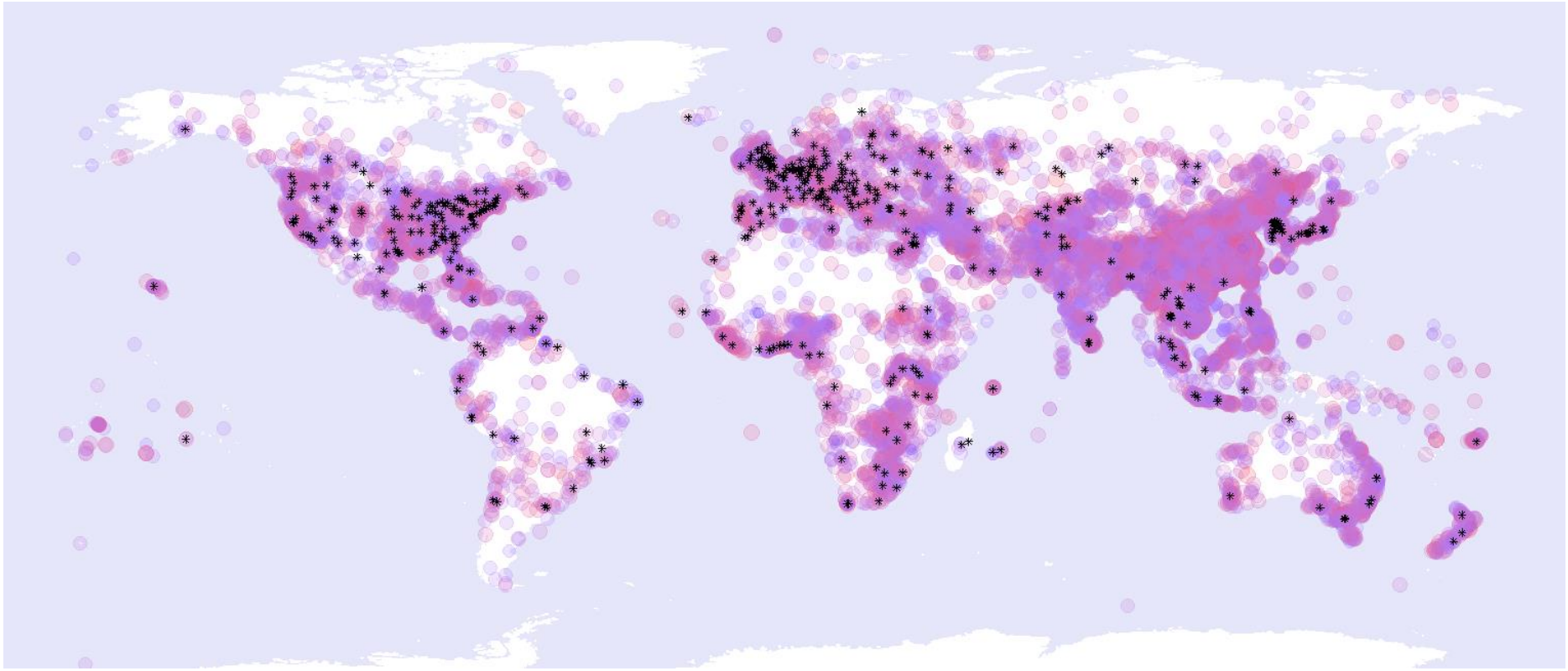
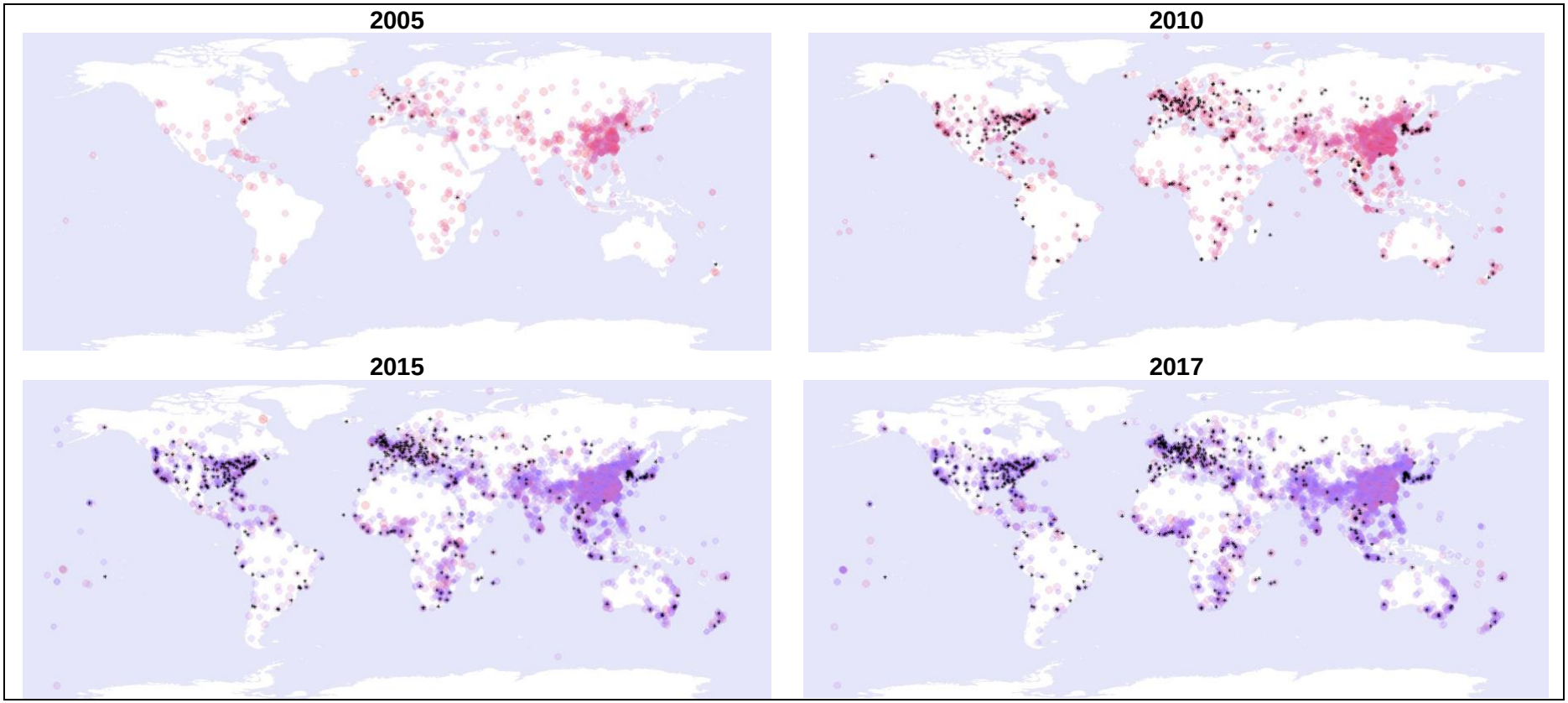


Figure 2 – CI Locations and Media Tone Over Time



In order to construct our treatment variable data, we geo-referenced the 505 Confucius Institutes listed on Hanban's English language website.[7] We were further able to collect the month and year of opening for 494 of the CIs, either from information on the Hanban website, from other media reports, or by directly contacting the CIs. In terms of data precision, we were able to find exact coordinates for 433 of the CIs. The remaining 72 CIs were coded at no worse than city-level. Of the tone location sites, 5,548 were precisely identified to the city level, while 247 were identified at the administrative one level (state/province). The remaining 217 were only identifiable at the country level or corresponded to a media report outside any country. We exclude country and administrative one level locations from our analysis below and only compare city-level location sites in order to match the precision of the CI data.

Both the CIs and the tone location show a high degree of geographic variation, as shown in Figure 1, with CIs present on all 6 continents and Oceania. Interestingly, CIs are clustered in highly-developed countries in North America, Europe, and North-East Asia (South Korea and Japan). While this is undoubtedly a function of the comparatively higher number of universities in these locations, it is also suggestive of China trying to employ grassroots image management in open democratic contexts where public opinion is likely to be especially important. The distribution of media tone appears to be relatively uniformly distributed across the globe, suggesting some degree of face validity for the data. Larger and redder circles indicate more positive tone, while smaller and bluer circles indicate more negative tone. While some clustering of redder and bluer patches exists, these clusters often appear to be subnational and do not display any obvious spatial autocorrelation.[8] Longitudinal mapping in Figure 2, with snapshots from 2005, 2010, 2015 and 2017 also reveals that media reports containing public statements about China, like CIs, have become

[7] Available at http://english.hanban.org/ accessed 30-07-2018

[8] Testing for spatial autocorrelation for the sites we use in our analysis we find a Moran's I of 0.052 and Geary's c of 1.000. The latter statistic has a p-value of 0.495 failing to reject the null hypothesis of no spatial autocorrelation. The p-value of the Moran's I statistics, 0.000, does suggest the correlation is statistically significant, but given the low value of the correlation coefficient, spatial autocorrelation is not a major feature of the data.

more widespread over time. These maps show how CIs were initially located in the global North, but eventually spread across the globe. Likewise, the maps pick up the structural shift in the tone of the data, with the 2015 and 2017 maps far bluer compared to the 2005 and 2010 maps, indicating an overall negative shift in media tone.

Method

We take advantage of the spatial-temporal nature of the data to employ quasi-experimental methods similar to those used by Knutsen et al. (2017). First, we code outcome sites (in this case the *Average Tone* locations) as either having no proximate CI, one or more "active" proximate CI, *active*, or one or more "inactive" proximate CI, *inactive*. The active/inactive distinction utilizes the temporal nature of the data to distinguish between sites that *will have* a CI but where that CI has not yet opened. As discussed in Knutsen et al. (2017), this approach enables us to control for the potential of endogenous selection effects wherein CI placement is biased by existing media tone about China and/or other unobserved variables. Thus, in our first models below, we can generate a difference-in-difference measure that compares the "treatment" of an active CI site, controlling for time-invariant selection effects. Similar to Knutsen et al. (2017) the reduced form for this specification is:

$$Y_{it} = \beta_1 * active + \beta_2 * inactive + \alpha_c + \gamma_t + \varepsilon_{it}$$

where the dependent variable is the media tone *Y* for each location *i* at time *t*, given by month/years. Media tone is regressed on *active* and *inactive* CI indicator variables. The regression includes country (α_c) and month/year (γ_t) fixed effects. Like Knutsen et al. (2017), we cluster standard errors by outcome location to account for any exogenous shocks correlated by location.

Second, as our data is an (unbalanced) panel, wherein some sites have multiple observations of tone at different points in time, we can also directly test for CI effects by comparing media tone locations before and after the CI opens by employing location-level fixed effects, δ_i, again as is similarly employed in Knutsen et al. (2017). This specification approach allows for a direct interpretation of the presence of a CI and has the added benefit

of including fixed effects which account for time-invariant, location-specific, factors. The reduced form is given below as:

$$Y_{it} = \beta_1 * active + \delta_i + \alpha_c + \gamma_t + \varepsilon_{it}$$

Intuitively, we would expect the influence of CIs on media tone to be stronger when the CI is in closer proximity. CIs are located at universities, which themselves are often centres of intellectual and cultural life in a community insofar as they host public events, have faculty provide expert commentary to local media, and so on. However, given that, like Knutsen et al. (2017), we have no *a priori* expectation for what our exact cut-off distance for the proximity of the CI to the tone location should be, we employ several different cut-off distances in our models below. While effects should remain sufficiently local, this also allows us to check if the effect diminishes/disappears when the nearest CI is substantially afield.

Main Results

The results in Table 1 show clear support for the hypothesis that the presence of an active CI improves local media tone towards China. The difference between an active site and an inactive site is positive and significant at the 5% level in Models 1 (sites with 25km of a CI) and 2 (sites within 50km of a CI). In Model 3 (sites within 100km of a CI) the difference-in-differences is still positive but is of a slightly smaller magnitude and the p-value of the F-test is now only significant at the 10% level, suggesting that increasing distance renders the positive CI effect on media tone less meaningful. When restricting the active tone locations to those sites that *only* have a CI within 200km to 1000km in Model 4, we see that the difference-in-differences between active and inactive CI sites is now statistically insignificant. We see this as further support for the spatial logic of our hypothesis that CI's influence proximate media tone.

A visual example of this spatial decay is present in Figure 3. Zooming in on the University of Sierra Leone in Freetown, we compare media tone before (left-hand map) and after (right-hand map) the opening of the Confucius Institute in September 2012. In both

Table 1: Impact of CI on Media Tone: Difference in Difference

	(1) Within 25km	(2) Within 50km	(3) Within 100km	(4) Within 200 & 1000km
Active	0.263	0.241	0.227	0.194
	(4.12)	(3.80)	(3.38)	(1.22)
Inactive	0.073	0.073	0.067	0.083
	(0.84)	(0.85)	(0.72)	(0.43)
Difference in Differences	0.190	0.168	0.160	0.111
F-test: Active-Inactive=0	5.34	4.36	3.83	1.11
F-test: p-value	0.0210	0.0369	0.0506	0.2920
Mean Average Tone	2.913	2.913	2.913	2.913
R-squared	0.6350	0.6348	0.6348	0.6318
Number of Observations	25,171	25,171	25,171	25,171

Absolute value of T-statistics given in parentheses. All models include country and month/year fixed effects. Standard errors are clustered by location.

instances we normalize average media tone to "1" in the smallest radius capture area (roughly 25km). The left-hand map shows how media tone in and near Freetown (in red), captured in that smallest circle, prior to the CI opening is nearly indistinguishable from media tone at increased distances, drawn at roughly 50km, 200km and 475km. Conversely, in the map on the right which captures media tone after the CI opened, we see that media tone is most positive near Freetown (in bright red) but less positive the further one gets from the center, as seen in bluer circles capturing media tone within roughly 75km, 150km and 450km.

Substantively, having an active CI nearby improves media tone about China by roughly 6% of the sample mean in Models 1 and 2. While this is not an overwhelming impact at first glance, it is a sizeable return given the relatively low cost of CIs and the myriad factors that can otherwise influence media tone.[9] Examining actual stories shows how substantively significant a change of tone can be. For example, a story by *Reuters* (2014) about protests in Hong Kong was coded very close to the mean of 2.913 and used relatively neutral language like "leaving the two sides far apart in a dispute over how much political

[9] Figures from 2015 indicate that Hanban spent a total of $310 million that year, $228 million of which was for the operational costs of Confucius Institutes (Hanban 2015). For comparison, in 2013, Amazon.com founder Jeff Bezos purchased the Washington Post for $250 million. Generally, states are drawn to public diplomacy initiatives like CIs because they are relatively cheap compared to other policy options (Sharp 2005: 107).

control China should have over Hong Kong" and "China accords Hong Kong some autonomy and freedoms not enjoyed in mainland China." A story from the Pakistani outlet the *Express Tribune* (2016) is coded at 3.016, which is roughly the 0.19 difference-in-differences from Model 1 more positive than the Reuters story. It reports some details about economic agreements and plans in Pakistan and depicts a chief minister highlighting the positive aspects of the relationship, noting "that there was complete agreement" between the two ruling parties of the countries about development and that recent "projects had taken the two countries' friendship to a new height." The tone is noticeably more upbeat but is not at the positivity level of, for example, a ceremonial report in Belarus News (2016) reporting on Belarus' leader Alexander Lukashenko sending New Year's greetings to Xi Jinping (tone 11.46). These examples highlight that a seemingly modest shift in tone can substantively alter how the Chinese political system and foreign policy are presented abroad.

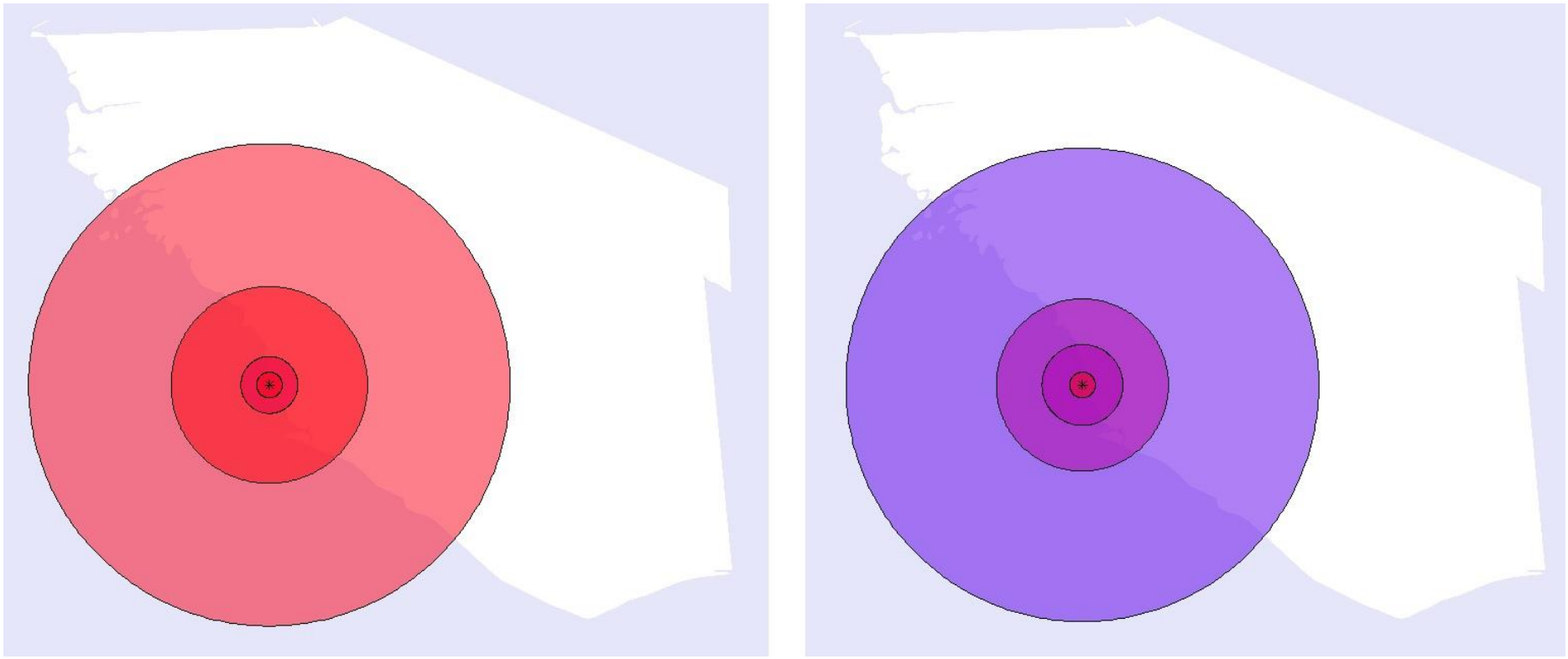
Table 2: Impact of CI on Media Tone: Location Fixed Effects

	(5) Within 25km	(6) Within 50km	(7) Within 100km
Active	0.181**	0.124	0.091
	(1.97)	(1.37)	(1.00)
Mean Average Tone	3.345	3.231	3.114
R-squared (within)	0.5989	0.5945	0.5929
Number of Groups	317	413	558
Number of Observations	12,110	13,175	14,942

** significant at 5% level, T-statistics given in parentheses. All models include location and month/year fixed effects.

The results of the location fixed-effects models in Table 2 also support our hypotheses, albeit the coefficient on active CI is only statistically significant at the 5% level in the 25km proximity model. The coefficient remains positive in the 50km and 100km models, but is no longer statistically significant, and the magnitude of the coefficient has decreased. However, this is in line with our difference-in-differences models above where significance and magnitude also decreased in distance. Moreover, this loss of statistical significance is not entirely unexpected as the sample in these models is significantly restricted. That said,

Figure 3: Normalized Media Tone Around Freetown, Sierra Leone before and after Confucius Institute



(Left-hand map shows media tone prior to CI opening in September 2012 at radii of ~25km, 50km, 200km and 475km. Right-hand map shows media tone after CI opening at radii of ~25km, 75km, 150km and 450km. In both instances the 25km tone is normalized to “1” such that the radii on both maps are comparable in terms of percentage of the 25km tone).

the substantive results in the 25km model (Model 5) is remarkably similar to its difference-in-differences counterpart, with a coefficient on active of 0.181 compared to a difference-in-differences of 0.190. This substantive similarity across different types of identification strategies increases our confidence in the robustness of the result.

Robustness Checks

We also employ several robustness checks with our models, with full results available in the Supplementary Online Appendix. As mentioned above, we restricted our investigations in the primary analysis to those tone locations that had a least 5 observations over the 220 months of the study. In our first robustness check (Model A.1), we include all locations that had at least 2 observations. Likewise, we check if our results are driven by those tone locations that had an unusually high number of observations (Model A.2). We exclude those locations in the upper 5th percentile of observations, or those with 180 or more month/year observations. In both instances our substantive findings remain the same and statistically significant at at least the 10% level. Finally, as we noted above, the GDELT coding algorithms appear to misclassify a non-negligible amount of news stories. A review of a sample of the stories did not reveal any obvious bias in this error, but tone locations with only a handful of media observations are more prone to skewing by erroneous coding. As such, we further test only those locations that had at least 25 month/year observations of tone (and many more individual observations of news stories) (Model A.3). Under this restriction, the result remains, and in fact both the magnitude and the statistical significance of the difference-in-differences increase notably.

Interestingly, in the model in which the most tone locations are included, Model A.1, we find that the coefficient on "inactive" CI sites is also positive and significant at the 5% level. While we are hesitant to read too much into results which are driven by locations with very few tone observations, as discussed above, this may be some evidence that CIs are also *established* in areas that have more positive than average existing levels of tone. Yet even if this selection effect is at play, the difference-in-differences in this model is

substantively similar to that in Model 1, 0.140 or roughly 5% of the *Average Tone* mean, meaning that active CIs still boost positive coverage of China.

As noted above, the Moran I and Geary c statistics suggest that spatial-autocorrelation is not overwhelming in our tone data. Indeed, calculating Moran's I, by year and at different bands, on the residuals from Model 1, results in Table A.3, shows very little spatial autocorrelation in those residuals. However, to further ensure that our results are not biased by spatial relationships, our second approach to robustness more explicitly accounts for the possibility of spatial autocorrelation between our tone location sites. To this end, we employ a multi-level, mixed-effects model with random intercepts for each tone location in our sample. These results shown in Model A.4 again are consistent with those presented in the primary analysis both in terms of statistical significant and magnitude of effect, with a difference-in-difference of 0.156, or 5.4% of the *Average Tone* mean. The CI locational selection effect is again evident in this model, with the coefficient on "inactive" CI site significant at the 1% level.

Our third and fourth robustness strategies further address limitations and possible coding errors in the GDELT database. First, the data contains media reports from the Chinese state-owned media outlets discussed above. We identify 15,075 record entries from Chinese state-owned media outlets, or roughly 5% of our sample.[10] There is strong reason to suspect bias in the media tone from these outlets, although it is plausible that the theorized impact of CIs may still be evident in these reports – that is while Chinese state-owned media is likely to be positively biased, the difference-in-difference after the opening of a CI may further increase the positive sentiment. However, as a robustness check we drop these entries from *Average Tone* in Model A.5, finding no substantive difference in the results.

To address coding issues in the GDELT data, we also exclude the tails in the raw *Average Tone* data. There are several issues in these tails. First, in the 95th percentile of

[10] Where we excluded media reports from *Xinhua, People's Daily, Global Times, China Post, China Daily, CNTV, english.china.com, www.ecns.cn, Shanghai Daily, english.sina.com* and www.*china.org.cn*.

positive stories in our sample, over 97% of entries do not list a source URL, compared to 38% in the entire sample. Of the few stories that do indicate a source URL in that percentile, the content is often similar to the Belarussian New Year's greetings described above, which are only loosely related to our theoretical understanding of media sentiment. Conversely, many of the extreme observations appear to be mis-coded, or again capturing media tone that is not closely related to our theoretical mechanism. Numerous stories in the most negative 5th percentile consist of reports about the Chinese government or leaders expressing condolences for terrorist attacks or natural disasters, which are clear coding errors. Many other stories refer to individual criminal cases, which may only involve China in a tangential way. Accordingly, in Model A.6 we exclude entries from the 5th and 95th percentile in calculating *Average Tone*. The difference-in-differences results are not only maintained, but indeed become substantially stronger both in terms of magnitude and statistical significance. We take these findings as evidence that the measurement errors in the GDELT data, if anything, lead us to *understate* the results in the primary analysis.

Our next robustness check takes advantage of the fact that some tone location sites have *multiple* proximate CIs (Model A.7). While the models above coded "active" CI sites as those for which *at least* one CI was active in proximity of the site for a given month/year, it is also possible that there is an effect on the extensive margin and *more* CIs would lead to a greater impact on media tone. Accordingly, we create a count variable of CIs for each location site and use this count as the primary explanatory variable in our location fixed-effects specification.[11] Using this count measure we find evidence that an increasing number of CIs leads to an increased positive change in local media tone, with a 100 per cent increase in the number of CIs (say from 1 to 2, or 2 to 4) increasing local media tone a further 0.201, or 6% of the sample mean of the Average Tone. Again, this result is substantively quite similar to our findings in the primary analysis and further strengthens our confidence in those results.

[11] Where we take the natural log of the count to account for the fact that there are likely to be diminishing marginal returns to additional CIs. To make this log transformation we first add 1 to all observations.

It is also possible that the opening of a CI is an endogenous event. Identifying strong and valid instruments can be challenging under any circumstances. It is particularly difficult to satisfy the exclusion restriction when considering media tone as an outcome variable as nearly all time-varying instruments may be picked up in media coverage. However, we identify satellite gathered night-time light as a possible instrument. Using a data extraction from AidData's GeoQuery tool, we gathered annual night time light data from the NOAA-DMSP series from 2000-2012, and monthly night time light data from the VIIRS series from January 2013 to January 2017. We use mean values at ~25km from the media tone locations. We use the instrument in three ways in Table A2. First, following Knutsen et al. (2017) we use the instrument for "active" projects alone (Model A.8). Second, we combine both the difference-in-differences approach and the instrumental variable approach to test difference-in-differences when instrumenting for the "active" projects (Model A.9). Finally, we use night time light to instrument for our count of CIs (Model A.10). In all instances night time light has a high degree of statistical significance in the first stage, the instrument appears both strong and valid, and the second-stage results are substantively comparable to our primary analysis above.

Finally, while the use of the GDELT data gives us an outcome measure with global coverage dating from 2000, given its limitations we cross validate our substantive result against an alternative, albeit more limited, outcome measure. Round 6 of the Afrobarometer survey conducted in 2014 and 2015 included a battery of questions on China, including question 81b, which we use as a basis for an outcome variable *China View*:

> "Now let's talk about the role that China plays in our country. In general, do you think that China's economic and political influence on [ENTER COUNTRY] is mostly positive, or mostly negative, or haven't you heard enough to say?" (Isbell, 2017)

The Afrobarometer surveys have been geo-coded by BenYishay et al. (2017) and we use our methodology above to identify survey respondents as being within 25 km of an active CI, an inactive CI, or not proximate to either. We create both a binary response measure, and a measure that uses the original ordinal responses (very negative, somewhat

negative, neither positive nor negative, somewhat positive, very positive). In these models we are also able to include individual-level baseline controls for age, gender and socio-economic status. Full results are in Table A.4, but the results are qualitatively consistent with our findings above. The results from the binary model (Model A.11) suggest that the presence of an active CI leads to a 4% increase in the chance a respondent gives a positive view about China, with the difference-in-difference is significant at the 5% level.

Conclusion

This paper proposed and tested the idea of grassroots image management by a rising power by focusing on China's Confucius Institute initiative. It argued that the Chinese Communist Party attempts to actively manage its image among ordinary citizens abroad. The CI project is a major part of this effort at grassroots image management, yet previous research had not systematically measured its global impact. Using a quasi-experimental, geo-spatial research design, this paper found that the tone of media about China in areas where active CIs are located improved significantly. These findings are robust to multiple specification and estimation choices, as well as qualitatively consistent with results using Afrobarometer household-level opinion data. Given that CIs are located at universities, and often in capital or major cities, this is a substantively significant finding that suggests that grassroots image management can "filter up" via the media to national-level discourse. We see our investigation as a first step in capturing the effects of grassroots image management, a useful extension of this research would be to more broadly examine how grassroots image management mechanisms impacts localized public opinion on relevant issues.

The strategy of grassroots image management has theoretical significance for how we understand processes of great power legitimation and ideational change at the international level. First, it suggests that the focus on political elites that has characterized much of the norm socialization literature is useful but incomplete. Rising powers care about how they are perceived by foreign publics because they know that foreign publics, even those in authoritarian systems, have some influence on the policies of their governments.

The prevailing conception of international norms filtering down from the international system or being imposed on elites by a hegemonic power neglects the idea that public support provides a sturdier foundation than elite imposition. Second, it demonstrates that even short of aggressive initiatives like "regime imposition" or "autocracy promotion", a rising authoritarian state can influence how it is perceived among foreign publics. Achieving increased prestige or status in this way can in turn favourably shape the international environment for that state's priorities.

Third, and specific to China, these findings demonstrate that a rising China is indeed reshaping its image abroad. The CI project is at least partially successful in changing the images and ideas associated with China that circulate in the public discourse of foreign societies. This is important as China's global investment strategy, known as the Belt and Road Initiative (BRI), aims to reshape regional and domestic economies. The political impacts of the BRI are still unfolding and will continue to do so for many years, but a more amenable foreign public opinion environment will provide more latitude for the CCP to implement its strategies with less resistance. If the "China threat theory" does indeed pose obstacles for the CCP's foreign policy, "grassroots image management" appears poised to help smooth some of the frictions associated with negative images about China's political system and intentions.

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Appendix: Data Sources and Collapsed Summary Statistics (from 25km Models)

Variable	Source	Max	Min	Mean	Std Dev.	Observations
Average Tone	https://www.gdeltproject.org/	18.28	-15.18	2.913	3.955	25,171
Active	http://english.hanban.org/	1	0	0.355	0.479	25,171
Inactive	http://english.hanban.org/	1	0	0.126	0.332	25,171
China View (Binary)	BenYishay et al. 2017 http://geo.aiddata.org http://www.afrobarometer.org	1	0	0.628	0.483	53,935
China View (Ordinal)	BenYishay et al. 2017 http://geo.aiddata.org http://www.afrobarometer.org	5	1	3.665	1.156	52,709

Supplementary Online Appendix

Table A.1 Robustness

	(A.1) + Low N Locations	(A.2) - High N Locations	(A.3) Only High N Locations	(A.4) Mixed Effects	(A.5) - China Media	(A.6) - Outlier Media	(A.7) CI Count
(ln) CI Count							0.201
							(1.95)
Active	0.332	0.264	0.112	0.382	0.212	0.179	
	(6.38)	(3.95)	(0.97)	(5.24)	(3.33)	(3.81)	
Inactive	0.192	0.095	-0.096	0.226	0.065	-0.076	
	(2.50)	(1.04)	(0.83)	(2.56)	(0.75)	(1.11)	
Difference in Differences	0.140	0.169	0.208	0.156	0.147	0.255	
F-test: Active-Inactive=0	3.25	3.75	6.10	5.58	3.25	14.51	
F-test: p-value	0.072	0.053	0.014	0.018	0.072	0.000	
Mean Average Tone	3.299	2.813	3.343	2.913	2.922	2.691	3.299
R-squared	0.6233	0.6250	0.6553		0.6477	0.6452	0.5973
Prob > χ^2				0.000			
Number of Observations	30,967	23,601	16,430	25,171	24,574	23,163	12,756

Table A.2 Instrumental Variable Estimations

	(A.8) Active	(A.9) Difference in Differences	(A.10) CI Count
Second Stage			
(ln) CI Count			0.619***
			(3.52)
Active	0.599***	0.480	
	(3.53)	(3.95)	
Inactive		0.222	
		(2.30)	
Difference in Differences		0.258	
F-test: Active-Inactive=0		5.58	
F-test: p-value		0.018	
First Stage			
Inactive		-0.616***	
		(16.88)	
Night Light	0.010***	0.014***	0.010***
	(12.21)	(13.04)	(12.58)
Cragg-Donald F	2721.17	5855.45	3261.16
Kleinbergen-Paap F	149.07	169.91	158.16
Anderson-Ruben F	12.23	13.11	12.63
Mean Average Tone	3.616	3.616	3.616
Number of Observations	20,672	20,672	20,672

In all models Night time light is the excluded instrument. *** significant at 1% level.

Table A.4 Moran I Spatial Correlogram on Model I (Table 1) Residuals

Moran's I spatial correlogram 2000 (mean) resid	**Moran's I spatial correlogram 2001 (mean) resid**	**Moran's I spatial correlogram 2002 (mean) resid**	**Moran's I spatial correlogram 2003 (mean) resid**
Distance bands I E(I) sd(I) z p-value*	Distance bands I E(I) sd(I) z p-value*	Distance bands I E(I) sd(I) z p-value*	Distance bands I E(I) sd(I) z p-value*
(0-1] **0.262 -0.005 0.146 1.830 0.034**	(0-1] **-0.037 -0.005 0.145 -0.220 0.413**	(0-1] **-0.035 -0.006 0.181 -0.159 0.437**	(0-1] **0.158 -0.005 0.142 1.148 0.125**
(0-2] **0.010 -0.005 0.103 0.147 0.441**	(0-2] **-0.007 -0.005 0.104 -0.021 0.492**	(0-2] **0.038 -0.006 0.131 0.330 0.371**	(0-2] **-0.038 -0.005 0.105 -0.314 0.377**
(0-3] **0.030 -0.005 0.086 0.406 0.342**	(0-3] **-0.050 -0.005 0.090 -0.499 0.309**	(0-3] **-0.028 -0.006 0.104 -0.210 0.417**	(0-3] **-0.055 -0.005 0.090 -0.549 0.291**
(0-4] **-0.006 -0.005 0.078 -0.016 0.493**	(0-4] **-0.014 -0.005 0.081 -0.112 0.455**	(0-4] **-0.035 -0.006 0.096 -0.307 0.380**	(0-4] **-0.054 -0.005 0.082 -0.600 0.274**
*1-tail test	*1-tail test	*1-tail test	*1-tail test
Moran's I spatial correlogram 2004 (mean) resid	**Moran's I spatial correlogram 2005 (mean) resid**	**Moran's I spatial correlogram 2006 (mean) resid**	**Moran's I spatial correlogram 2007 (mean) resid**
Distance bands I E(I) sd(I) z p-value*	Distance bands I E(I) sd(I) z p-value*	Distance bands I E(I) sd(I) z p-value*	Distance bands I E(I) sd(I) z p-value*
(0-1] **-0.134 -0.005 0.145 -0.897 0.185**	(0-1] **-0.126 -0.006 0.185 -0.649 0.258**	(0-1] **0.072 -0.004 0.160 0.477 0.317**	(0-1] **0.088 -0.003 0.101 0.896 0.185**
(0-2] **-0.064 -0.005 0.108 -0.544 0.293**	(0-2] **-0.221 -0.006 0.137 -1.580 0.057**	(0-2] **0.027 -0.004 0.109 0.282 0.389**	(0-2] **-0.004 -0.003 0.070 -0.014 0.495**
(0-3] **0.089 -0.005 0.085 1.109 0.134**	(0-3] **-0.091 -0.006 0.108 -0.792 0.214**	(0-3] **-0.086 -0.004 0.083 -0.987 0.162**	(0-3] **0.049 -0.003 0.058 0.893 0.186**
(0-4] **0.022 -0.005 0.075 0.351 0.363**	(0-4] **-0.086 -0.006 0.097 -0.833 0.203**	(0-4] **-0.187 -0.004 0.070 -2.610 0.005**	(0-4] **-0.028 -0.003 0.051 -0.484 0.314**
*1-tail test	*1-tail test	*1-tail test	*1-tail test
Moran's I spatial correlogram 2008 (mean) resid	**Moran's I spatial correlogram 2009 (mean) resid**	**Moran's I spatial correlogram 2010 (mean) resid**	**Moran's I spatial correlogram 2011 (mean) resid**
Distance bands I E(I) sd(I) z p-value*	Distance bands I E(I) sd(I) z p-value*	Distance bands I E(I) sd(I) z p-value*	Distance bands I E(I) sd(I) z p-value*
(0-1] **0.084 -0.002 0.087 0.986 0.162**	(0-1] **0.072 -0.002 0.067 1.111 0.133**	(0-1] **0.025 -0.002 0.067 0.405 0.343**	(0-1] **0.073 -0.002 0.060 1.241 0.107**
(0-2] **0.058 -0.002 0.064 0.947 0.172**	(0-2] **0.070 -0.002 0.048 1.494 0.068**	(0-2] **0.020 -0.002 0.049 0.443 0.329**	(0-2] **0.013 -0.002 0.044 0.324 0.373**
(0-3] **0.030 -0.002 0.053 0.607 0.272**	(0-3] **0.056 -0.002 0.040 1.465 0.071**	(0-3] **-0.006 -0.002 0.040 -0.105 0.458**	(0-3] **0.003 -0.002 0.037 0.124 0.451**
(0-4] **0.019 -0.002 0.045 0.480 0.316**	(0-4] **0.053 -0.002 0.034 1.606 0.054**	(0-4] **-0.032 -0.002 0.034 -0.871 0.192**	(0-4] **-0.009 -0.002 0.032 -0.227 0.410**
*1-tail test	*1-tail test	*1-tail test	*1-tail test
Moran's I spatial correlogram 2012 (mean) resid	**Moran's I spatial correlogram 2013 (mean) resid**	**Moran's I spatial correlogram 2014 (mean) resid**	**Moran's I spatial correlogram 2015 (mean) resid**
Distance bands I E(I) sd(I) z p-value*	Distance bands I E(I) sd(I) z p-value*	Distance bands I E(I) sd(I) z p-value*	Distance bands I E(I) sd(I) z p-value*
(0-1] **0.019 -0.002 0.058 0.355 0.361**	(0-1] **0.131 -0.002 0.059 2.247 0.012**	(0-1] **0.065 -0.001 0.054 1.224 0.111**	(0-1] **0.021 -0.001 0.048 0.455 0.325**
(0-2] **-0.019 -0.002 0.042 -0.415 0.339**	(0-2] **0.137 -0.002 0.042 3.279 0.001**	(0-2] **0.032 -0.001 0.039 0.866 0.193**	(0-2] **0.030 -0.001 0.035 0.901 0.184**
(0-3] **-0.055 -0.002 0.035 -1.534 0.062**	(0-3] **0.122 -0.002 0.035 3.554 0.000**	(0-3] **0.039 -0.001 0.032 1.278 0.101**	(0-3] **0.004 -0.001 0.028 0.172 0.432**
(0-4] **-0.028 -0.002 0.031 -0.861 0.195**	(0-4] **0.105 -0.002 0.030 3.505 0.000**	(0-4] **0.050 -0.001 0.027 1.871 0.031**	(0-4] **0.013 -0.001 0.023 0.587 0.279**
*1-tail test	*1-tail test	*1-tail test	*1-tail test
Moran's I spatial correlogram 2016 (mean) resid	**Moran's I spatial correlogram 2017 (mean) resid**		
Distance bands I E(I) sd(I) z p-value*	Distance bands I E(I) sd(I) z p-value*		
(0-1] **0.120 -0.001 0.044 2.731 0.003**	(0-1] **0.040 -0.001 0.047 0.880 0.189**		
(0-2] **0.073 -0.001 0.033 2.268 0.012**	(0-2] **0.009 -0.001 0.034 0.287 0.387**		
(0-3] **0.052 -0.001 0.027 1.987 0.023**	(0-3] **0.041 -0.001 0.028 1.507 0.066**		
(0-4] **0.060 -0.001 0.023 2.659 0.004**	(0-4] **0.012 -0.001 0.024 0.535 0.296**		
*1-tail test	*1-tail test		

Table A.4 Afrobarometer Results

VARIABLES	(A.11) OLS	(A.12) Logit	(A.13) Ordered Logit
Active	0.050***	0.232***	0.117***
	(0.010)	(0.046)	(0.040)
Inactive	0.011	0.050	-0.017
	(0.013)	(0.063)	(0.069)
Observations	53,107	51,914	51,889
R-squared	0.122		
Baseline Controls	YES	YES	YES
Year FE	YES	YES	YES
Country FE	YES	YES	YES
Difference in difference	0.039	0.182	0.134
F test/Chi2 test: active-inactive=0	5.909	5.579	2.859
p value	0.015	0.018	0.091

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1