



Do informal networks become formalised over time? Analysing school networks and multi-academy trust membership in England using ego-centric analysis

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Abstract

Recent decades have seen a global shift in educational policy and practice towards various forms of ‘joining-up’, through partnerships and networks. These networks have differing aims but are broadly geared towards increasing quality and/or innovation in educational provision, although many prove messy and problematic. Policy makers in England have encouraged schools to collaborate, although parallel market pressures can also drive competition, leading to an argument that schools must engage in ‘coopetition’. More recently, policy has encouraged schools to form or join a multi-academy trust (MAT) and the government’s stated aim is that all 21,000 schools in England will be part of a MAT by 2030. A MAT is a formal legal entity with a board and Chief Executive which oversees multiple schools. The headline question we address is whether pre-existing partnerships between schools predict eventual membership of multi-academy trusts? We do this through an analysis of ego network and case study interview data collected from 20 schools across two local areas. We track these networks over a seven-year period, identifying which schools join which MATs. We find that schools do not form or join MATs with other local schools they have collaborated with in the past. We assess this somewhat counter-intuitive finding through the lens of socio-spatial theory, presenting a framework for assessing the interactions between place, scale and networks and considering the implications for policy, practice and research.

Keywords Ego networks · School partnerships · Middle tier · Multi academy trusts · Networks · Place · Scale · Socio-spatial theory

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Introduction

In a global review for the OECD, Révai (2020: 8) reports that ‘more and more countries have been investing in establishing networks in education as forms of organisation to facilitate change’. One explanation for the increased focus on networks in education is the set of shifts taking place in wider societies. For example, Castells (1996) argues that we are now living in a ‘network society’, resulting from transformations such as the spread of digital information and communications technologies together with wider developments, such as globalization, which are changing norms, expectations, cultural dynamics and the ways in which individuals and organizations connect to one another. These transformations directly affect education, meaning that contemporary leaders must deal with issues that are more complex than the issues their predecessors faced, arguably requiring more adaptive forms of leadership and change (Hannon & Peterson, 2020).

Inter-school partnerships, collaborations and networks have been promoted in education as mechanisms for sharing knowledge and expertise, improving pupil outcomes, addressing equity challenges, making schools more responsive to parental and community needs, and/or securing wider innovations (Hargreaves, 2012; Leithwood, 2019; Paniagua & Istance, 2018; Rincon-Gallardo & Fullan, 2016; Sartory et al., 2017; Suggett, 2014). Evidence that networks impact in the ways that their proponents claim is growing, but remains far from comprehensive (Armstrong et al., 2020; De Lima, 2010). What is clear is that networks are frequently messy and problematic, leading to frustration and tensions for network members and making leadership a key variable (Greany & Kamp, 2022; Kamp, 2013). Furthermore, while networking can bring benefits, networks can also have a ‘dark side’ (Bidart et al., 2020), for example if they reproduce unequal power relations, operate as exclusive clubs, lead to groupthink, and/or are motivated by risk, fear and suspicion (Cook et al., 2007; Ehren & Perryman, 2017; Hatcher, 2008). These issues lead Grimaldi (2011: 121) to argue that networks have been presented as ‘magical concepts’ promising ‘modernity, neutrality, pragmatism and positivity’, but that the reality is vastly more complex and uncertain.

This article contributes to our understanding of how inter-school networks evolve over time, helping to address gaps in the existing evidence base. In addition, our analysis through the lens of socio-spatial theory explores how networks interact with place and scale to reshape the dynamics of local schooling landscapes, making an important contribution to wider research, policy and practice. The headline question we address is whether pre-existing partnerships between schools in England predict eventual membership of multi-academy trusts (MATs). A MAT is a formal legal entity (a charitable company), with a board and Chief Executive, which oversees multiple schools. We also explore related issues, such as whether schools tend to collaborate with other schools that have similar or different characteristics. We do this through an analysis of ego network and case study interview data collected from 13 primary schools and 7 secondary schools across two local areas (urban and rural) in England. We track these schools and

networks over a seven-year period to identify which schools join MATs and to assess the implications for the pre-existing networks.

The article is structured as follows. First, we provide a brief overview of recent and continuing developments in the English school system, showing how inter-school networks have been promoted and developed in the context of wider structural reforms. Next, we set out our conceptual framework which draws on socio-spatial theories to consider intersections between place, scale and networks, focussing in particular on the factors that drive and influence network formation. We then set out our methodology, followed by our findings on how inter-school partnerships have developed in the context of MAT growth. Finally, we present a discussion of the findings, drawing out a number of implications: first, we show that pre-existing inter-organisational networks do not necessarily develop into formal structured groups over time; second, we argue that MATs are contributing to the balkanisation of local school systems in England—existing place-based school partnerships are broken up as different schools join different MATs; third, viewing these changes through the lens of socio-spatial theory we show how place, scale and networks interact in dynamic ways, leading to inherently complex ‘local learning landscapes’ (Greany et al., 2023) with important implications for educational coherence, quality and equity. We set out a conceptual framework, adapted from Jessop et al. (2008), to assess these interactions between place, scale and networks. Finally, the conclusion highlights the article’s main contributions and considers limitations.

School partnerships and the development of multi academy trusts

England’s school system is in the midst of fundamental structural changes, a process that we characterise in terms of fragmentation and reformation. The 1988 Education Reform Act (ERA) introduced major system features, including a national school inspection and accountability framework and parental choice of school, which have remained in place ever since. The ERA also ushered in Local Management of Schools (LMS—aka School Based Management or school autonomy), giving individual school governing bodies and head teachers devolved responsibility for budgets, staffing and other operational areas. Increased school autonomy involved a parallel reduction in the influence of England’s 152 local authorities (LAs—akin to school districts), although these locally elected bodies retained a strategic role in overseeing and funding most schools until the recent expansion of academies and MATs largely removed this (Greany, 2020).

The ERA reflected a New Public Management-inspired assumption that competition between autonomous schools would enhance quality and responsiveness (Hood, 1991). In the decade after the ERA reforms were introduced, research identified sharp competition and status hierarchies between schools, particularly at secondary level, as the new parental choice reforms became embedded (Gewirtz et al., 1995; Glatter et al., 1997). However, by the late 1990s, the negative impact of inter-school competition was becoming clear, with increased socio-economic stratification between schools and challenges in securing systemic improvement (West & Pennell, 2002). In response, the New Labour (i.e. centre left) governments in power

from 1997 to 2010 introduced a range of initiatives aimed at encouraging schools to collaborate, while still retaining the core ERA ‘high-autonomy-high-accountability’ framework (Greany & Waterhouse, 2016). One example was the Networked Learning Communities programme, from 2002 to 2006, which involved around 1,500 schools in 137 networks, geared towards improving pupil, teacher and organizational learning (Jackson & Temperley, 2006). By the end of New Labour’s period in power the focus of collaboration policy had shifted towards more structured partnerships between designated higher performing ‘system leader’ schools and individuals—such as National Leaders of Education (NLEs)—and schools judged to be under-performing and requiring turn-around support.

New Labour’s emphasis on collaboration in tandem with the ERA’s quasi-market features led to arguments that schools must engage in ‘co-opetition’ (Muijs & Rumyantseva, 2014). Nevertheless, it seems that New Labour’s investment in networks did facilitate a change in culture and practice, making inter-school collaboration a significant—if still problematic—feature of the system. For example, a survey in early 2010 indicated that around three quarters of head teachers were engaged in some form of school-to-school partnership working (Hill, 2011). Conservative-led (i.e. centre right) governments in power after 2010 built on New Labour’s approach, further increasing support for ‘system leadership’ and school-to-school collaboration in pursuit of what was called the ‘self-improving, school-led system’ agenda (Hargreaves, 2010, 2012).

Greany and Higham (2018) analysed the evolution of the network landscape after 2010, finding that formal and informal partnering had become more important to schools as a result of the loss of support from LAs coupled with the need to respond to significant policy and accountability changes, such as a new National Curriculum. Collaborative activity between schools took many forms, but the ‘local school cluster’ was the most common form of partnership, especially among primary schools. These local clusters ranged widely, but the strongest examples were long-standing, with formalised governance and involvement from staff at multiple levels in a range of improvement-focussed activities. Collaboration between secondary schools reflected higher levels of local competition, although this did not necessarily prevent them from co-operating locally, including in local clusters. The partnerships studied by Greany and Higham (2018) were continually evolving as a result of both internal dynamics and external opportunities and pressures. One common trajectory was for one or more higher performing school/s within an existing cluster to apply for a government designation—as a ‘system leader’—in order to access funding, increase sustainability, and/or enhance legitimacy and prestige. However, existing partnerships were changed as they adapted to these officially sanctioned models, for example where one school became the designated ‘system leader’ and thereby became ‘first among equals’ (Matthews & Berwick, 2013) within a previously flat partnership.

In addition to promoting inter-school partnerships and ‘system leadership’, Conservative governments in power since 2010 have also driven through radical reforms to school structures. The focus initially was on further increasing school-level autonomy and reducing the role of LAs in overseeing local school arrangements. The Government’s 2010 white paper (DfE, 2010) explained that its aim

was to “dismantle the apparatus of central control and bureaucratic compliance” (ibid, 66), so that teachers and schools should “feel highly trusted to do what they believe is right” (ibid, 18). This deregulating rationale was combined with the push, described above, for a ‘self-improving, school-led system’, in the hope that schools would collaborate with each other to ‘self-improve’. In practice, this was achieved by incentivising or forcing many of England’s 21,000 schools to become stand-alone academies. Academies (akin to charter schools in the US) are funded by national rather than local government, thus leading to a rapid reduction in the role and capacity of LAs to oversee local schools. However, the haphazard promotion of individual academies and the complexities involved in funding and overseeing thousands of academies from London led to systemic fragmentation and incoherence (Ball, 2011; Crawford et al., 2020; Greany, 2020; Richmond, 2019) and by 2016 the government announced that it would require all schools to join a MAT, arguing that these multi-school structures offered a more robust and efficient model for improvement (DfE, 2016). As noted above, a MAT is a formal legal entity (a charitable company), with a board and Chief Executive, which oversees multiple academy schools. In 2022 the government set out its aim for all of England’s 21,000 schools to be part of a MAT by 2030 (DfE, 2022).

The MAT sector has developed rapidly throughout this period. By early 2022 there were around 1200 MATs operating across England, overseeing around 8500 schools in total, including four out of five secondary schools and two out of five primary schools. These MATs range in size from two to 75 schools, with the average size increasing from five schools in 2018 to seven in 2022 (Plaister, 2022). Most trusts operate schools in only one of England’s nine regions, although most larger MATs (i.e. with 20 or more schools) operate across two or more regions (Plaister, 2022). Meanwhile, around 1300 stand-alone academies are not in a MAT and almost 12,000 schools (mainly primaries) are still maintained by their LA. In this fragmented landscape, a single locality is likely to include multiple MATs, stand-alone academies, and traditional LA-operated schools.

The policy and regulatory framework for MATs has also evolved over this period, becoming progressively tighter as the government has sought to address early high-profile cases of corruption and mismanagement by pioneer MAT executives (Greany & Scott, 2014) and to manage the growing number of trusts in operation.

A number of studies have explored how MATs grow and operate and their impact on school and pupil performance, revealing a mixed picture (Andrews, 2018; Greany, 2018; Menzies et al., 2018). Greany and McGinity (2021) analyse how MATs expand by taking over and incorporating additional schools, characterising this as a process of ‘mergers and acquisitions.’ What is clear is that trusts work in different ways to integrate new schools and to secure collective improvement, for example by seeking to codify and embed shared systems, practices and cultures across the group of member schools (Constantinides, 2021; Glazer et al., 2022; Ofsted, 2019; Simon et al., 2019). The implication is that once a school joins a MAT, its staff will be encouraged or required to focus on the priorities and ways of the working of the trust, reducing the likelihood that they will participate in other local partnerships outside the MAT.

Overall, we suggest that these shifts represent a profound but incomplete process of fragmentation and realignment across the English school system: moving from a place-based model of autonomous schools overseen by 152 LAs before 2010; to the current fragmented landscape of MATs, academies and LA schools operating in parallel; to a future reformed state in which—the government hopes—all schools will be part of a ‘strong’ MAT. Meanwhile, schools have been encouraged to compete, but the last two decades have also seen incentives for collaboration, initially in local clusters but more recently in ‘system leader-led’ partnerships. Most recently, schools have been encouraged to academise and join a MAT, many of which have been formed by ‘system leader’ schools. These developments have numerous implications, but our focus here is on how pre-existing school partnerships have responded to the growth of MATs and the implications for place-based schooling systems.

Conceptual framework

Jessop et al. (2008) argue that understandings of place and scale can be combined with networks to reveal important aspects of socio spatial relations. While socio spatial theories have been utilised to some extent in educational research (Gorard et al., 2003; Gulson & Symes, 2007; Nespor, 1997; Thomson & Hall, 2016), they have rarely been applied to the study of inter-school networks. Our choice of this approach aligns with the design of the mixed methods study from which we draw our ego-network and qualitative data, which included place-based network case studies (see "Methodology").

Starting with definitions, given our focus on inter-school partnerships and networks, we adopt Provan and Kenis' (2008: 231) conceptualisation of partnerships as comprising three or more ‘legally autonomous organizations that work together’. This definition accurately describes the various clusters, collaboratives, partnerships, soft federations and alliances identified in the original research (Greany & Higham, 2018) and reflected in most of the ego-centric network maps, as we illustrate below. However, MATs are single legal entities overseeing multiple schools, meaning that once a school joins a trust it cannot choose to leave of its own accord. In this sense, an individual MAT is not a partnership because the schools within the trust are not ‘legally autonomous organizations’, even though these schools might collaborate with each other and display some network features.¹ Of course, it is possible for a school to be part of a MAT while also collaborating with other schools that are not part of that MAT, but we find limited evidence of this occurring in our data. We reflect on these issues—and particularly the key transition from (legally autonomous) partnerships to (legally bounded) MATs—through our discussion of place, scale and networks.

We turn now to place and scale, where we draw on four main constructs to highlight the ways in which school and network leaders are always located within and

¹ A separate, but related, question is whether and how different MATs collaborate with each other at local levels. See Glazer et al. (2022) and Greany and Kamp (2022) for a fuller discussion of this issue.

responding to a distinctive context, while also orienting towards a wider set of processes and power relationships. First, Cresswell (2004) sees place as a material location with distinctive features, a particular landscape and a unique identity, all of which are interconnected and ‘in movement through time’ (Thomson & Hall, 2016: 15). Second, Massey (2005) highlights how these places are inherently porous and permeable, always connected—vertically, horizontally, through flows—to other places, ideas, things, and people. But places are not equal, they are shaped by particular power geometries, reflecting historic and contemporary social relations of class, gender, race, and dis/ability. Furthermore, places are ‘thrown together’, unpredictable and messy: there can be no assumption of any singular coherence or identity. Third, Appadura (1996) recognises that localities—and the schools within them—are simultaneously ‘context derived’ and ‘context generative’; meaning that their ability to generate a distinctive local approach will be shaped by how (inter) national policies and norms impose standardised requirements, such as Ofsted inspection judgements in England. Fourth, a consideration of scale raises questions about vertical differentiation between ‘nested hierarchies’ (Jessop et al., 2008), which in England’s educational context allows us to consider relationships between schools, MATs, local and central government. Noyes (2014) raises important questions about how educational research might be designed to recognise and encompass multiple scales and the ways in which they interact across complex eco-systems. Mixed methods designs offer the potential to ‘zoom in’ and ‘zoom out’, for example from the case study which seeks to capture the lived reality of an individual student, to the statistical analysis of system-level outcomes over time, but—though fruitful—such scale-jumping remains conceptually and methodologically challenging.

Turning to research on inter-organisational partnerships and networks, we focus here on understandings of why and how networks develop, in line with the focus of this article. Importantly, networks are inherently rhizomatic, meaning that they do not develop automatically or in consistent ways. Rather, they are seen to operate along a set of dynamic continua, reflecting the strength, length, breadth, and depth of the relationships and activities that develop within and through the network (Perry et al., 2020). Furthermore, networks commonly operate at multiple levels, often simultaneously, creating the potential for sub-networks and cliques which may or may not align to wider partnership goals (Townsend, 2015). Kadushin (2012) identifies three intrinsic needs which drive engagement in networks—safety, effectiveness and status—arguing that different needs might be met by different types of network: thus, while ‘safety’ arguably requires dense, cohesive networks, ‘status’ relies more on asymmetric networks that can advance members’ rank and level of social capital. In practice, network membership commonly reflects a tendency for homophily (‘birds of a feather’), while the process of collaboration in networks involves mutual influence (feedback), leading to a convergence in norms and behaviours over time (isomorphism). However, these tendencies can be problematic if they lead to exclusive cliques or prevent wider knowledge flows (Granovetter, 1973).

Research indicates that most successful inter-organisational networks tend to display common features, including: a shared goal or interest that motivates collaborative action; shared commitment among all network members, reflecting a degree of shared decision-making and a sense that benefits are shared equally;

and shared values, practices and attributes, such as reciprocity and trust (Greany & Kamp, 2022). Networks tend to develop formalized governance and management structures over time as they grow, believing this will improve efficiency, but such structures can risk reducing levels of ownership for (some) members (Provan & Kenis, 2008). Reflecting these points, Pino-Yancovic et al. (2020) suggest that inter-school networks exist on a spectrum—from loose ‘association’, to ‘emerging collaboration’, ‘sustained collaboration’ and, finally, ‘collegiality’—with different formations serving different purposes and the potential to move from one model to another over time. Finally, leadership is widely recognised as a key ingredient in successful networks and a growing number of studies provide empirical evidence to support these claims (Sherer et al., 2021; Silvia & McGuire, 2010).

Methodology

There are several different types of network analysis, including whole network analysis, two-mode network analysis, and ego network analysis. This article draws on ego network analysis, which is only concerned with the connections that form around a particular actor (Crossley & Edwards, 2016: 18)—in this case the partner schools identified by 20 case study headteachers. In ego network analysis the focal actor (i.e. the headteacher) is referred to as an ego. Researchers attempt to understand the alters, or personal network, of ego (Wasserman & Faust, 1994: 42). This focus on a single actor varies from whole network analysis, which attempts to determine the existence of a particular type of relationship between all nodes in a predetermined population of actors, and two-mode network analysis, which examines the connections between two different types of entities (i.e. the funding relationships between NGOs and nation states or the attendance of various individuals at social events). Our focus on the ego networks of headteachers here reflects their key role in forming and maintaining inter-school partnerships and in deciding whether or not a school should join a (particular) MAT.

The 20 headteacher ego-networks we analyse here were identified in 2015, as part of a larger mixed methods study undertaken by one of the authors (Greany & Higham, 2018). That research received ethical approval from the PI’s university. The original study included four locality case studies. In each locality the researchers visited a representative range of schools, in terms of socio-economic contexts and school characteristics, interviewing the headteacher and a range of other school staff. Each case study headteacher was asked to complete an ego-network pro-forma in advance (see Appendix 1—NB: not all completed these—see below), listing all the schools with which the school partnered in a meaningful way and categorising these in terms of the types of partnership activity in place, the duration and frequency of collaborative activities, and their assessment of partnership impact. These proforma responses were then discussed and developed as part of the headteacher interviews.

In this article we reanalysed 20 of the headteacher ego-network pro-formas completed in 2015. The 20 schools were located in two anonymised localities:

- Eastern—a regional city with above average levels of deprivation and ethnic diversity, but with significant differences between different parts of the city. The Eastern LA area includes almost 200 schools. It had relatively high (top quintile) proportions of academies and schools designated as ‘system leaders’ in 2014. Eleven school/academy case studies were completed in Eastern, of which eight completed ego-network proformas.
- Western—a shire county (i.e. mainly rural, with some market towns) spanning a wide geographic area, with over 300 schools and academies in total. The LA had low proportions of academies and ‘system leader’ schools in 2014. Fourteen school/academy case studies were completed in Western, of which 12 completed ego-network proformas.

The recent analytical work, undertaken by the authors, involved tracking MAT membership using nationally available sources² for the 20 case study schools and their named partners to assess change over time. The recent analysis has focussed on the following questions:

1. Are existing partnerships between schools predictive of eventual membership of multi-academy trusts?
2. What are the implications for socio-spatial relations—in particular place, scale and networks—in England’s evolving school system?

Findings

We start by providing a brief overview of findings, highlighting broad patterns in how schools engage in partnerships and how our sample population of schools has developed in terms of academisation and MAT membership since 2015. We then focus on illustrative examples of specific ego-network partnerships, showing how these have been impacted by the development of MATs.

Overview

The ego-network and case study data collected in 2015 shows that schools were most likely to collaborate with other schools in the same geographic locality and in the same phase, although cross-phase partnerships—for example a ‘pyramid’ model, with a single secondary school working with its feeder primary schools—were not uncommon. Among primary schools, 82 per cent of meaningful ties were with other primary schools, while among secondary schools, 64 per cent were with other secondaries. Primary headteachers reported collaborating, on average, with ten other schools, while secondary headteachers reported an average of 13 schools, with a range from two to 28 schools. The primary networks generally encompassed most

² See: www.getinformationaboutschoools.gov.uk.

or all of the primary schools in a particular locality, but a minority drew together schools from a wider area based on shared characteristics and interests (e.g. all serving deprived communities). The secondary school networks were largely drawn from the same geographic region, but they were less likely to encompass all of the schools in a specific locality, reflecting higher levels of competition between local schools in this phase.³ The average length of time a tie had existed with another school was just over five years, but the mode was one year. The ego-network proforma (Appendix 1) also asked about the regularity of collaborative activity between schools, in terms of the approximate number of staff interactions the schools had had the previous term. While a minority of schools only collaborated infrequently (once or twice a term), the majority had both regular interactions with one or two schools (and less frequently three or four schools) and less regular interaction with their other ties.

Comparing the 2015 findings from Eastern and Western we see similarities and differences, reflecting historic developments as well as contextual differences between the two localities.⁴ For example, Eastern is urban, meaning that the school landscape is considerably more dense than in rural Western, which previous studies have shown can influence patterns of inter-school competition and collaboration (Woods et al., 1998). Eastern was selected on the basis that it had a relatively high proportion of academies and ‘system leaders’ when the original study began (2014), whereas Western had low proportions of both: for example, 40% of the schools analysed in Eastern had joined a MAT before 2016, compared to just 8% of schools in Western. Interestingly, by 2022 Western has almost ‘caught up’ in terms of MAT membership: 43% of schools analysed in Western were operating in a MAT in 2022, while Eastern has seen a more gradual increase, to 47%.

We turn now to the recent analysis, which tracked changes in MAT membership in the seven years after 2015. In total, we analysed 20 ego-network partnerships from 2015 (completed by 20 case study schools), which named 148 different partner schools. Among the case study schools, two were within existing MATs in 2015, two were stand-alone academies (Single Academy Trusts/SATs), and 13 were LA maintained.⁵ By 2022, seven of these schools were in MATs, two were SATs and nine were LA maintained. Among the 148 non-case study schools: 23% were academies in 2015, rising to 48% in 2022, an increase of 25%, which is broadly in line with the national increase in academies over this period. As noted above, the increase in academies was notably faster in Western than Eastern, albeit from a lower base. The case study and named partner academies were in 35 different MATs in 2022.

³ The federation of 11 local secondary schools shown in Fig. 3 is therefore relatively unusual.

⁴ See Greany and Higham (2018) and Greany (2020) for more detailed explorations of the localities and the networks within them.

⁵ We term all schools that are not academies ‘LA maintained’ here (except one ‘private school’). In fact these schools are a mixture of LA maintained/community, Voluntary Aided, Voluntary Controlled and Foundation schools, but we group them together here to support ease of interpretation and anonymisation. We differentiate between stand-alone academies (Single Academy Trusts) and MATs here. We do not distinguish between sponsored and converter academies, again for ease of interpretation, but this analysis is available on request. See Courtney (2015) for a detailed discussion of school types.

Illustrative examples

We focus now on specific partnerships which illuminate the changes described above, showing how MAT membership has impacted on pre-existing partnerships.

Figures 1 and 2 show ego-network maps for two secondary schools—both in Eastern— which were part of different MATs in 2015. These indicate the ‘bounded’ nature of MATs, with schools mainly collaborating with other schools in the same MAT. Figure 1 shows that the school was collaborating with eight other schools— five secondary schools, two primary schools and one all-through school— five of which were members of the same MAT. Figure 2 shows that this MAT-based school that was collaborating with 15 other schools— seven secondaries, six primaries, one all-through school and one Alternative Provision school—all except two of which were in the same MAT.

Importantly, given our focus on place, the networks shown in Figs. 1 and 2 are mainly located in the same city or region as the case study schools, but they are not ‘local’ in the sense of comprising all the schools serving one community. Rather, they reflect the geographic footprint of the MATs that the schools belong to. The school in Fig. 1 is part of a national MAT, with over 30 schools spread across the country, although all except one of its named partners is in Eastern city. The school in Fig. 2 is part of a MAT that operates 14 schools across the region, the furthest of these being around 30 miles away from the case study school.

Figure 3 shows how a reasonably typical local cluster (in this case a pyramid, with one secondary school, 12 primaries, one junior and one infant school in Western) has been reshaped by MAT developments between 2015 and 2022. In 2015,

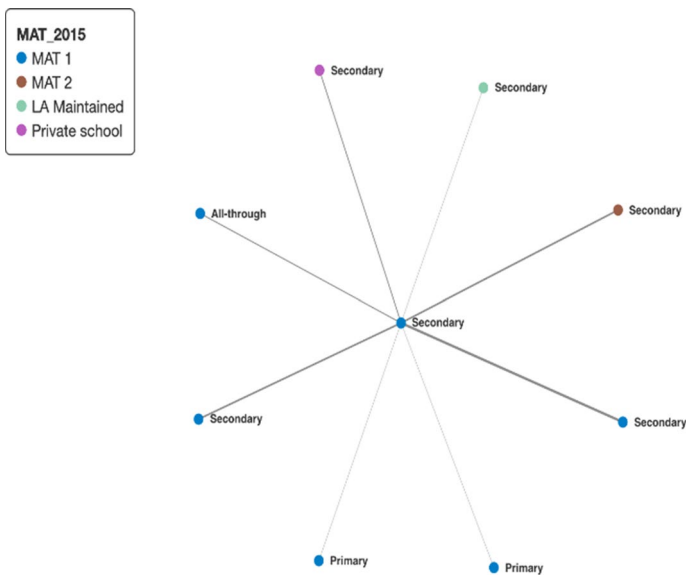


Fig. 1 Ego-network for case study secondary school within a national MAT (2015)

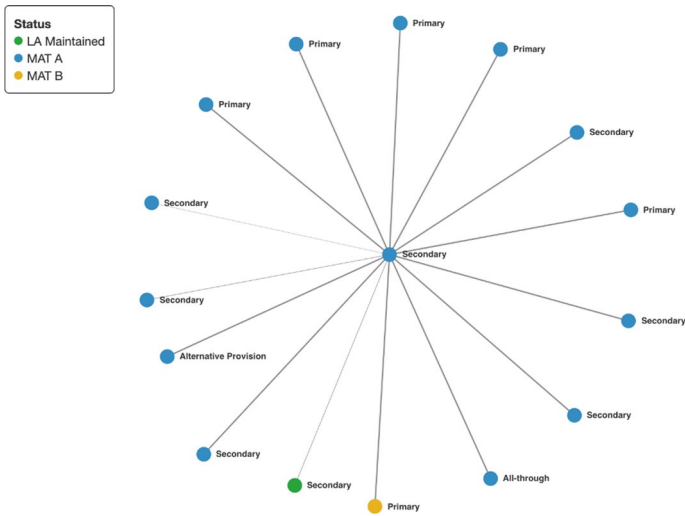


Fig. 2 Ego-network for a case study secondary school within a regional MAT (2015)

two of the named partner schools were in two separate MATs, with the rest all maintained by the LA. By 2022, nine schools were in six different MATs, leaving six LA maintained schools.

Finally, Fig. 4a, b show changes over the same period for the ego-networks identified by two secondary schools in Western. These schools have overlapping ego-networks, reflecting the fact that they are relatively near neighbours (8.5 miles apart) and in 2015 they were working together in a federation of 11 local secondary

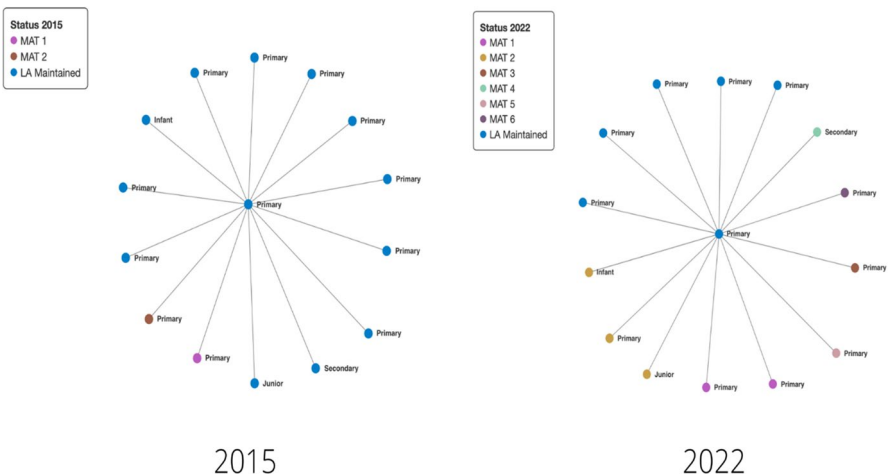


Fig. 3 (Left) Ego-network for a primary school, including MAT membership in 2015. (Right) The same ego-network, showing MAT membership in 2022

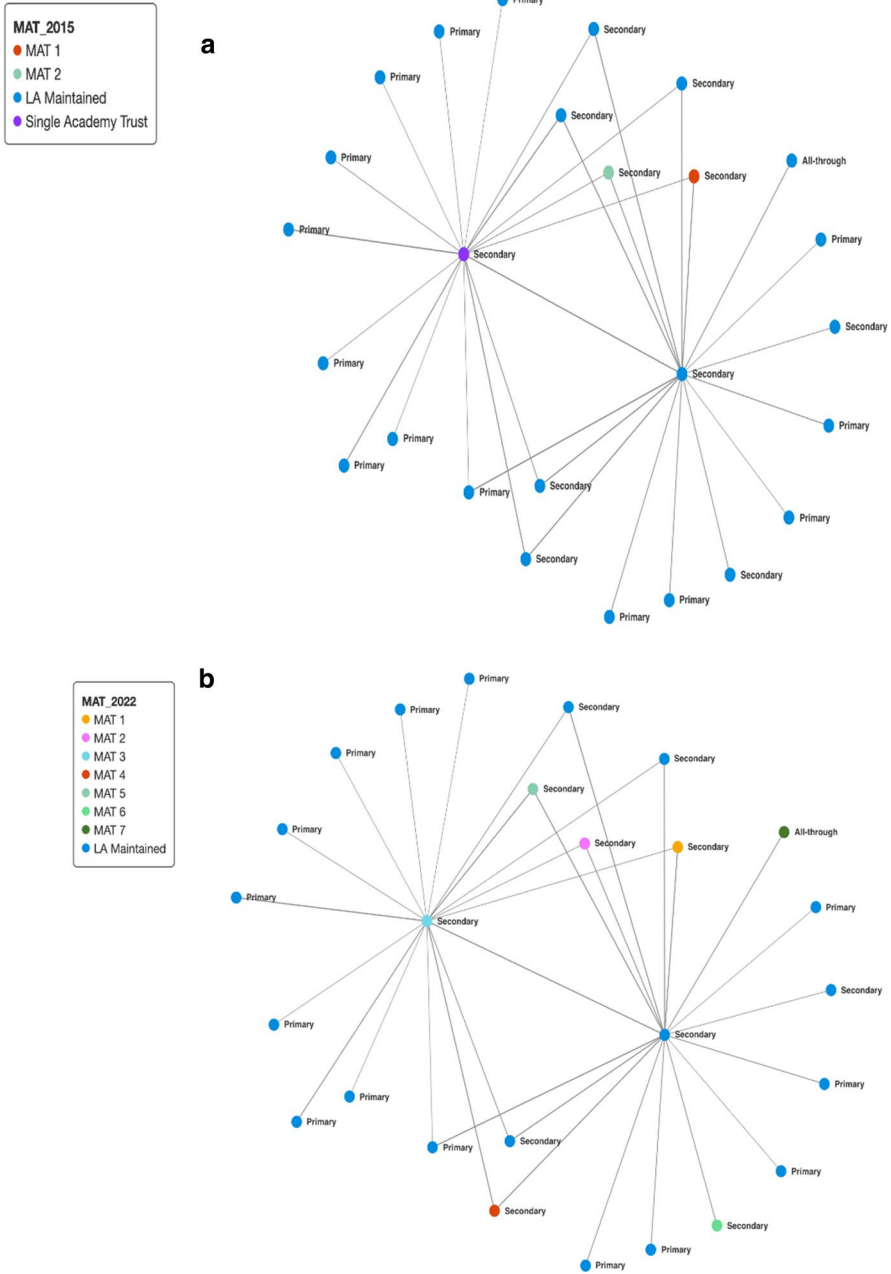


Fig. 4 **a** 2015 ego-networks for two secondary schools, showing MAT membership at that time. **b** The same two ego-networks, showing MAT/LA membership in 2022

schools. Both schools were also collaborating with their local—feeder—primary schools.

The secondary federation is interesting because at the time of the case study visits, in 2015, it was operating in a similar way to many MATs, although—unlike a MAT—each individual school remained a separate legal entity and could choose to leave the federation if desired. The federation had developed over an 11-year period and was described by both case study schools as their main source of school improvement support. Every school in the federation had signed a formal agreement to work in partnership, including through shared governance, joint staffing appointments, and the pooling of some budgets. The schools were engaged in regular partnership activities involving multiple staff at different levels of seniority. Examples included: senior leaders undertaking peer reviews of each others' schools; subject networks and school business manager working groups; shared professional development programmes; and a federation-wide vocational curriculum offer.

Figure 4a shows that, in 2015, two of the 11 federation secondary schools were academies—one in a MAT and one (a case study school) a stand-alone academy (SAT). Figure 4b shows that, by 2022, six of the 11 secondaries had joined six different MATs, including the previously stand-alone case study academy, while five secondaries (and all of the primaries) were still LA maintained.

Discussion

The response to our first research question is that pre-existing partnerships between schools do not appear to be predictive of eventual membership of MATs. None of the 18 non-MAT-based ego-networks in 2015 (i.e. all except the two MAT-based networks shown in Figs. 1 and 2) had developed into a single MAT by 2022. None had even developed into a partial MAT, for example with a majority of network schools joining the same trust: indeed, the maximum number of schools joining a single MAT from a single ego-network is three. We illustrate these findings by showing exemplar networks (Figs. 3 and 4), which highlight how schools in each network have joined a variety of different MATs, leaving some schools as LA maintained.

Considering our second research question, three conclusions appear particularly significant.

First, our findings provide an important contribution to research and theory on network formation and development, by showing that pre-existing inter-organisational networks do not necessarily develop into formal structured groups over time. This finding appears somewhat counter-intuitive, given the research outlined above which emphasises the importance of homophily and shared goals, values and social capital as a basis for successful partnership working, and the suggestion by Pino-Yancovic et al. (2020) that partnerships become more formalised and structured over time. That evidence might lead us to assume that many school partnerships would seek to convert their existing local clusters into local MATs. In fact, a “local MAT” was the desired outcome for one of the two federation case study schools shown in Fig. 4 at the time of the 2015 visit. The headteacher explained that her school had had “tentative” discussions about forming a MAT with the second case study school

and others in the federation. In her view this was a strong possibility: “I would not be at all surprised if, in 4 years, you were to come back and we’d say, ‘Actually, we’re now part of a multi-academy trust.’” For this headteacher, forming a MAT with these schools seemed the “logical way to go”, since it would build on the existing collaborative work but make it more secure. However, another senior leader in the same school explained that these discussions were “very politically sensitive here, because people choose this school, or the school that way, or the school that way, for very particular reasons.” Thus, competitive pressures coupled with entrenched parental and school governor perceptions made forming a local MAT “a political hot potato”.

A second factor that might prevent the formation of local MATs is hierarchical steering. Academies are funded and overseen by England’s national Department for Education (DfE), with a network of eight Regional Schools Commissioners providing operational oversight. These policy makers must authorise all decisions regarding MAT growth and can also force under-performing schools to join a trust. The government’s recent white paper implementation plan (DfE, 2022: 6) states that it will seek to ‘avoid local monopolies (i.e. one MAT operating all the schools in one locality) which are not in the interest of parents.’ However, this policy position has not been defined or consistently enforced before now⁶ and various examples exist of MATs operating a significant proportion of schools in one locality (Robertson, 2017), so it seems possible that our case study clusters could have developed as local MATs if they had wanted to. Further research would be required to understand the drivers of MAT formation and how this impacts on pre-existing local partnerships.

Our second main conclusion is that our findings support our argument that the school system in England is in the midst of a profound reconfiguration. The process of fragmentation has been driven by multiple shifts, in particular the roll-back of place-based LAs and the partial and uneven roll-out of academisation, while the more recent shift towards a fully MAT-led system represents the evolving reformation of the landscape on a non-placed-based model.

Our findings contribute to existing understandings of these developments in two ways. Firstly, while the two MAT-based ego-networks shown in Figs. 1 and 2 cannot be assumed to be representative of all trusts, they reinforce the findings from previous research that trusts work to integrate new schools into an internally ‘bounded’ improvement model and culture, with limited collaboration beyond the MAT’s member schools. Second, we show that pre-existing place-based local clusters and networks are being progressively broken up as different schools join different MATs. This does not necessarily mean that all local links and relationships between local schools will disappear the moment a school joins a MAT, but Figs. 1 and 2 do support a conclusion that over time these schools may reorient their collaborative efforts towards other schools within the same MAT, and away from other local schools. It seems reasonable to assume that local clusters will become less significant and that

⁶ We could not find any official definition of what proportion of schools in a locality would constitute a ‘local monopoly’. In addition, we note that the government is currently legislating to enable LAs to establish MATs, which will—by definition—involve significant numbers of schools in a locality.

MAT membership will become more significant in shaping the inter-school collaborative landscape in the years ahead.

Our third conclusion is that notions of place, scale and networks in English education are being reshaped in line with the expansion of MATs. In Fig. 5, below, we draw on an existing matrix developed by Jessop et al. (2008) and apply this to our findings here.⁷ The matrix can be read horizontally, to show how each structuring principle impacts on other fields, or vertically, to show how a structured field is shaped by other structuring principles. So, reading the first line of Fig. 5 horizontally, we see how 'place' influences the enactment of 'scale' and 'networks'.

Figure 5 provides a helpful heuristic for assessing the interactions between place, scale and networks in England's fragmented and reforming school system, but it does not pretend to capture the full range of developments or their implications, so we summarise the headlines as we see them here. Starting with networks, we see that existing inter-school partnerships are being replaced by hierarchically structured MATs. Turning to place, we see how, as local clusters become less significant and as LA oversight is rolled back, individual schools are orienting towards MAT structures that span wider geographic areas. As we noted above, most MATs operate schools within one of England's nine regions and relatively few are national in scope, but this does not mean that trusts are 'local', since each region includes around 2500 schools on average and covers a very sizeable geographic area (Durbin et al., 2012). Scales are also being reshaped, as England moves from a model of relatively autonomous schools overseen by elected LAs, to a model of non-autonomous schools within 'bounded' MATs that are overseen by central government through its network of regional commissioners. The resulting landscapes are inherently complex and crowded (Crawford et al., 2020; Greany, 2020), making it challenging for busy school leaders to navigate their 'local learning landscape' (Greany et al., 2023), for example if they need to access high quality professional development opportunities for their staff. What is less clear is how this process of fragmentation and reformation might impact on wider but no less fundamental issues, such as equity and inclusion for children and young people, or how parents might come to judge the long-term legitimacy and responsiveness of England's publicly-funded education system.

⁷ Jessop et al. (2008) also include territories, but we exclude this as less relevant to our discussion of national policy on academies/MATs.

Structuring principles	Fields of operation		
	Place	Scale	Networks
Place	Locales, milieux, cities, sites, regions, localities	Government has encouraged 'geographically focussed' MATs Larger MATs create internal hubs to structure place-based working	'Local clusters' and pyramids (i.e. secondary school with feeder primary schools) were previously the most common forms of inter-school partnership
Scale	MATs are replacing local authorities (LAs) as non-place-based, hierarchically structured school groups Government states that it will 'avoid local monopolies' (e.g. a single MAT operating all schools in one locality) which are 'not in the interest of parents' (DfE, 2022b:6) Government-appointed Regional Schools Commissioners and MAT central teams form rescaled 'middle tier' between national government and individual schools	Vertical ontology based on nested or tangled hierarchies	MATs are replacing 'local clusters' as non-local, hierarchically structured school groups Government is currently legislating to require MATs to collaborate with each other and with reshaped LAs Government funds various place-based curriculum hubs and professional development initiatives to support policy implementation and lateral knowledge exchange across MATs/schools
Networks	In some localities, new 'locality partnerships' are being formed to draw MATs, LA and other partners together to address shared priorities	Question: To what extent are local clusters/networks sustained or reshaped in the context of MATs and the rescaled middle tier?	Networks of networks, spaces of flows, rhizome

Fig. 5 An assessment of MAT development in relation to place, scale and networks. Adapted from Jesop et al. (2008)

Conclusion

This article provides new evidence of how local schooling landscapes in England are being reshaped, showing in particular that pre-existing inter-school partnerships do not develop into formal MATs. It assesses these findings through the lens of socio-spatial theory and draws out three overarching implications that can inform wider research and theory in relation to the development of networks and the ways in which place, scale and networks interact. It responds to Jessop et al.'s (2008) call to avoid one-dimensionalism and to assess the dynamic interactions between different structuring principles in socio-spatial research. It does this by adapting Jessop et al.'s (2008) framework, showing how it translates to the context of England's fragmented and reforming schooling system. The discussion section also points towards an important research agenda for the future, not least the need to assess how local lateral networks are reshaped in the context of MATs. Finally, the article makes an important methodological contribution, combining ego-centric analysis with detailed qualitative research findings and tracking changes in network composition over time: we explore this methodological approach in depth in a separate article (Cowhitt et al., forthcoming).

This approach has various limitations, some of which result from limited space in a single article, but two are important to highlight. Clearly, our sample of two localities and 20 ego-networks cannot be assumed to be comprehensive or representative of all schools and localities across England. Furthermore, follow up qualitative research would be required to assess how and why decisions on MAT membership were taken, and to assess the implications and impact of these decisions.

Appendix 1: Ego-network proforma—headteacher/principal pre-visit activity (2015)

This activity asks you to identify schools with which you work or collaborate. The specific question we would like you to respond to is: '*which schools does your school work or collaborate with in a meaningful way?*'

In the table below, please fill in Part A first, to identify ALL the schools you work or collaborate with. Please then complete Part B, to tell us about your links with each school. Thanks for taking the time to complete this activity. Please return it to XXXXX in advance of our visit, as this will inform the interview itself. The completed form will be treated confidentially and the data will be anonymised.

Part A	Part B <i>Please write in a number below</i>			<i>Please mark with a tick or cross</i>						Number
Name of schools you work or collaborate with:	Frequency How many times each term do you or your staff work with this school in any way.	Strength How strong are your ties with this school, on a scale of 1-10. (10 is high)	Length How long have you been working with this school (in years).	Do you: Work with this school in a Heads group or subject network.	Collaborate to develop staff (e.g. in INSET for teachers or School Direct).	Undertake joint work or projects to improve the quality of teaching & learning.	Evaluate student progress in each other's school using data or observation	Share governance with this school (e.g. in a Multi Academy Trust or Federation).	Provide (P) and/or receive (R) support from this school (e.g. as an NLE, LLE, SLE).	Finally: How much impact has your work with this school had so far, on a scale of 1-10.

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