The reclaimed agricultural territory of the province of Ferrara, between the city (top left) and the Adriatic Sea.

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MAIN SECTION

Critical Notes on Mapping the Mobility of Agricultural Workers in the Province of Ferrara: the (Ethical) Importance of Opacity.[1]

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ABSTRACT

This article presents an on-going research project developed by the Department of Architecture of the University of Ferrara and AMI Ferrara regarding home-work mobility patterns in local agro-industrial production. By combining quantitative and qualitative research tools (i.e. literature review, surveys, interviews, GIS-mapping), this research originally aimed to research habits, needs, and propensity to change of agricultural workers in the area in relation to home-work mobility. The investigation therefore necessarily has to confront "caporalato". Bearing in mind existing power relations and the inherent opacity of dynamics in agricultural work, we highlight the difficulties encountered by the mapping campaign, as well as the dangers of its instrumentalization when addressing such work relations. By emphasizing the tendency of agricultural day-labourers to defy localization, we aim at departing from this lack (or absence) of information to suggest the relevance of a critical approach to mapping in contemporary racial capitalism. The paper finally proposes substantial theoretical frameworks, extensive field research and investigative campaigns on-the-ground in contrast to the strictly vertical, top-down and technocratic approach of traditional mapping, in order to answer to mobility habits and needs of agricultural workers.

Introduction

This paper sets out to discuss mapping agro-industrial workers' mobility patterns in the north-eastern Italian province of Ferrara. Mobility in agricultural labour is, in fact, the object of an on-going research at the Department of Architecture of the Ferrara University together with AMI Ferrara, the local Agency for public transport and mobility-related facilities, aimed at providing alternative forms of transport to those arranged through "*caporalato*": a practice whereby the recruitment and payment of day-laborers - in this case in agriculture - is subcontracted to a gangmaster, or, in Italian, a *caporale*.

However rightful in its aspirations, charting the mobility of agricultural workers raises ethical questions concerning the operativity of the practice of mapping itself and highlights the fact that, in capitalist modes of production, alternative forms of transport alone arguably will not be able to overcome *caporalato*. On the contrary, this would require a multi-level, comprehensive political and economic adjustment. In this sense, we will posit an alternative form of mapping which departs from such a critical stance, and calls for substantial theoretical frameworks, extensive field work and investigative campaigns on-the-ground that counter the predominantly vertical, top-down and technocratic approach of traditional mapping.

Mobility is central to the organization of *caporalato* since workers are usually forced to pay for car-rides to and from work. This payment however stands for the multifarious ways in which such mobility arrangements entrench workers' exploitation in agricultural production, that is: a) by allowing *caporalato* to violently appropriate significant parts of workers' wages in exchange for transport (and other essential services), thereby indebting workers and reducing actual retributions, as well as contractual bargaining power; b) by pushing migrant day-labourers into relations of dependency *vis-à-vis* the mobility of *caporalato*, all the more so since this mediation intersects the spatial segregation produced by peripheral accommodations, one that cuts off migrant workers from essential services or support and also splinters political organization; c) by organising, often through physical and psychological coercion, a cheap and pressured labour force, in order to preserve labour productivity for producers and answer the demanding requests of large-scale retail distribution. More accurately, then, mobilities play a key role in (re)producing *caporalato* itself, as well as workers' exploitation in agro-industrial production.[2]

The project we will describe comprises qualitative research regarding the current situation of agricultural production in the country, lengthy institutional negotiation, interviews and questionnaires, field surveys and the

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2   Osservatorio Placido Rizzotto - FLAI-CGIL, VI Rapporto Agromafie e Caporalato (Roma: Futura Editrice, 2022).

design of potential new mobility services (through changes to existing lines of public transport, the implementation of new, tailored services, or the activation of private contractors). One of its main prerequisites is being able to *map* the specificities of home-work rural mobility across Ferrara's vast landscape of agricultural production. However, mapping, in the initial phase of this project - that which, for the most part, will be described in this contribution - has strayed from a properly cartographic dimension and rather comprised a set of actions which together constitute the preconditions of cartographic work itself, namely, examining inherently opaque information, as well as navigating private and institutional power relations at work in the process of gathering data. In other words, the aim is to highlight how the constitutive opacity of agricultural work, and the ethico-political implications arising from this condition, mean that such a project of mapping is not without its limits and contradictions. We thus intend opacity, not as a synonym for illegality, but, quite literally, as a quality proper to that which is difficult to understand or locate, and, thus, to map.[3]

Yet, the wager of what follows will be that these difficulties do not, or should not, constitute an impossibility that can be circumvented via a refinement of technological means, or through the insistent proposal of new questionnaires, but are actually a further reason to address them by suggesting alternatives to current forms of mobility and, in broader terms, production. In this sense, a critical reflection on mapping in relation to this research cannot but expose the point at which mapping comes up against a form of unpredictability that cannot be overcome by traditional mapping itself, but requires strengthening alliances with more qualitative, on-the-ground approaches.

We will firstly contextualize our research project within agricultural production in Italy, highlighting the structural issue of, as well as the State's current disposition and action plan toward workers' exploitation and *caporalato*. Secondly, we will present our ongoing research project concerning mobility in the Eastern section of Ferrara's province and, thus, detail the process, results and limitations of such a work, specifically with regard to mapping. Finally, we will try to argue that the unsurmountable gaps in and resistance to the process of mapping in this project might be understood as information in themselves, yet a sensitive one which must be critically addressed.

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3   In this sense, we will not engage with the ontological argument regarding opacity that is famously associated with French-Martiniquan poet and philosopher Édouard Glissant; see, in particular, Poetics of Relation (Ann Arbor: University of Michigan Press, 1997). This however does not mean we do not acknowledge the fertility of the notion of opacity, and of other concepts developed by Glissant, to the fields of geography - Heidi Bojsen, Géographies Esthétiques de L'imaginaire Postcolonial (Paris: Editions l'Harmattan, 2011) - urban studies - Abdoumaliq Simone, Improvised Lives. Rhythms of Endurance in an Urban South (Cambridge: Polity, 2018) - or urbanism - Garth Myers Rethinking Urbanism. Lessons from Postcolonialism and the Global South (Bristol: Bristol University Press, 2020). On opacity as a lens to study the intersections between urbanisms and agricultural work in Southern Italy, see Camilla Rondot, Abitare l'Opacità (Siracusa: LetteraVentidue, 2022).

Agri-Food Production, Exploitation and Rural Mobilities in Ferrara's Province

The mediatic attention given to violent and tragic episodes during work, in particular to Satnam Singh's gruesome death in the Agro-Pontino on June 19, have so far made 2024 a year of political fermentation around the issues of *caporalato* and workers' exploitation in the agri-food industrial complex. Grisly injuries and deaths in connection to agriculture have made the exploitation of predominantly migrant day-laborers surface intermittently in the media at least since the 1980s.[4] Once again, recent episodes have brought under the spotlight the insistence of a "submerged" feature in Italian agricultural production that, with variations, has actually characterized Italy since its post-unitary period,[5-6] if not earlier.[7] Within the scope of the Next Generation EU-funded National Recovery and Resilience Plan (PNRR), one of the stated goals of current political initiatives by the Italian state in this context has been that of overcoming exploitation in agricultural work, along with migrant ghettos and encampments that revolve around agri-food production and maintain relationships with criminal networks. So far, this strategy has amounted to little change. On the other hand, the rhetorical power and spectacularization implicit to its narrative fail to recognize exploitation as a structural, deep-rooted characteristic of agricultural work in capitalist modes of production.

This aspect of agro-industrial production in Italy speaks volumes about the (dis)continuities in the project of national unification, as well as its contemporary ramifications: from land reclamation and rural mobilities[8] at the hands of foreign investors or the Piedmontese government in the late nineteenth century, through Fascist and post-WWII mass emigration, urbanization and developmental policies, to the current intersections between the carceral geographies of migration to the European Union, global commodity chains and racialized labour. In this sense, Satnam Singh's death must be considered as part of a long history of violence and struggles associated with agricultural production in Italy.

In fact, as geographer Timothy Raeymakers makes clear in his recent book "The Natural Border", the bordering regime which permits the exploitation of agri-food workers today in the peninsula is an ingrained character of the Mediterranean agrarian mode of production, insofar as it prolongs the

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4   Enrico Pugliese, L'Italia tra Migrazioni Internazionali e Migrazioni Interne (Bologna: il Mulino, 2002).

5   Irene Peano, "Spatiotemporal Stratifications: Engaging Containment and Resistance in Italian Agrifood Districts," Public Culture 34, no.3 (2022): 385-392; Pino Arlacchi, La Mafia Imprenditrice. Dalla Calabria al centro dell'inferno (Milan: Il Saggiatore, 2007).

6   Pino Arlacchi, La Mafia Imprenditrice. Dalla Calabria al centro dell'inferno (Milan: Il Saggiatore, 2007).

7   Timothy Raeymakers, The Natural Border (Ithaca and London: Cornell University Press, 2024).

8   Micheal Bell and Giorgio Osti, "Mobilities and Ruralities: An Introduction," Sociologia Ruralis 50, no. 3 (2010): 199-204.

geographies of racial and economic differentiation produced by the slave trade in the Mediterranean which contributed to the shift from a feudal society to an incipient form of capitalism. Raeymakers calls this historical process of racial division "natural racialization", to account for the ways in which multiple racisms naturalize certain groups into permanent forms of non-belonging within liberal capitalist societies. In this context, EU-funded state politics, such as that of "overcoming" rural labour encampments in Italy, are ambiguous *vis-à-vis* the contemporary agri-food industrial complex, and serve a two-fold (and two-way) purpose: through a selective process of inclusion/exclusion,[9] the State discharges elementary social reproduction onto the workers themselves but seizes on it by sustaining illegal forms of intermediation and employment in agricultural production. In other words, while condemned, *caporalato* and worker's exploitation are functional to the State's capitalist accumulation. We might then actually refer to a form of "*caporalato* capitalism," or:

> "a mode of production and exploitation that thrives on the historical relation between labour, capital and public authority in the domain of industrialized agriculture, and which continues to reproduce migrant labour as an adversely incorporated force that produces wealth."[10]

Compared to a slightly higher rate (40%) in the South, similar forms of labour exploitation are also significantly present in Central and Northern regions of Italy, where irregular work constitutes 20 to 30% of total.[11] Rather than a matter of "rotten apples," these phenomena permeate agricultural production at its core, thereby problematizing the racist and urban-centric view that *caporalato* and workers' exploitation are exclusively rural and backward dynamics connected to the mafia (*viz.*, Southern), or accidental events.

Although the area has not been the object of research in relation to agricultural exploitation, one of such territories in the North of Italy indicated in FLAI-CGIL's Report is the province of Ferrara, that is, the focus of our research project. Such a research deficit is all the more noticeable given that the largest land-reclamation projects in the peninsula fall under the provinces of Ferrara and Rovigo. Today this part of the Po Valley (*Pianura Padana*) is in fact home to some of the largest agricultural production facilities in Italy. However, the Eastern section of Ferrara's province is also one of the very few non-mountainous areas in Italy among the many "Aree Interne"(*internal areas*) defined by the Strategia Nazionale Aree Interne (2012-2020).[12] It is, in fact, characterized by low population density, low

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9   Sandro Mezzadra and Brett Neilson, Border as Method. Or the Multiplication of Labor (London and Durham: Duke University Press, 2013).

10   Domenico Perrotta and Timothy Raeymaekers, "Caporalato Capitalism. Labour Brokerage and Agrarian Change in a Mediterranean Society," The Journal of Peasant Studies 50, no. 5 (2022): 3.

11   Osservatorio Placido Rizzotto-FLAI CGIL, VI Rapporto Agromafie e Caporalato, 25-26.

12   For further information, please see: https://www.camera.it/temiap/documentazione/temi/pdf/1375588.pdf?_1702652730824

birth rates and an aging population, high rates of land abandonment and an overall deficiency of public services, including mobility, which contribute to a generalized lack which affects not only seasonal migrant workers, but the local population as a whole.[13] *Caporalato*, in particular, is reinforced by the specificities of this territory: such a spatial segregation, the lack of mobility services and infrastructure, in fact, allow *caporali* to hold a monopoly on mid- and long-distance home-work mobility and thus, as highlighted above, also on other aspects of the everyday life of workers.

FIG. 1   The reclaimed agricultural territory of the province of Ferrara, between the city (top left) and the Adriatic Sea.

Territorial deprivation, exploitation and rural mobilities in the province of Ferrara have been documented since the end of the post-unitary period. Land reclamation and the late (and relatively contained) industrialization brought about a substantial transformation of social relations and modes of production which, until then, were for the most part predicated on cattle agreements (a kind of customary salaried relationship) and large masses of farm-laborers. As described by the social historian Michele Nani, land newly colonized as a result of vast engineering projects created large concentrations of land ownership, as well as a mobile rural proletariat that merged into the previous trajectories of labour mobility.[14] *Caporali*, initially political or religious mediators acting between landowners and the many agricultural workers (*boari, braccianti, garzoni*, depending on their skills, mobility and status), were crucial in this context. The need for non-local workers was then a result of the transformations of agricultural enterprises, both in terms of size and structure. Faced with large class struggles and strikes at the turn

13   Elisa Vitale Brovarone, Giancarlo Cotella and Luca Staricco, Rural Accessibility in European Regions (London: Routledge, 2022).

14   Michele Nani, "Uno sguardo rurale. Le migrazioni interne italiane viste dalle campagne ferraresi dell'Ottocento," Meridiana 75 (2012): 27-57.

of the 19th century, the *caporale* took on a conflictual role.[15]

The mediation by *caporali* is then not the result of an accidental convergence between the relatively small-size of farms (especially in the South), high numbers of non-European migrants and criminal activity - although the intensification or presence of each of these aspects is strictly connected to it - but a structural feature of agricultural production which today takes on new forms and relations, also within the organization of large and successful companies.[16] The agri-food industry ultimately makes racialized bodies pay the brunt of its low profits in the context of global supply chains.

While its intensity may not be comparable to other regions of Italy such as Foggia's Capitanata,[17] the Piana di Gioia Tauro[18] or the Piana del Sele,[19] *caporalato* and workers' exploitation in the province of Ferrara, especially in the area of Portomaggiore, have activated local institutions and led to punitive actions against gangmasters and illegal labour recruitment since 2018, as well as a large investigation into subcontracting and exploitation in 2017, following a fatal road accident.[20] In June 2024, going home after their shift at a local plant nursery, two Pakistani men died and five more were injured when an Opel Zafira crashed into a canal close to Portomaggiore, just a couple of days before Satnam Singh's death.[21]

Fatal episodes in the Eastern province of Ferrara thus paint a stark picture of the exploitation of day-labourers. The *Rete Lavoro Agricolo di Qualità*(Quality Agricultural Work Network)[22] has been recently created precisely to mobilize a set of actions, among which are interventions in terms of mobility, that is, the object of our specific research project.

Yet, as put by Mezzadra and Neilson: "[t)he control of labour mobility is also one of the key sites where the expanding frontiers of capital continue to intertwine with political and legal borders".[23] Labour exploitation

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15   Michele Nani, "Fattori, caporali e capisquadra. Note su mediatori e «mercato» del lavoro agricolo nel Ferrarese dell'Ottocento," Mélanges de l'École française de Rome - Italie et Méditerranée modernes et contemporaines 129, no.1 (2017).

16   On larger companies producing Made in Italy products, see the detailed acount of prosecco production in Osservatorio Placido Rizzotto-FLAI CGIL, VI Rapporto Agromafie e Caporalato, 211-225.

17   Alessandro Leogrande, Uomini e caporali. Viaggio tra i nuovi schiavi nelle campagne del Sud (Milan: Mondadori, 2008).

18   Irene Peano, "Within and Against Racial Segregation: Notes from Italy's Encampment Archipelago," Lateral: Journal of the Cultural Studies Association 10, no. 2 (2021).

19   Gennaro Avallone, Sfruttamento e Resistenze (Verona: Ombre Corte, 2017).

20   Altro Diritto-FLAI CGIL. 2024. Inchieste in corso di analisi al 2023. Available at: https://www.adir.unifi.it/laboratorio/tabella.htm (last accessed 25th September 2024).

21   The fact that one of the major police operations against workers' exploitation and illicit mediation in the province of Ferrara in 2023 was called "Zafira" already points to the central role played by mobility in the organization of caporalato.

22   The "Rete Lavoro Agricolo di Qualità" is a protocol which should coordinate a common effort among institutions and private companies to prevent illegal work and caporalato in agricultural production so as to support agricultural productivity and Made in Italy products. Ferrara's was established in 2023.

23   Mezzadra and Neilson, Border as Method, 93.

in Italian agro-industrial production, in fact, pivots around mobility, as part of today's "mobility regime"[24] of migration. First, at a large international scale, by fuelling the mechanism of inclusion/exclusion at the border(s) of the EU: long-distance mobilities in which spaces, devices and logistics involved in cross-border movement and reception become the site of exploitation, all the while incorporating cheap labour force; second, at a more localized scale, by replenishing the labour needs of territorial production and dumping the costs of essential services, such as transport, and labour reproduction onto migrant workers;[25] but also, third and last, at the national scale, by establishing forms of internal "hyper-mobility"[26] aimed at disciplining migrant populations and distributing them across the geographic cores of Italian agricultural production. In this sense, mobility is a multi-scalar lens to index the structural exploitation of migrant populations in relation to agricultural production.

Any project that attempts to tackle *caporalato* and labour exploitation through mobility must therefore reckon with the fact mobility does not coincide with the mere transport of people, but is an essential component of the exploitation that is constitutive of capitalist modes of production.

The Project: Mapping the Home-Work Mobility of Agricultural Workers

Bearing in mind the limits and contradictions of the agri-food industry in contemporary capitalism outlined above, this paper will try to engage with one among the spectrum of "solutions" that have been suggested - especially, at the level of institutional policies - to counter the injustices related to agricultural production. We can subdivide these actions into two kinds: a) legal, potentially including changes to residence and citizenship permits, labour policies and healthcare services, but so far limited to actions of a punitive nature, and b) infrastructural, that is, supposedly ameliorative or preventive. The latter kind, which this article will *critically* engage with, advocates for both suitable accommodation and adequate forms of transport to bypass workers' exploitation, as well as the unlawful intermediation of *caporali*.

In this section, we will elucidate the possibility and upsides of such a project of bypassing forms of illicit mobility, while remaining wary of its possible instrumentalization and shortcomings. This critical stance toward the effectiveness of infrastructural actions is not to argue that such interventions might not improve contingent conditions for workers in the everyday,

24   Mimi Sheller, Mobility Justice. The Politics of Movement in an Age of Extremes (Verso Books: London and New York, 2018).

25   Elena Tarsi, "Quando la mobilità è il parametro dello sfruttamento. Migrazione e agricoltura," Contesti. Città Territori Progetti, 136-151 (2019).

26   Martina Tazzioli, "Governing migrant mobility through mobility: Containment and dispersal at the internal frontiers of Europe," Environment and Planning C: Politics and Space 38, no.1: 3-19 (2020).

but to call for a careful consideration of their capacity to bring real change to the very extractive structure of agricultural work within contemporary racial capitalism.

In the context of current political auspices, and in coordination with AMI, in February 2024 we set out to negotiate and design a local service of transport that could initially facilitate home-work mobility for agricultural labourers working in the Easternmost sections of the Ferrara province, and then, in a second moment, potentially counter the current lack of access to and presence of mobility services which characterizes the predominantly-rural and deprived population of the area. In order to do so, it was necessary to: i) identify and involve private agri-food companies in the region that might be interested in co-funding, or even just formally joining, this project; ii) map the habits, needs and inclination towards change in the mobility patterns of workers (starting from an origin/destination matrix), while answering the requests of such companies; iii) negotiate with AMI possible strategies for implementation and funding to submit to local, regional and, to a lesser extent, national administrations.

The preventive action highlighted above - housing and transport - evidently requires some form of mapping, but faces from its start considerable obstacles: where do the high-number of migrant, seasonal and, potentially, illegal(ized) workers live and work? What are their means of transport? What are their timetables and needs? How can institutions - granted political conditions push them into doing so - respond to this submerged, illegal(ized) or illicit dimension of agri-food production, and, thus, how can mapping produce relevant information, since most of the potential data in itself escapes mapping's definitional hold? One might in fact conclude that while their intention is supposedly that of providing adequate homes and forms of transportation, State institutions have little information regarding existing arrangements in terms of work, inhabitation and mobility, in light of the inherently elusive, mobile and abject forms these have in agri-food production. Moreover, while mapping's shortcomings are thus mostly to do with workers' very conditions of accommodation and mobility, its effectiveness is also obstructed by often-conflictual power relations or, indeed, *power as a relation*.

To clarify these aspects, we will briefly consider an example from our mapping campaign, bearing in mind cartography plays a secondary role in this exposition. Based on the Italian regulatory framework regarding the mapping and monitoring of home-work mobility by employees of companies, organizations and institutions,[27] we devised, in collaboration with AMI, two different questionnaires. The first was submitted to HR managers and aimed at collecting quantitative information regarding

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27   "Home-Work Commute Plans" - PSCL(Interministerial Decree No. 179, May 12, 2021, art. 3, paragraph 5. Available online: https://www.gazzettaufficiale.it/eli/id/2021/05/26/21A03111/sg is a law aimed primarily at the reduction of the environmental impact caused by private car use in regular home-to-work commutes.
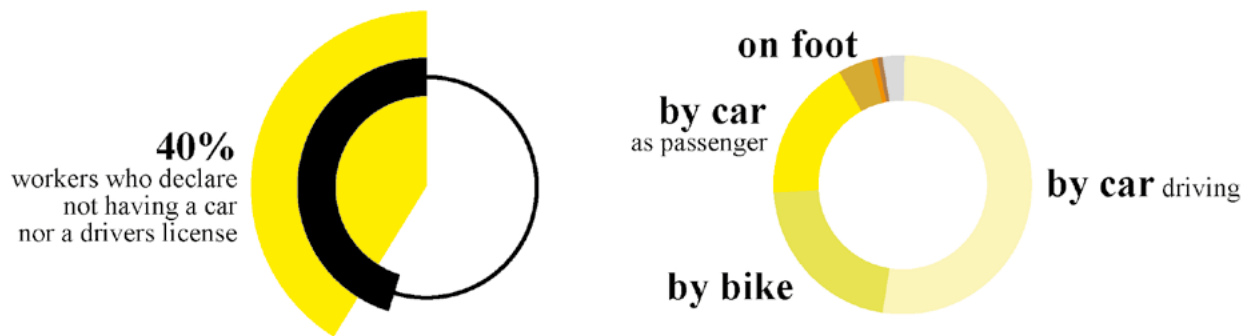
the internal organization, the kind services offered - particularly in support of employee mobility - and the arrangement of work shifts and production cycles in agricultural businesses, while the second was directed at workers. The latter was distributed directly by such companies in Italian, English, and Urdu, with the possibility to either fill it in online, using the businesses' intranet platforms, or through printed forms handed out at the end of work shifts.

This already proved to be more challenging than expected, either because the distribution was not immediate and effective, or due to resistance and refusal by workers to fill in the form itself. The first difficulty stems from the fact of having to negotiate with economic operators the content, anonymity and mode of distribution of the survey - for instance, while anonymous, one of the main companies involved in the project asked workers to sign their survey; or because the questionnaire had to be printed out, possibly due to workers' lack of access to the online form via smartphones. The second difficulty too stems from power relations within the working environment and concerns the extent to which workers ignored, resisted or refused to fill in the survey, at least the first time the survey was issued. The reasons are multiple and cannot be easily categorized, nor do we know, of course, how frequently workers to some extent declined to participate, but we can nevertheless suggest a convergence of several likely factors: our faults in the distribution and content of the questionnaires; high-incidence of asymmetrical contractual relations within the working environment, which, above all, pose a threat to workers with irregular(ized) jobs and juridical status; significant language barriers; inability to read and/or write.

We might further discuss these aspects by briefly focusing on some of the data we were able to collect for one specific agri-food business. The semi-structured questionnaire consisted of 19 questions (15 of which were multiple choice and 4 open-ended), divided into four sections: general information such as home address, gender, age; work shifts; mobility habits regarding home-work mobility; mobility needs and propensity for change. Our survey was answered by 546 workers - a large number, considering the company employs about 600 people. In terms of mobility,
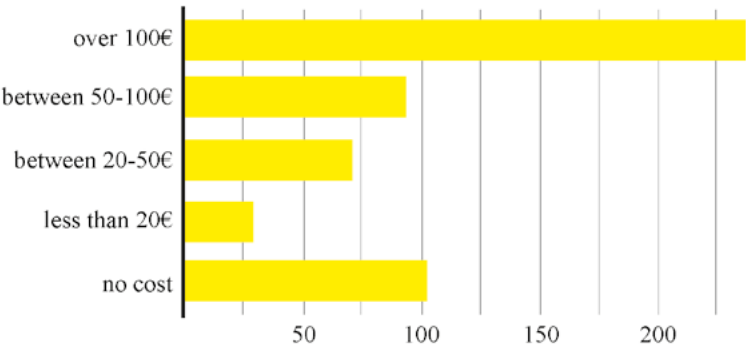
FIG. 3   Answers to question 14: "On average, how much do you spend on transport to and from work per month?". Graphic elaboration by the Authors, 2024.
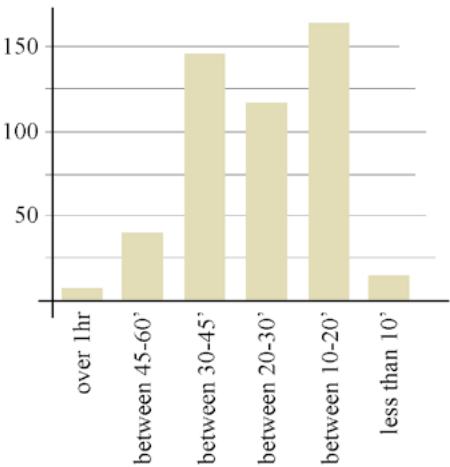

FIG. 4   Answers to question 13: "On average, how long does it take you to get to work?". Graphic elaboration by the Authors, 2024.

323 declared that they owned a car and 221 did not; 288 in fact drive to work, 96 are passengers in someone else's car, and a considerable share of the remaining (117) cycle to work.

Based on our results, 234 of the total 546 employees that answered the survey spend more than 100 euros a month to go to work: a significant amount considered the modest salaries of agricultural workers.[28] We might add to this that 98 people take between 30 and 45 minutes to get to work, 86 between 20 and 30, and 125 between 10 and 20.

Finally, the transfer of this data onto GIS-software shows that Portomaggiore, Ostellato and San Giovanni di Ostellato are the main centers of origin for movements to and from work(Fig. 5) although the actual-route map(Fig. 6) reveals just how far workers actually come in every day - Monselice to the North and Bologna to the South, meaning, a labour pool with a radius of approximately 90 kilometres, spanning across several provinces and two regions.

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28   Osservatorio Placido Rizzotto-FLAI CGIL, VI Rapporto Agromafie e Caporalato, 17-29.
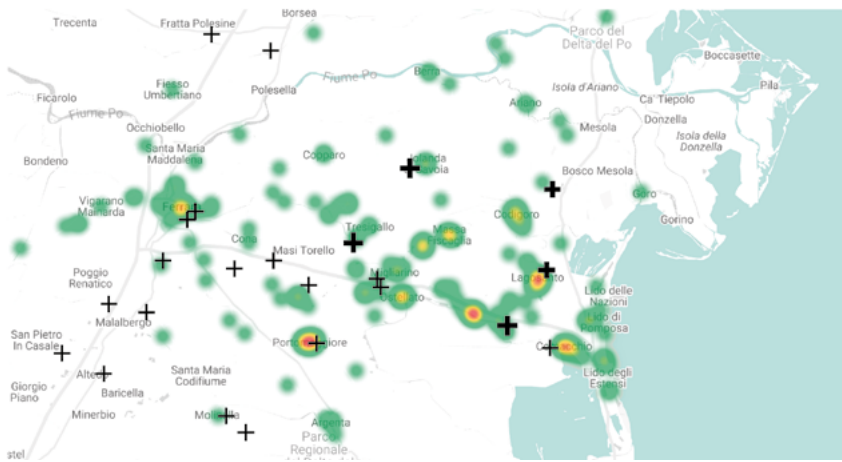
FIG. 5   Heat map showing the origins of workers' daily mobility (i.e. declared place of residence) and the location of the main agri-food companies in the area, as mapped by the Osservatorio Placido Rizzotto. Graphic elaboration by the Authors, based on web-GIS visualization from questionnaire responses.

FIG. 6   Route map of daily mobility and the location of the main agri-food companies in the area, as mapped by the Osservatorio Placido Rizzotto. Graphic elaboration by the Authors, based on web-GIS visualization from questionnaire responses.

Taken out of context, part of this data is a fair reflection of the Italian mobility landscape,[29] since more than 52% of the population sample drives into work, spending quite some time of their day (between 60 and 90 minutes) at the wheel. What is surprising, however, is the fact that 21% of the company's workers cycle to work. Unexpected not only in terms of numbers, but also because roads in the area do not have cycling lanes: cycling, in fact, takes place, in most cases, along freeways, next to fast traffic - a dangerous aspect pointed out by many workers in the survey. This high incidence of cycling is due to the fact that most of the workers who cycle live in San Giovanni di Ostellato, a small municipality at about 5 kilometres from the company, most likely in the same residential unit, as confirmed by interviews: several answers to the survey in fact described the same point of origin, if not the same address. Cycling then is not due to an "ethical" or virtuous choice, of course - although it might arguably be more pleasant or convenient than other means of transport for some

29   ISFORT, 20° Rapporto sulla mobilità degli italiani. Il passato, il presente, il futuro. Report, 27 November, 2023. Available at: https://www.isfort.it/wp-content/uploads/2023/12/RapportoMobilita2023_Def.pdf (last accessed 25th September 2024).

- but to social and spatial arrangements produced by the need of cheap, unskilled labour in agricultural work. The risk of analyzing data in purely quantitative terms overlooks the specificities of agricultural production, along with its social and geographical characteristics.

Within the pool of 546 questionnaires that were answered, we can focus on 151 surveys that were printed and filled in by hand by workers in order to further problematize our results and pose relevant questions regarding the efficacy and implications of mapping in such a context. These answers in fact allow us to gather information regarding the habits and needs of mobility of predominantly non-Western European day-laborers in the region, in particular, Pakistani men. In fact, 56 people out of the 151 cycle to work, that is, almost half the total share of those who answered the survey for the whole company; 42 travel as passengers in private cars - again, almost half of all answers; 41 drive into work, that is, a mere 12% of the total who own a car (323), although the sample population (151) is over a fourth of the total (546).

Considering these 151 surveys filled in by hand, we can highlight several issues that cannot be taken at face value, that is, as a mere number to be spatialized on a map: the large-number of bike riders is not a form of "independence" or "green" mobility;[30] among the driving 12% of the 151 who answered the survey by hand some are likely to be the drivers of fellow workers (for instance, drivers of the infamous fleet of Opel Zafira); the fact of being forced to sign the survey (at times, with name and surname) arguably means its answers are given under some form of duress; some of the data is apparently incoherent, or rather, poses further questions regarding the organization of mobility, for example: some workers apparently drive but do not have a driving license, or do not have a car but drive; finally, many of these 151 answers did not give or gave only partial answers to questions regarding satisfaction with their current mobility: some attest to great frustration, but others express a disarming satisfaction with working conditions - in this sense, many described the fact of not being satisfied, but, surprisingly, also not being willing to change, under any circumstance, their current arrangement in terms of mobility. Finally, the overall opacity of work, accommodation and mobility arrangements, as well as the ambiguity of working through indicators of satisfaction exposes a constitutively aleatory behaviour that does not reflect the objective structures which dictate the conditions of agricultural work.

With this brief description of results, we do not mean to downplay what we find are the project's rightful aspirations, but to argue that it is evidently difficult to trace a clear profile of the potential users of alternative means of transport which could bypass *caporalato* and thus reach, in this

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30   This number is even more surprising considering how workers who bike to work are systematically subjected to physical violence in other parts of Italy. See: Tarsi, "Quando la mobilità è il parametro dello sfruttamento", 136.

specific research, an adequate level of information that can be turned into comprehensive mapping. The habits and needs of mobility are not easily understood, in fact, if not in the context of the hardship and evasive nature of work in agricultural production: there is a constitutive opacity which obstructs the research that complements and leads to cartographic representation, which therefore cannot be grasped through canonical, straightforward forms of mapping. Habits, needs and satisfaction of workers are hard to map when work, and mobility, are reduced to exploitation. This opacity, we might say, corresponds to the "submerged" characteristic of labour relations; to the extractive and exploitative dimension which is at the core of agricultural work in capitalist modes of production.

However, the claim of this contribution is that this lack of information, indifference, or resistance and refusal to answer might precisely be one of the results of mapping, more so given the object of research. This gap in information actually reveals the exploitative dimension, as well as plasticity of agricultural work and production. Our goal would thus be to address such an absence - what is supposedly an impossibility to complete mapping, if not at the risk of exerting further duress over that which or those who are being mapped - and turn it into a possibility to discuss and *critically* map an otherwise unmappable topic. Working around this gap not with the goal of filling it in, but in order to suggest the (ethical) importance of accepting negative results while mapping the arrangements of agricultural work. In this sense, mapping could become a form of critique - something we will try to outline in the next section by further borrowing on some aspects of our project and on relevant literature on critical mapping.

The Contradictions of Visualizing Agricultural Work Relations

British landscape architect James Corner has famously insisted on the emancipatory potential of mapping against its strictly coercive, governmental use. In his words: "[...] on the contrary, mapping is perhaps the most formative and creative act of any design process, firstly disclosing and then staging the conditions for the emergence of new realities".[31] Yet, looking at mapping in practice, in the context of our project, how far can it take us in terms of liberation? Indeed, mapping can be an "[...] extremely shrewd and tactical enterprise, a practice of relational reasoning that intelligently unfolds new realities out of existing constraints, quantities, facts and conditions",[32] but it is highly relevant that we first insist on analyzing such an existing context, beyond its apparent quantitative givenness.

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31   James Corner, "The Agency of Mapping: Speculation, Critique and Invention," in Mappings, ed. Denis E. Cosgrove (London: Reaktion Books, 1999), 91.

32   ibid., 100.

By definition, as architect and planner Laura Kurgan succinctly puts it, "Maps locate".[33] In other words, maps are never neutral and never *just* a map, but, from their very beginning, are caught up in a web of governmental and military technologies and apparatuses: a product and production of power. Mapping is not simply a form of representation but the definition of objective outcomes: "Maps construct space - physical, propositional, discursive, political, archival, and memorial spaces.".[34] Taking into account today's ubiquitous, vertical and three-dimensional processes of accurate and totalizing visualization, representation and localization, maps tend to gloss over, or even disguise, the contradictions, unevenness and violence of social relations.[35]

In this regard, we might bring up a recent example of mapping in the context of institutional action *vis-à-vis* agricultural work relations in Ferrara's province. Portomaggiore's local council recently initiated a campaign to detect, via software and on-the-ground "technical" assessments, the presence of overcrowded accommodation in town.[36] This online platform allows the local administration and its police force to locate the main "hubs" in which seasonal workers, mostly from Pakistan, find temporary accommodation. The preventive measures regarding housing solutions, in this action, blur with the strictly punitive nature of policing, troubling and breaking though the division between private and public spheres. Such a form of mapping, one which arguably leads to detection, eviction and possibly detention, is to be understood within the underlying presuppositions of institutional political action and its intersections with the PNRR. In the fight against *caporalato*, there is a high risk - and evidence - that maps legitimize the encroachment by disciplinary and biopolitical mechanisms into the lives of racialized labour populations, thereby making such a form of control an end in itself rather than a mere externality of current political measures; all the more so given the current global political conjuncture between EU migration management, war and extreme climatic events. The initiative in Portomaggiore further stresses the need to recognize agricultural production beyond purely economic metrics, as it enters into a highly conflictual and politicized domain. Far from coinciding with the technical service of cartography, mapping becomes a contested multi-faceted and multi-media tool adjusted to economic output and policing measures.

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33   Laura Kurgan, Close Up at a Distance. Mapping, Technology, and Politics (New York: Zone Books, 2013), 16.

34   ibid., 14.

35   Alberto Toscano and Jeff Kinkle, Cartographies of the absolute (Winchester and Washington: Zero Books, 2008).

36   "Alloggi sovraffollati, c'è la mappa. Un software trova il caporalato", Il Resto del Carlino, September 9th, 2024. Available online: https://www.ilrestodelcarlino.it/ferrara/cronaca/alloggi-sovraffollati-ce-la-mappa-un-software-trova-il-caporalato-dd9a40a7?live (last accessed 25th September 2024).

Following Marxian critique, we maintain this is because mapping agricultural work entails, *de facto*, an attempt to *visualize* social relations, that is, to represent capital. When it comes to mobility, indeed mapping becomes a tool for processes of accumulation and valorization to continue as they are: "be it through the form of the city or the movement of commodities and workers' bodies,(mapping mobility) is fundamental to managing circulation," where circulation indicates the immaterial circulation process of capital, as much as the movement of "stuff," including people.[37]

Borrowing on Alberto Toscano and Jeff Kinkle's work on "cognitive mapping" as an aesthetic-political endeavour to visualize and situate class relations at the global scale - or, as the authors put it, the "absolute," that is, an infinite totality which defies representation and lacks a locatable centre, in other words, capital - one dare say that our project is asked to map, beyond the medium of maps alone, that which resists mapping.[38] Of course, Toscano and Kinkle's theoretical work gestures toward critical aspects and artistic practices that present few points of contact with our specific project - although the notion itself of "cognitive mapping" derives from a reappraisal of urbanist Kevin Lynch's famous work - yet its framework allows us to point to the fact that our mapping can be conceived as a possible attempt to visualize class, race and gender relations within a global capitalist economy, from the purview of the space of mobility. This critical insight finally allows us to broach a set of questions that have consequences for the practice of mapping, all the more so when confronted with the manifold relations between production, consumption and distribution in agricultural work. From this critical stance, in fact, we may ask (but not answer exhaustively): what are the objective effects of mapping agricultural work? What ethical concerns do these effects bring up and how to mediate the necessities of change with those of control?

To this end, we can return to the specificities of our project. Within the limitations of current political conditions, the mapping campaign produced two ways to implement an answer to the hardship of agricultural work in terms of transport. These two "solutions" were not intended to be distinct, but, in our view at least, part of a gradual process; a two-phase or two-fold plan toward improving "mobility justice," that is "an overarching concept for thinking about how power and inequality inform the governance and control of movement, shaping the patterns of unequal mobility and immobility in the circulation of people, resources, and information."[39]

Mapping the habits and needs of workers, as well as employers, in terms of mobility suggests systemic intervention on existing public transport routes. Yet, such a form of transport is left no room for manoeuvre due to

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37   Deborah Cowen, The Deadly Life of Logistics. Mapping violence in global trade (Minneapolis: Minnesota University Press, 2014), 100-102; 191.

38   Toscano and Kinkle, Cartographies.

39   Mimi Sheller, Mobility Justice. The Politics of Movement in an Age of Extremes, 38.

underfunding and current overstretching of its lines and drivers; it therefore cannot be reorganized. The project then can only propose either a privately funded line of transportation or an official car-pooling service via workers' access to a telematic application. In the first case, a private company would provide either a double or a single ride to and from work at specific times of day, depending according to work shifts. Due to its schedule (partial incompatibility of shift work with other activities), limited capacity of buses (compared to the high number of workers) and route (scattered territorial distribution of the population), the transport would neither benefit nor be accessible to local residents, nor to most workers throughout the rest of the day. The second option, car-pooling, on the other hand, would be cheaper, more flexible and, importantly for institutions, immediately at hand, providing a quick answer to the current political and mediatic attention given to *caporalato* and workers' exploitation in agriculture.

It is quite evident that both "solutions" will not change the structure of agricultural work; nor can they be considered adequate proposals in terms of mobility justice. In the first case, public transport may allow a reduced number of workers to circumvent *caporali*, but the service will not have an impact on exploitation, since no accessible form of transportation is provided for anything else *other than* work; in the second case, a legal form of carpooling is likely to merely reproduce the injustices of *caporalato* via its institutionalized form, also due to the fact that the organization or attendance of such an operation would be difficult to actually monitor. In other words, it is not enough to provide alternative forms of transport for workers if the goal is exiting the exploitative system of *caporalato*.

Critical Mapping:
The (Ethical) Importance of Opacity

Thus, our attempt to locate and actively contribute to the ameliorative, preventive actions put in place by State institutions comes, above all, with ethical concerns, as well as methodological and operative challenges put forward in the previous section. In this sense, our proposal for an alternative form of transport to bypass *caporalato* leaves in place, if not actually legalizes, exploitation. Although we do not know the actual spatial arrangement and social structures of day-labourers in the region, in fact, it is safe to say that we are trying to locate people who intentionally wish to avoid localization. And mapping is one of the main operations to implement such a project: one which leads workers to and from work, grounding its organization around the imperative of production, without providing transportation in other times of day, or for other users, such as the already-isolated residents of the Eastern sections of Ferrara's province.

The contradictions we have outlined regarding the possibilities of mapping in the context of the current political effort to contrast *caporalato* and

workers' exploitation in agricultural production, however, should not be seen as an invitation to withdraw from mapping. On the contrary, it wishes to call for a practice that accompanies mapping with careful analyses of the economic logics and social arrangements which subtend and derive from production itself. The recognition of exploitation as a structural and unsurmountable characteristic of agricultural work in capitalist modes of production, as well as of the reproduction of migrant, racialized cheap labour within contemporary mechanisms of differential inclusion/exclusion is not an ancillary aspect but the precondition for a form of mapping that does not further entrench inequalities - distancing us even more from an improvement in terms of mobility justice - and is not reduced to a purely technical operation. This opens up to an ethical concern always already at stake in mapping as a form of critique. In the words of critical GIS scholar, Matthew W. Wilson:

> "Abstaining seems radical, but it is a reaction to the ways in which even participatory mapping has enabled exploitation, as maps and local spatial knowledge become utilized in ways that exceed or even negate any simple emancipatory agenda. This should not be surprising as mapping is fundamentally capturing. But this should not cause us *not* to map. Instead we should recognize the stakes and the need for being strategic in our mapping work.(…) Studying, doing, and abstaining from mapping is to understand our technopositionality within these geometries. As mapmakers and allies in mapmaking, we can never be outside these configurations."[40]

The fact relations are caught up in the logics of accumulation and power does not mean we can simply withdraw from them but opens up to a space of critique as part of the practice of mapping, or *critical mapping*. We might therefore ask, neither solving such a contradiction nor seeking to evade it, whether we can accept the questionnaire's answers, in light of the fact that a number of them - arguably those given by the share of people whose habits and needs were, originally, the object of our research - were given under duress, and are, subsequently, incomplete and incoherent; or ask to what extent our project, undergirded by a purely technocratic approach, can actually be considered to be ameliorative. Is our project reduced to the technical service of cartography? Is it free from a consideration on ethics because of its socially-oriented intentions?

We can here only provide partial answers. Yet, tweaking Corner's call for emancipatory mapping and bearing in mind the incompleteness of our mapping campaign, we might argue that mapping mobility, which is in this context mapping capital: "is not a question of accuracy or resemblance, in which aesthetic form would be a mere instrument for knowledge, but constitutes a kind of force-field in which our conceptions of both

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40   Matthew W. Wilson, New Lines. Critical GIS and the Trouble of the Map (Minneapolis and London: University of Minnesota Press, 2017), 40-41.

modes of production and aesthetic regimes are put to the test."[41] It is in this sense, that mapping becomes critical, insofar as it tries to expose the limits and contradictions of mapping within capitalist modes of production and the current political conjuncture, not as a form of passivity or retreat from the practice of mapping, but as a way to question the operativity of such a practice itself. In the case of our specific project, we thus need substantial theoretical frameworks, extensive field work and investigative campaigns on-the-ground that parallel the vertical, top-down and technocratic approach of traditional mapping, in order to answer to the habits and needs of mobility of agricultural workers.

41   Toscano and Kinkle, Cartographies, 23

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