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Technology and clientelist politics in India

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Abstract: This paper argues that new computer, smartphone, and universal ID technologies are reducing the incentives for political clientelism in the delivery of social programmes in India, especially by allowing party leaders to bypass local brokers to credit-claim for better service delivery and allowing politicians to deliver programmatic service delivery much more efficiently than in the past, with fewer diversions. Politicians are responding to these changed incentives, not surprisingly, by investing more money in large social programmes, supporting technological efforts to improve their efficiency, and increasing campaign expenditures to advertise these improvements and link them to party leaders at the expense of local brokers who used to monopolize these local party–voter linkages.

Key words: clientelism, India, technologies, social programmes, service delivery

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1   Introduction

In their analysis of the decline of clientelism in the USA and UK in the 19th and early 20th centuries, Stokes et al. (2013: 179, 186, 199) showed how the growth of telegraph, rail, and print technologies in that era increased awareness of the prevalence and costs of corruption and also allowed politicians to manage the media and promote their programmatic party platforms to increasingly literate and wealthy voters.[1] In this paper I argue that the explosion of computer, biometric, telephone, and social media technologies in India (and elsewhere) over the past 30 years is having even more dramatic effects on the incentives for clientelism in our own era. I focus on the ways in which these new technologies can lower the costs of delivering programmatic goods more effectively and increase local demand for such programmatic delivery. These incentives are most effective, however, when they interact with technologically driven changes in party political organization, monitoring, and means of contacting and persuading voters. Those developments increase the ability of upper-level party leaders to communicate with voters directly and claim credit for improved service delivery at the expense of local brokers and officials, whose own self-seeking behaviours they can now monitor and control more effectively. Because powerful upper-level party leaders now stand to gain more from better programmatic delivery, they have an incentive to supply it. We see them doing just that, with increasing expenditures in India on centrally and state-sponsored welfare schemes—spending on national welfare schemes rose 14 per cent per annum after 2015—and increasing investments in improving the efficiency of those schemes.

I begin the paper with a brief description of the scale of the technological transformation in India over the past three decades, during which India has gone from being one of the least wired countries in the world to a society where phones and smartphones are now ubiquitous and vital for many transactions. Then I lay out the four factors that, together, explain the ways in which phone/smartphone, biometric ID, and big data technologies are shifting the overall mix between clientelist and programmatic politics. First, decisions about when, where, and with which message to contact individual voters and important groups are increasingly being driven by upper-level and data-driven party leaders and analysts, from the private sector and in new cells set up within each party, at the expense of local intermediaries. Second, technology, as well as increasing broader voter concern with development and government service delivery as existing theories predict, has increased the ability of governing parties to identify recipients of programmes they sponsor and integrate this with political campaign data, making more efficient delivery of programmatic goods to these voters more attractive. Third, technology is altering the balance between state and national party leaders and local politicians and brokers in terms of credit claiming by making it easier for upper-level leaders at both central and state levels to monitor local messages (resolving principal–agent issues) and making sure that more of the credit for service delivery goes to them rather than local party workers or political brokers. Fourth, given the previous three factors, we observe that parties are shifting strategies, spending more on non-contingent development programmes and on increasing efficiencies within them and raising money for persuading voters through mass and social media and less on local contingent clientelistic exchange and door-to-door in-person contact. None of this should be exaggerated; there is still a lot of inter-state variation, and these trends are not universal. Nonetheless, this shift in emphasis away from local clientelistic delivery is real and looks to continue.

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[1] The authors provide the example of Gladstone's Midlothian Campaign of 1879.

2   Background: the speed and scale of the computer and telephone revolution in India

In 1990 there were only around five million telephones in India (165 people per phone), and new applicants for a landline connection had to endure long waiting lists from the state monopoly provider, as well as poor service after the phone was installed (Doron and Jeffrey 2013: 28.). There were no mobile telephone networks, there were only a couple of state-run television networks, and the presence of computers was still very limited in homes and in government offices. The records of individuals' many interactions with the vast clientelist state were logged in paper files in multiple government offices and warehouses throughout India's state and local government bureaucracies and in the personal records of tens of thousands of brokers and party officials.

Thirty years later, the situation in India, as elsewhere, has been transformed. Cable television is ubiquitous and has all the variety, sensationalism, and extreme partisanship that we see in the USA and elsewhere. Mobile telephone networks rapidly expanded after regulatory changes led to phone and data prices dropping in 2003–04, with the number of mobiles rising from 13 million to 33 million by 2004–05 (Doron and Jeffrey 2013: 151). There are now more than 1.3 billion mobile phones (2019), one for each person, and roughly one-third of these are smartphones, a proportion that is estimated to climb to more than 60 per cent by 2022.[2] Mobile phone service in India, itself driven by politicians such as Telecoms Minister Sukhram who realized they could benefit from its expansion, is now in absolute terms the cheapest in the world, making the delivery of high bandwidth content such as videos and images a viable political strategy. Roughly 25–30 per cent of Indian voters in 2019 used phone apps like WhatsApp, Facebook, and YouTube daily and are absorbing and sharing political information through these, whether consciously or not.[3] By comparison, in 2009, less than 5 per cent of the electorate reported using the internet in any form—fixed computer or mobile—to get any political information.[4]

Technology has also meant that Indians are 'legible' to the state, private industry, and political parties as never before.[5] Mass marketers and companies in India, as elsewhere in the world, are collecting and analysing masses of information of citizens' activities and preferences and using these to target messages of all kinds. One challenge to this used to be the lack of a common identifier, such as a national ID or social security number. But in the early 2010s, the central government rolled out India's first national ID programme, *Aadhaar*, despite a great deal of political opposition by privacy advocates, in the hope that having a universal biometric identifier would eventually bring about large efficiencies in development and the use of government services. Companies, government offices, and political parties now use Aadhaar, in combination with people's mobile numbers and more traditional (but less accurate) identifiers such as name and address, to efficiently build databases that track many aspects of people's lives.[6] Government officers and politicians can now determine, with unprecedented speed, who has been the recipient of various government schemes and triangulate those data with data on other characteristics of interest.

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[2] 'India to Have 820 Million Smartphone Users by 2022'. *Economic Times*, 9 July 2020.

[3] Lokniti (2019). National Election Study 2019. Q.6. https://www.lokniti.org/national-election-studies

[4] Lokniti (2019). National Election Study 2009. Q. 26, p. 45. https://www.lokniti.org/national-election-studies

[5] The term comes from Scott (1998).

[6] The political consultancy SCL's Indian head, Amrish Tyagi, told an interviewer in 2017 that 'Most of the information we gather is in public domain. Based on where you shop, the music you buy from the Apple store, trips to the hair salon. It's easy nowadays to identify individual tastes and habits. And then accordingly, create messages'. *The Wire*, 20 March 2018.

2.1 New technologies of political campaigning and communication

The ability to aggregate and analyse unprecedented amounts of individual and household data has, over the past 15 years, led to the emergence in India of a huge US-style campaign, polling, and data analytics industry. Homegrown Indian companies like Indian Political Action Committee (IPAC), Axis My India, and Rnema are all now well established.[7] For a price, they offer a wide range of campaign packages, including targeted voter analytics, ad design, online and social media strategies, and guidance on the best in-person campaign strategies.[8] Media companies, for their part, also offer different 'packages' with different levels of media coverage to candidates, without which candidates for the state Legislative Assemblies and national Parliament (*Lok Sabha*) will receive only cursory coverage. The outside world also tried to take advantage of this gold rush, and an Indian branch of Cambridge Analytica's Strategic Communications Limited was founded in 2011, before closing when its parent became embroiled in US election scandals in 2018.

Even more importantly, from the perspective of understanding party leaders' incentives, India's major parties all now have their own IT and data analytics units that collaborate with private consultants as needed. The Bharatiya Janata Party (BJP) was the first to develop this expertise, beginning in December 2011, when the talented strategist Prashant Kishor managed Narendra Modi's media-driven 2012 Gujarat state re-election campaign, which successfully field-tested many of the techniques that Modi would later use in the 2014 general election. After 2012, Kishor and his team, including US-trained computer scientist and MBA Arvind Gupta, the newly recruited head of the BJP's IT Cell, collated and analysed huge amounts of private and public data on voters to develop targeted strategies and new ways of putting upper-level politicians in direct contact with voters. In 2014, Prashant Kishor's Citizens for Accountable Governance (CAG) consultancy worked with Modi to organize new means of connecting with voters, such as 'Chai pe Charcha' (Chat over tea), in which Modi took questions in real time on governance, women's empowerment, and agriculture from an audience of millions on cable, mobile, and in person. Kishor also organized a huge event on the anniversary of the BJP's 1980 founding to allow Modi to communicate directly over video (with accompanying coordinated text messages) with 600,000 booth-level BJP workers 50 days before the election, in which he assured them he too was a party worker at heart and urged them not to be complacent in the final stretch even though polls showed the party ahead.[9] To reach areas where mobile and computer technology or even electricity was missing, the BJP tried other methods: in Uttar Pradesh (UP) state, for example, 400 GPS-enabled video trucks travelled out to the villages to broadcast Modi's core message. The effect of this media bombardment was that India's 2019 election focused much more on national leaders and personalities than ever before. The 2019 National Election Survey (NES) found that 24.7 per cent of the electorate said that they would have voted for another party in their Lok Sabha seat had Modi not been the Prime Ministerial candidate.[10] By contrast, less than three per cent of those polled in the 1971 NES

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[7] For a sampling of the services on offer, see http://www.rnemasurvey.com/election-campaign-management/ and https://www.indianpac.com/.

[8] 'Behind Congress' Punjab Election Win: Prashant Kishor's Behind-the-Scenes Magic at Display'. *Business Standard*, 11 March 2017.

[9] 'Those who feel that the others are sleeping cannot win their polling booth. We have to think that we can win every booth, not that we have won every booth'. Modi's April 2014 speech (in Hindi) is available here: https://www.youtube.com/watch?v=Fys3t3ljds4.

[10] NES 2019, Q.23, p. 33.

mentioned Indira Gandhi's leadership as the main factor in their vote, even though at the time there was a highly personal battle going on between Gandhi and her rivals in the Congress.[11]

Kishor's and the IT Cell's work before and during the 2014 campaign—the party won 120 out of the 160 seats it targeted for mass persuasion efforts because of their social media usage profiles—was widely credited with the party's unexpectedly strong performance in winning a clear majority in that year's national elections (Jha 2017). There was definitely a darker side to this, and much media attention has rightly focused on the communal messages and fake news being pushed out through websites, phones, and social media and the widespread organized efforts to troll anyone who criticized the party and its leader.[12] But other national parties, seeing the BJP's initial success, quickly developed their own in-house operations. These are now capable of sending a constant stream of content to their state IT cells, which can then be mixed with more local messaging as it is circulated on WhatsApp, Facebook, Instagram, Twitter, and other formats.[13] Separate text, video, and press messages can be targeted, highlighting the impressive performance or promises of the party on different welfare dimensions. These messaging efforts can be further tailored to specific groups of voters, based on caste, previous contact with party workers, their social media activity, consumer behaviour, and information on whether the voters have been recipients of various government welfare programmes. Local booth-level volunteers—the BJP and Congress claim that they have 1.3 million and 800,000 of these, respectively—both channel and forward these messages through their own networks and pass up local content through the party hierarchy—in line with the messaging priorities that have been shared with them—in the hope that it will become viral at the state or national level.[14]

Since 2014, these direct communication tactics that the BJP and Modi pioneered from 2012–14 have been replicated and expanded upon in other campaigns. For instance, Modi's streamed Q&A sessions with ordinary people were adopted by Chief Minister Nitish Kumar in his 2015 Bihar state victory ('Ask Nitish') and by Captain Amarinder Singh's 2017 Punjab election victory ('Coffee with Captain'). In the 2019 Delhi state elections, in which Chief Minister Arvind Kejriwal's Aam Aadmi Party (AAP) faced what many thought would be a tough battle against the BJP, Kishor's consultancy came up with targeted ads and messages highlighting AAP's accomplishments in basic services such as education, health, and transport. They also pushed a flashy campaign theme song in Hindi—'Keep at it, Kejriwal'—that riffed off an earlier Bollywood hit song and got more than 10 million views on YouTube alone.

For incumbent politicians, such private efforts to communicate directly with voters can also be supplemented with the use of state money in what are nominally 'development,' 'governance', or 'education' initiatives. The consultancy firm Citizens Alliance Private Limited, which employs dozens of computer scientists, engineers, and political analysts recruited from India's top colleges, was drafted by Bihar Chief Minister Nitish Kumar's JD(U) in 2015, just before upper-house legislative council elections in the state, to launch a '@Bihar2025' governance and development initiative aimed at communicating with 40 million overs. To get around Indian Election

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[11] 1971 NES, Q.6A.

[12] For a detailed insider account of these persuasion and dirty tricks efforts, see Chaturvedi (2017) and 'BJP IT Cell Insider Interview with Dhruv Rathee', 10 March 2018. https://www.youtube.com/watch?v=BL2ZYXLW5bU

[13] See interview with BJP and Congress Seva Dal social media coordinators in *Indian Express*, 5 April 2019. https://indianexpress.com/elections/forward-posts-lok-sabha-elections-twitter-facebook-whatsapp-social-media-congress-bjp-5630131/

[14] Karishma Mehrotra, 'How Do Political Campaigns Go Viral: Lok Sabha Elections 2019'. *Indian Express*. https://www.youtube.com/watch?v=nQz42Egn2F0

Commission rules against launching formal schemes or giveaways during election campaigns, the scheme did not offer concrete plans but instead used targeted messages about Nitish Kumar's achievements in the previous decade as well as forward-looking efforts to engage large groups of voters in developing priorities for his next term in office. The Election Commission (EC) put a temporary stay on these efforts nonetheless during the Bihar campaign in 2015, given the obvious campaign purpose and large expenditures involved.[15] But post-2019, in an environment where the EC is much more under the influence of the central government, state governments that are allied with the centre will likely be able to use such tactics again.

2.2 New technologies lower the cost of delivering programmatic policies and non-contingent benefits

Improved technology has over the past 15 years substantially lowered the costs in India of trying to appeal to voters with programmatic rather than clientelist strategies. It is now, because of the biometric *Aadhaar* ID and the widespread availability of phones including smartphones that can scan, take photos, and track locations, much easier to track whether large government welfare and spending schemes are selecting beneficiaries in accordance with the rules, to track how much leakage is happening and where, and to enlist the recipients themselves to monitor delivery and prevent diversion. The huge, subsidized food programme Targeted Public Distribution Scheme (TPDS), for instance, started an 'end-to-end computerisation' effort in December 2012 to address the many errors of inclusion, exclusion, and corruption in the nation's largest subsidized food programme, and similar efforts have since been undertaken in other major programmes. In Chhattisgarh, a state that has made major efforts at improving the TPDS, technology has been extensively used to track the moment of subsidized grains (via GPS), send SMS messages to local citizens telling them when supplies are expected to hit the fair price shops, and verify the rolls of beneficiaries (Heath and Tillin 2017: 90–110).

Investigative reports from India's auditor general, the media, and studies by academics make it clear that technology is not a silver bullet (Bussell 2012).[16] Muralidharan et al. (2020) find that simply making one or two technological improvements, such as adding a biometric identification step to reduce leakages in a subsidized food programme in Andhra Pradesh, has little effect on its own in improving delivery. Such programmes need additional political backing so that officials have an incentive to implement the improvements, as well as human safeguards to ensure that qualified beneficiaries are not being unduly excluded (Muralidharan et al. 2016: 2895–929). Every large programme still has problems, at the procurement and wholesale distribution levels as well as at the local level. Some states such as Madhya Pradesh have been much less interested in reform than others, digitization and tracking is incomplete, and efforts to cross-check beneficiaries imperfect. Wherever the recipients are illiterate and lack power, they are still vulnerable—as they have always been—to others receiving payments on their behalf: short deliveries; direct cash transfers being made to accounts in their names they did not know existed; and village *pradhans* receiving money on their behalf for subsidized home projects.[17] There are also periodic horror stories about poor individuals who are denied benefits because their Aadhaar numbers are

[15] *Indian Express*, 27 June 2015.

[16] The first major assessment of Indian digital anti-corruption efforts, done by Bussell a decade ago (2012), argued that whether they succeeded depended a great deal on whether politicians derived their funds from petty corruption or grand corruption, with reform more likely when politicians depended less on petty corruption to fund their campaigns. This study preceded the recent massive spread of smartphone technology and social media, which arguably has increased the political incentives for reform.

[17] 'Ghatigaon Residents Allege Corruption in Pradhan Mantri Awas Yojana'. *The Quint*, 8 May 2019. https://www.youtube.com/watch?v=3woi4rCoh6I

improperly linked with programme information, or biometric data.[18] In cases such as this, as Mookherjee and Nath (2021) show in a study of West Bengal, poorer voters may still be better off—given their greater responsiveness to clientelistic goods—in traditional clientelist systems compared to formula-based systems whose delivery may be highly imperfect.

In general, and consistent with a large number of studies of the conditions under which clientelism thrives elsewhere, the rollout of new technology seems to lead to the greatest improvements where the governing party or a substantial section of it is interested in reform and where the local targeted population already has sufficient literacy, awareness, and agency to push back against efforts by locally dominant castes or by corrupt local politicians and officials to divert resources from the programmes. Bussell (2012: 4) argues that single-party systems—such as we have seen with India's post-2014 BJP government—might be more likely to lead to reform, because they allow 'party leaders [to] internalize the electoral benefits of providing improved government service to voters, while the costs in terms of foregone rents are borne largely by party ministers and legislators with limited capacity to resist leaders' policy directives.' The social and spatial exposure to information and networks to which citizens have access, as studies by Kruks-Wisner (2018) and Jha et al. (2015) document in Rajasthan, is very important to making effective claims for services. In dense urban slums, Auerbach and Thachil (2019) and Auerbach (2020) have shown how local communities effectively pick the brokers who are most successful in making claims on their behalf and that parties in turn select brokers from those who have the best local reputations. Improvements are much less likely, however, where locally dominant castes control land and village politics and can use their near-monopoly of literacy to coerce beneficiaries into signing over their benefits (e.g., Manika 2018) or to take a share of the food or benefits that should go to the poor.[19]

The fact that progress is uneven, however, does not mean that improvements are not taking place.[20] Two-thirds of Indians, when polled, report that the biometric Aadhaar ID has made their lives much easier and more convenient in many ways.[21] For the largest and most visible national programmes, such as NREGA (employment), the *Pradhan Mantri's Awaas Yojna* (Prime Minister's Housing Scheme), and various food subsidy programmes, the possibilities for diversion and individual discretion in selecting beneficiaries are more constrained than they were because many payments are now made directly to citizens through e-payments, delivery of subsidized goods to individuals is verified with *Aadhaar*, information on criteria for eligibility is widely shared, and *Aadhaar* allows much easier monitoring and cross-checking with other household data, such as information on ration cards and below poverty line status. Major infrastructure schemes, such as the PMAY, release payments in several stages, conditional on proof of progress (e.g., foundation,

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[18] Aarefa Johari, 'A Year After Jharkhand Girl Died of Starvation, Aadhaar Tragedies are on the Rise'. *Scroll*, 28 September 2018.

[19] Anderson et al. (2015) found, in a large-scale survey of villages in Maharashtra, that Maratha land-dominated (MLD) villages had much less uptake on central government income programmes, which they reasonably explain as a response by locally dominant landed Maratha castes, who used their control of local government positions and processes to remove competition for the local labour on which they rely to work their own holdings. Anderson et al. also speculate, however, that 'administering benefits from higher levels of government might weaken the cohesiveness of such blocking agents' (2015: 1814).

[20] This is a contested issue. On one hand, there are studies by scholars such as Khera who argue that Aadhaar has not helped. On the other hand, there are audits, surveys, and other studies that show substantial improvements (Khera 2017: 61–70). For the reasons I give here, I think that Aadhaar, in combination with other new technologies, is having a positive effect.

[21] NES 2019.

walls, roof), in the form of precisely geocoded photos of the house being built and progress to date. These can be uploaded in various ways, including a specialized PMAY app.[22]

Audits of the major schemes have generally found that these new processes have increased overall efficiencies, that many ineligible beneficiaries have been weeded out as a result, and more qualifying beneficiaries included. A large-scale audit of the TPDS in Uttarakhand in 2017–18, for instance, found that computerization efforts had resulted in 2,626,000 ineligible recipients among the 12,875,000 previous food distribution beneficiaries being dropped from the programme.[23] An important study of the working of the massive Prime Minister's housing scheme (PMAY) (Singh 2021a) in 10 states over the period 2014–19 found a similar picture: the new rules and procedures for the distribution of houses were successful in bypassing local brokers, and the selection of beneficiaries was largely in accordance with the formal programme rules. Even in the least likely case of minority voters—which vote against the ruling BJP—Singh (2021b) finds that Muslims were just as likely to get a house under the scheme as members of other communities.

A more recent study by Muralidharan et al. (2021) shows even more impressive effects because it looks at the effects of adding telephone monitoring to a programme that already has many checks and therefore constitutes an environment where we would expect relatively little added value of technology. They studied whether introducing phone monitoring of lump sum payments to farmers in a random sample of districts in Telangana in 2018 increased the effectiveness of this sizeable programme, which cost US$0.9 billion and accounted for 3.5 per cent of total state expenditure. Farmers in the chosen districts were contacted by phone and asked about whether they had received payments and whether they had experienced problems or been asked for bribes. The officials in charge of the programme were told that recipients in their districts would be surveyed by phone and that these data would be used to evaluate the quality of programme delivery.

The authors found that phone monitoring (from human callers; robocalls were not useful in reaching recipients) was highly successful in increasing the effectiveness of the programme, even in an environment where service delivery was already quite good relative to other Indian states. In treated districts, phone monitoring 'reduced the fraction of farmers not receiving their checks on time by 7.9% (2.4 percentage points on a base of 31%) and ever receiving their checks by 7.8% (1.3 percentage points on a base of 17%). These are non-trivial rates of improvement—especially given the "light touch" nature of the intervention and its low cost'.[24] The phone monitoring intervention was also somewhat progressive, with farmers in the bottom quartile of landholdings cashing their checks at around twice the average rate of increase. The authors eliminated information-based explanations for this outcome and infer that the result likely came from incentives from local officials believing that future evaluations and opportunities would be linked to improved performance. That in turn depends on whether officials feel that efforts to improve efficiencies have strong political backing.

This is not just a supply-side story: as education and literacy has increased, there are also greater citizen demands for better distribution and awareness of irregularities (Kitschelt and Wilkinson

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[22] 'Bina id passward ke Pradhan Mantri Awaas ka geo tag kaise karte hai?' ('Without an ID Password How Can the PM's Housing Programme Geotag Work?'). https://www.youtube.com/watch?v=tgFV0U72WCI

[23] See, e.g., the CAG report on the working of TPDS in the Uttarakhand state in 2017–18, which found that, because of digitization, 2,626,000 ineligible recipients among the 12,875,000 previous food distribution beneficiaries were dropped from the programme. CAG Report No. 2 of 2019, Government of Uttarakhand, pp. 17–8.

[24] Muralidharan et al. (2021) estimate that it costs only US$0.036 to deliver an extra dollar of benefits.

2007).[25] Using methods first pioneered by Indian non-governmental organizations, which 15 years ago used Right to Information requests to get lists of programme beneficiaries and amounts they were due and they then posted outside local government offices, the major government programmes now make information on eligibility criteria, waiting lists, and amounts to be paid widely available. The TPDS has local monitoring committees that meet several times a year, as well as local, state, and government lines to report abuses. This allows citizens to verify what is happening and makes it much harder for officials and politicians to conceal clientelistic transfers. Parties that want to can also use this increased citizen awareness and widely available phone and social media access to highlight corruption, as well as to blunt attempts by their rivals to buy votes. In the 2014 Delhi election campaign, for instance, the challenger AAP party blunted the influence of the incumbent Congress by telling voters to '… report liquor and cash distribution through WhatsApp at 9718500606. Tweet using #AAPSquad' (Ahmed 2016).

Over the long run, as the effectiveness of programmatic delivery increases and voters become better off, we can expect the appeal of clientelistic exchanges to diminish in India, as it has elsewhere. The best evidence of the interaction between better programmatic delivery and the decline of clientelistic appeals is an important study done by Heath and Tillin (2017) comparing how similar groups of voters respond to clientelist inducements in contexts that have been given different programmatic 'treatments'. Tillin and Heath surveyed a representative sample of villagers on either side of the MP and Chhattisgarh state border. These villages had all been part of the state of MP before the division of the state in 2000, for elite-driven reasons that were plausibly exogenous to the socio-economic and political conditions in the villages. Both sets of villagers were matched in terms of their socio-economic profile. But there was one crucial difference. The state government in Chhattisgarh had, in the preceding years, made major efforts to improve the programmatic delivery of its marquee Public Distribution Scheme (PDS), whereas the MP government's reform efforts had been half-hearted, and delivery of the scheme in MP was still riddled with corruption and clientelism. The empirical result, as Tillin and Heath show, is that on many dimensions, the PDS system in Chhattisgarh performed much better than in Madhya Pradesh: more recipients, better delivery, and higher overall satisfaction with the food distribution system. Heath and Tillin then administered a survey to voters on either side of the state border, asking them whether they would give their vote to a political party in exchange for inducements of varying size, from vegetables at the small end of the scale, to a government job at the top. The interesting finding is that, at the lower end of the inducement scale, when voters were offered food (vegetables), similarly poor voters in Chhattisgarh—the better performing state—were now much less likely to say that they would change their votes in return for the benefit. Only the largest benefit, a job, could shift voting preferences equally in both states.

This increased resistance to clientelist promises of vegetables in Chhattisgarh as opposed to Madhya Pradesh could theoretically be caused by three things: its one-shot nature; the better availability of food through the PDS reduced the attractiveness of food in particular; or the better delivery of food through the PDS increased the faith of voters in government programmatic delivery more generally. It seems likeliest given the null or positive results on other kinds of goods that, in this case, the effect they observe is largely because of its one-shot nature or the better availability through programmatic means of the specific good (food) being offered, or some combination of the two. This study provides good evidence that, over time, better programmatic performance can change people's view of the relative attractiveness of clientelistic versus programmatic benefits and shift their preferences towards programmatic delivery.

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[25] Politicians may also push these local demands by urging recipients to be aware of their rights under programmes and urging them to act if there are irregularities.

2.3 Technology, political persuasion, and political credit claiming

The widespread availability of phones, social media, and databases that combine records of social service delivery with politically relevant information has altered the balance between state and national party leaders and local politicians and brokers by making it easier for upper-level party leaders to (1) monitor local patterns of benefit delivery to voters and party communications with them in ways that help resolve principal–agent issues and deter local rent-seeking and (2) make it easier for upper-level leaders to communicate directly with voters, bypassing brokers, and make sure that more of the credit for service delivery goes to them rather than the local party workers. In a trip to the state of Odisha in 2012, I vividly remember senior national and local officials I was interviewing teasing each other about the fact that, while most of the funding for a subsidized programme came from the centre, the state government responsible for delivery over the last few kilometres got most of the credit. That local bias balance in the ability to credit claim has now begun to shift, however, because national leaders have, through new technology and social media (Narendra Modi currently (June 2021) has 69.4 million Twitter followers), an unprecedented ability to reach out directly to local programme recipients and emphasize their own role in delivering the goods. National party organizations, armed with lists of local recipients, can and do contact those recipients by phone or message a prescribed number of times to then emphasize the national leader's role in providing the benefit.

They can also keep tabs on the extent to which their own local party workers highlight the central party leaders as opposed to their own contributions when delivering the goods. Clientelist relationships are bedevilled, as scholars have long recognized, by principal–agent problems in which local workers often choose to work in their own interest rather than that of their patron or party (Kitschelt and Wilkinson 2007: 8–9; Stokes et al. 2013: 197–8). Parties try to address this partly by investing in 'ideology work' and also, as Auerbach and Thachil (2019) show, by valuing loyalty to the patron and party as well as popularity and effectiveness in the initial selection of local brokers.[26] But it is also true that new technology allows for far more real-time monitoring of individual party members' local messaging and activities than in the past. The centre is now beaming out its own messages and checking the extent to which these are being dutifully circulated and promoted on Twitter, WhatsApp, and other outlets. Parties have created rewards, within their organizations, for local party workers to identify locally compelling stories, images, and footage that 'fit' with the issue priorities set by the national level. Party leaders now have the ability to much more quickly identify and discipline those workers who go off-message by following their workers' social media messaging in real time.[27] At the ground level, workers are regularly expelled for 'anti-party activities' tracked through social media, and one city Congress unit head reported to Auerbach that he had expelled 59 party workers during his tenure for such reasons (Auerbach 2020: 70). Most local brokers, as Auerbach and Thachil's (2019) research on urban slums demonstrates, want to move up in the party hierarchies, maybe even to get a party ticket for the council, and those who are not seen as loyal have little chance of promotion up the ladder. The effect of all this, for local intermediaries, whose influence and ability to move up in the party depends to a large extent on them being seen as loyal soldiers, is that they have much less autonomy than in the past to further their own interests and messages at the expense of the party's.

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[26] 'Slum leaders are ambitious entrepreneurs whose aspirations extend beyond the settlements from which they emerge. They seek political careers of their own, not to forever remain rentable intermediaries for politicians' (Auerbach and Thachil 2019).

[27] See, e.g., the expulsion of a local BJP women's organization worker in Padrauna, UP for 'anti-party activities' for her social media posts. *Scroll*, 1 July 2019.

From the perspective of parties, one problem with programmatic welfare delivery in federal multi-level states such as India is that it is often unclear to voters just who is delivering the goods. Opinion polling in India, as elsewhere, has shown consistently that voters misidentify, by quite large amounts, the level of government (central, state, local) responsible for delivering particular programmes. The combined benefits to upper-level leaders from a combination of better service delivery and more effective credit claiming can therefore be very substantial. Modi's massive advertising and social media push after 2014 to identify himself and his party with the largest central welfare schemes was very successful, for instance, in shifting voter perceptions. In the 2014 Lokniti NES Post-Poll, most of the recipients of nationally funded housing (Awaas Yojana) and employment (NREGA) programmes credited their *state* governments or local politicians and bureaucrats for the help they received.[28] This was even though 80–90 per cent of the funding for these programmes came from the centre. Two-thirds of those surveyed in 2014 credited either the state government (51 per cent) or local politicians (14.7 per cent) for the benefits they received, with another 3.9 per cent crediting local bureaucrats and only 22.4 per cent crediting the central government, which actually paid for most of the programme.[29]

By 2019, however, that balance had shifted decisively. Most of the credit for the Awaas Yojana in the All-India Post-Poll NES 2019 Survey Findings programme now went to the central government and to Modi in particular. In the 2019 NES Post-Poll, 51.1 per cent of beneficiaries credited the central government, with 32.2 per cent crediting the state government, and much smaller proportions than in 2014 crediting the influence of local politicians (5.9 per cent) or bureaucrats (2.2 per cent) for any help they received.[30] There was a similar pattern for another huge central employment scheme, NREGA, with 50 per cent of beneficiaries crediting the centre in 2019 compared to 27 per cent in 2014. The big exception in 2019 was the PDS-subsidized food programme, where a majority or plurality of people continued to credit their state governments. It seems likely that this is because PDS is distributed through a long-established network of state food distribution centres, which also administer state programmes, and that visits to these 'fair price shops' involve the regular interaction of citizens with agents of the state government, which therefore gets credit for the programme.

This pattern suggests both better monitoring and delivery of the schemes and successful large-scale efforts to convince the public that improvements were mainly because of the efforts of the national government and Modi, rather than local state officials. Each house built under PMAY credits the Prime Minister's programme in writing on the outside of the house, and there is a photo of Modi on the award certificate, just as there is a photo and quote from Modi on the COVID-19 vaccination certificate. In states where the BJP is in office, the dominance of Modi and his close associates in the party and their personal reputation for punishing over-ambitious subordinates, helps to discourage local politicians from attempts to hog the limelight and claim that it is them rather than their superiors who are most responsible for good local outcomes.[31]

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[28] Most of the funding for NREGA and PMAY comes from the centre—90 per cent in the case of NREGA. In 2019, US$46.2 billion was spent on centrally sponsored schemes—12 per cent of the total budget.

[29] This shift from voters crediting central rather than state governments for scheme benefits was first explored extensively in an important paper by Deshpande et al. (2019: 219–33).

[30] CSDS Lokniti, *All India Post Poll NES 2019 Survey Findings*, Q.31.

[31] For Modi's personal style of governance, the most revealing article is 'The Emperor Uncrowned' (Jose 2011). Indian political adverts, banners, and posters for local elections typically display the local candidate together with those above him or her in the party hierarchy, often in larger sizes reflecting their status, or alternatively smaller, but beaming down from above. It would be an interesting project to assess party dynamics and credit claiming through these posters,

Table 1: Who gets the credit for centrally sponsored schemes?[32]

	2014 NREGA-Employment	2014 Awaas Yojana-Subsidized Housing	2019 PDS-Subsidized Food	2019 NREGA-Employment	2019 Housing/Awaas Yojana
Percentage reporting family benefit from programme in previous 5 years	19.7	14.9	43.6	20.8	20.7
Proportion of those who benefitted who credit:					
Centre	26.9	22.4	27.7	50.2	51.1
State	42.0	50.2	57.2	31.5	32.2
Both		-	1.2	0.7	1.0
Local politicians	16.1	14.7	4.7	6.2	5.9
Local bureaucrats	4.9	3.9	2.4	2.8	2.2
Other/not reported	2.0	8.8	6.8	8.5	7.5

Source: author's elaboration based on CSDS NES Post-Poll 2014 and 2019. This was a nationally representative survey of 24,236 adults in 2019.

These improvements in delivery and efforts at central government credit claiming seem to be effective even in the least likely cases and in those states where the anti-BJP opposition is in power and has been in power for a long time. These opposing state governments have every incentive to diminish the credit-claiming efforts of the BJP central government and to highlight their own role in the delivery of subsidized housing, food, and job-support programmes. However, the state-level data from the 2019 NES (unfortunately we do not have it for earlier rounds) show quite clearly (Tables 2 and 3) that in most of these opposition-ruled states (Kerala is an exception), around half of the population in 2019 now credited the centre with the benefits they had received from the main housing (PMAY) and employment (NREGA) schemes. To be sure, the proportion crediting the centre and BJP government was even higher in those states where the BJP was in power, such as UP (72 per cent).[33] The proportion of those crediting the centre was also high in Madhya Pradesh and Chhattisgarh, states that had been ruled by the BJP for 15 years until the very end of 2018 and had only just installed opposition governments. In all these long-time BJP-ruled states, both the state governments and the BJP's national messaging had been humming the same Modi and BJP tune. But the shift in credit claiming towards the centre is clearly shown by the case of West Bengal, which has never been governed by the BJP and has been run by parties opposed to the central government every year since 1977 and by the fiercely anti-BJP Trinamool Congress since 2011. Even in this 'least likely' case, 49.2 per cent of those interviewed in 2019 now credited the centre for the PMAY and 48.1 per cent for the NREGA. (The PDS remained the one large scheme across many states where voters consistently still credit the state governments for reasons explored above.)

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tracing through, for instance, whether Modi appears more often or larger on these adverts than leaders in the past or leaders of other parties.

[32] NES 2019 and 2014 Post-Poll. The question was not asked for the PDS in 2014 and not asked at all prior to the 2014 NES.

[33] I am grateful to Sanjay Kumar at CSDS for allowing me access to these 2019 NES state-level data.

Table 2: Who got credit for the PMAY housing scheme in the 2019 elections?

State (ruling party in 2019 election)	Centre	Other	State	Local admin	Local pol
Chhattisgarh (INC)	73.3	10.0	14.4	1.1	1.1
UP (BJP)	72.3	3.2	16.8	0.5	7.2
Bihar (JD)	70.5	0.9	25.0	0.5	3.2
Madhya Pradesh (INC)	67.3	1.1	21.5	2.2	7.8
Jharkhand (BJP)	62.9	NA	31.5	1.0	4.6
Odisha (BJD)	56.3	0.6	38.1	1.1	4.0
Gujarat (BJP)	49.2	4.1	41.0	4.1	1.6
West Bengal (TMC)	49.2	0.3	40.8	0.3	9.4
Tamil Nadu (AIADMK)	42.3	0.6	41.7	6.6	8.9
Kerala (CPM)	10.0	6.6	78.2	1.3	3.9
Average	53.3	2.2	37.2	2.0	5.6

Source: author's elaboration based on CSDS NES Post-Poll 2019.

Table 3: Who got credit for the NREGA employment scheme in the 2019 elections?

State (ruling party in 2019 election)	Centre	Other	State	Local admin	Local pol
Bihar (JD(U)-RJD-INC)	69.0	1.0	24.0	1.0	5.0
UP (BJP)	62.8	1.8	17.9	1.8	15.8
Chhattisgarh (INC)	59.6	4.6	35	0.4	0.4
Jharkhand (BJP)	54.5	NA	38.3	1.4	5.9
Odisha (BJD)	53.5	NA	41.2	1.8	3.5
Madhya Pradesh (INC)	48.7	2.3	34.0	4.5	10.6
West Bengal (TMC)	48.1	0.2	43.6	0.5	7.6
Kerala (CPM)	45.9	2.5	50.4	NA	1.3
Tamil Nadu (AIADMK)	42.4	3.0	36.4	9.2	9.0
Gujarat (BJP)	40.0	8.0	48.0	4.0	NA
Average	51.6	2.7	37.1	3.0	7.3

Source: author's elaboration based on CSDS NES Post-Poll 2019.

Table 4: Who got credit for the PDS-subsidized food scheme in the 2019 elections?

State (ruling party in 2019 election)	Centre	Other	State	Local admin	Local pol
UP (BJP)	65.0	1.9	24.6	1.8	6.7
Jharkhand (BJP)	54.9	0.3	37.2	4.1	3.4
Bihar (JD(U)-RJD-INC)[34]	33.6	1.1	59.4	1.1	4.8
West Bengal (TMC)	30.0	0.3	66.2	1.2	2.3
Gujarat (BJP)	25.9	6.9	50.0	9.9	7.3
Madhya Pradesh (INC)	24.8	5.0	51.1	8.0	11.1
Tamil Nadu (AIADMK)	21.7	3.3	56.5	6.1	12.4
Chhattisgarh (INC)	18.9	6.8	73.1	NA	1.2
Kerala (CPM)	11.6	2.4	84.9	NA	1.1
Odisha (BJD)	1.5	NA	97.7	NA	0.9
Average	29.9	2.7	58.6	4.6	5.6

Source: author's elaboration based on CSDS NES Post-Poll 2019.

2.4 Shifts in party strategies

Given the interaction of the three factors above, as well as an increasingly educated electorate's concern with effective service delivery, parties have become relatively more concerned about influencing voters through the effective delivery of large-scale programmes and direct communication through mass and social media and less concerned than before with clientelist transfers through local brokers. Patterns of voter contact seem to reflect this change in emphasis. In the 2019 campaign, only 12.6 per cent of voters nationally reported that a party worker had come to their house during the past six months to ask for their vote, compared to 61.1 per cent in 2014 and 57.9 per cent in 2009.[35] Even if this 12.6 per cent is an underestimate, it seems likely that the trend towards more virtual media and less in-person contact is real. It is not that local clientelist contacts and transfers have stopped, but they are now seen as only one means, and not always the most effective means, of influencing voters.[36]

These trends do not mean a shift to programmatic distribution across the board, and we will continue to see politicians and parties employ a mixed strategy—some clean, well-administered programmes, others much more corrupt or clientelistic—depending on the party and the state and the groups they wish to target (Bussell 2012; Kitschelt and Wilkinson 2007).[37] Singh's (2021b) pathbreaking analysis of the delivery of both programmatic (housing) and clientelist (propane gas

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[34] The JD(U) was in alliance with the BJP 2010–14.

[35] NES 2019 Q.12; NES 2014 Q.25; NES 2009 Q.7.

[36] Traditional clientelism has always had the weakness from the perspective of the politician that monitoring is imperfect and that voters can defect. Only 16 per cent of voters asked in 2009 thought that voters who took money/food/liquor from candidates felt obliged to vote for the candidate (Q.7) 2009.

[37] For example, compare the differences in performance and efficiency between West Bengal and Andhra Pradesh in Mookherjee and Nath (2021) and Muralidharan et al. (2020).

cylinder) schemes in Northern India finds that both types of schemes are paying electoral dividends for the parties and leaders that deliver, though the political dividend for the clientelist programme requires a lot more hard work and credit claiming on the part of the brokers, with more contacts per beneficiary than the housing programme.[38] Most leaders and parties have some signature programmes of mass appeal to voters, and they care about the efficiency of these a great deal, while paying much less attention to others. Modi has greatly increased spending on CSSs since his 2014 election, and these have been growing around 14 per cent per annum since FY15 (central government expenditure on these is US$47 billion in FY2021, before being reduced during COVID-19 because of state budget problems that prevented them from matching these central expenditures).[39] In Odisha, Chief Minister Biju Patnaik cared a lot about his highly subsidized rice scheme, and his administration has emphasized to both voters and officials that this should be administered cleanly and efficiently, while other areas of the administration (e.g., licenses for mining) remained highly corrupt. In Chhattisgarh, Chief Minister Raman Singh likewise stakes much of his political capital on running a successful subsidized food distribution system (Heath and Tillin 2017).

A part of why brokers are not in danger of extinction is that much of the reason they are needed is not to access welfare but instead because of the kind of 'whole person' needs—' paying his son's tuition, filling out government forms, or getting food or medicine when he falls on bad times'—first sketched out by Scott (1972: 95) in his foundational work on clientelism in Southeast Asia in the 1960s. In a recent study of the Saharanpur district in UP, Singh and Hemrajani (2018: 252) similarly found that, when they asked people what services from political patrons were most important, 'Respondents inevitably mentioned three specific guarantees by the politician—that of *security* from or by the police, *facilitation* in the *tehsil* [the local subdistrict, where most people interact with the government] and *mediation* in cases that would otherwise go to court'. Krishna's (2002) foundational surveys and fieldwork on local brokers in Rajasthan also identified services such as negotiating with local welfare officials, hospitals, schools, and police as a vital function of these brokers.

The rise in the share of programmatic distribution over recent years is probably even greater than it appears because some 'clientelist' programmes, on closer inspection, were never as clientelist as they seemed. In recent decades there have been widespread 'freebie' programmes in many Indian states, in which regional parties in government give voters private goods such as televisions or laptops. The 2019 NES reported that 13 per cent of the Indian population had received such 'freebies' in the past 2–3 years. It turns out, though, that these programmes are more about raising party funds that can then be used to influence voters in other ways than they are about giving voters desired goods that will directly influence their votes (Nair 2020). Nair has extensively studied these schemes, such as the delivery of 15 million televisions to voters in Tamil Nadu or 1.8 million laptops to high school students in UP (at a cost of one-third of the state's education budget).[40] Nair has conducted his own surveys that clearly show that many of the recipients of these schemes, however, do not especially want what they are getting, as shown by the active secondary markets that grow up selling these televisions, laptops, or other goods at large discounts.

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[38] In Singh's analysis of the clientelist propane gas cylinders scheme, he finds that local politicians and brokers still have a great deal of influence over the beneficiaries, and he finds that BJP supporters are more likely to receive a connection than others, consistent with Stokes et al. (2013) and others who predict targeting at core and swing voters.

[39] https://www.financialexpress.com/economy/covid-19-spending-for-these-centraly-sponsored-flagship-schemes-to-be-cut/1970351/. Total expenditure rose from INR16.6 lakh crore in 2014–15 (INR237 billion) to INR24.4 lakh crore in 2018–19 (INR394 billion).

[40] NES 2019, p. 52.

Nair's (2020: 43–47) research finds that these schemes have zero effect or a small positive effect on voters, but if it exists, this effect is not large. That is not the most important thing for the politicians, though, because the schemes are often a way for the party to raise lots of money through contracts or, in the case of the television giveaway in Tamil Nadu, by increasing viewership for the party's cable network and that network's value. It is the money the politicians and party get through such large purchases that is key to these schemes—not the small benefit delivered to the voter or the small direct electoral benefit to the politician.

Along with the shift in power from lower-level brokers to upper-level party officials, there has also been a shift in India's overall federal balance, from the states to the centre, in a way that undercuts regional clientelism. This has happened for two reasons. First, the states have less power to extract resources from the centre in return for their political support in New Delhi. India was in an era of political coalitions from 1989–2014, in which smaller regional parties, as their support was often pivotal, could extract large benefits that they could in turn pass on to their clients. Even though governments in this period formed oversize coalitions to try to minimize such extortion, they were all vulnerable to such demands from state parties: rice support prices that helped the TDP's clients in Andhra Pradesh, sugar support prices that helped the National Congress's sugar farmers in Maharashtra, and sometimes straightforward bribes. Ziegfeld (2017: 23) used systematic evidence from 1989–2014 to argue, with considerable justification, that regional parties thrived in India during this period because they could deliver clientelism very effectively, in an environment where 'formal institutions do not penalize regional parties'.

Second, there has been a significant shift in the relative economic resources available to the centre as opposed to the states under Prime Minister Modi. In 2017, India's states signed on to a new national value-added tax, the GST, thereby giving up many constitutionally defined state taxes in return for a clear commitment by the centre to provide supplemental funds to the states over time to replace the c.50–60 per cent of state revenue that these taxes had provided. The centre, it now seems clear, has reneged on its part of the deal, partly because of a severe economic slowdown in 2019–20, during which central payments to the states in lieu of the taxes lost to GST were substantially delayed, often for months. The BJP national government has also been willing to play favourites and implement revenue sharing in a way that benefits its own BJP-run states and hurts those that are ruled by the opposition. The finance minister of Kerala, an opposition state and one of the worst affected by the GST shortfalls, has termed this 'a Centre-engineered crisis in states' finances'.[41] In the fall of 2020, during a COVID-19 crisis and ill-timed lockdown that had shrunk the economy by 24 per cent, the BJP strong-armed its own state governments and allies to take out US$14 billion in new loans to cover the state shortfalls, but opposition state governments were resisting these loans on the grounds that the centre had reneged from its original deal and that their own borrowing power was limited. All this means that the states have fewer patronage resources to spend on local programmes—whether clientelist or programmatic—compared to the centre.

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[41] 'Five Non-BJP States Red Flag GST Dues'. *Economic Times*, 21 November 2019. https://economictimes.indiatimes.com/news/economy/finance/five-non-bjp-states-red-flag-gst-dues/articleshow/72152045.cms

3 Conclusion

Improved technology is far from being an instant fix for clientelism. Muralidharan et al. (2020) have shown that new biometric checks or technical innovations, on their own, are not usually capable of counteracting the many other factors leading to inefficiencies in last-mile delivery. Bardhan and Mookherjee (2018) cite an example from Southern Italy, where new technologies were used to strengthen clientelism, as party workers asked voters to provide cell phone photos of their filled-out ballots.

New computer, phone, and big data technologies do nonetheless reduce the incentives for clientelism in the delivery of social programmes in several important ways. First, these technologies make individual programme recipients and voters legible and reachable to upper-level party officials—and politically persuadable by them—as never before. Second, these technologies allow for much better monitoring and efficiencies in the supply of goods, such as subsidized food, housing, fuel, and agricultural inputs, <u>if</u> the party in power wants those programmes to be run more efficiently. Third, these technologies also allow for much better internal party monitoring of party workers and local brokers—whose social media posts and other activities can now be tracked in real time—ensuring that they are more likely to promote party goals and messages rather than their own. The combination of these factors in India, I have argued, increases the incentives for programmatic delivery in India in several ways, allowing upper-level politicians and parties to make their major welfare schemes more effective, and then reap a larger share of the political benefit when they are effective by communicating directly with voters. Politicians respond to these incentives, not surprisingly, by investing more money in the schemes themselves, supporting technological efforts to improve their efficiency, and increasing campaign expenditures to advertise these improvements and link them to party leaders at the expense of local brokers who used to monopolize these local party-voter linkages.

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