Measuring Social Cohesion: Towards a Shared Measurement Framework for Social Cohesion in Australia

Authors: Matteo Vergani,[1] Andrea Giovannetti,[2] Rouven Link,[3] Simon Angus,[4] Melanie Rayment,[5] Nicholas Biddle[6]

1. Deakin University
2. Australian Catholic University
3. Scanlon Foundation Research Institute
4. Monash University
5. Premier's Department, New South Wales Government
6. Australian National University

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Australian National University

Acknowledgement and series note

In early 2024, the Australian Resilient Democracy Network was established as a collaboration between Australian researchers, civil society leaders and government agencies. The network is designed to encourage interdisciplinary, collaborative and applied research seeking policy-relevant insights that measure, diagnose and assess pathways strengthening Australia's democratic resilience. The network is dedicated to sharing the analysis publicly and to encourage the use of these ideas to prompt future research collaborations and actionable policy.

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Abstract

This is the second paper in the Australian Resilient Democracy Network Discussion Paper series focusing on the conceptualisation and measurement of social cohesion. As outlined in Discussion Paper 17 (Link et al. 2026), most existing measurement frameworks for social cohesion rely on survey-based approaches that focus primarily on individual attitudes. Without rejecting the usefulness of these surveys, this paper proposes an expanded measurement framework for Australia grounded in a network-based conceptualisation designed to inform policy, service delivery, and risk monitoring decisions. We conceptualise social cohesion as a network property defined by the durability, inclusivity, and quality of connections across society.

In this framework, a cohesive society is one in which *heterogeneous people, groups, and institutions are connected and collaborate towards collective goals within a multilayer social super-network*. More specifically, in this paper we define social cohesion as:

A condition in which people, groups and institutions with heterogeneous identities, views, and preferences are connected through durable, inclusive, high-quality relationships that enable collaboration towards collective goals across the whole of society.

We distinguish social cohesion from its enabling contexts, such as democratic institutions, civic space, and socio-economic conditions, while recognising their reciprocal influence and opportunity to monitor their interconnected influence. We make three shifts in how social cohesion is conceptualised:

1. **From individual attitudes to ecological networks:** We shift the unit of analysis from individuals to an ecological, multi-level "super-network" of relationships that link people, institutions, services, and public narratives across micro, meso, and macro levels. Social cohesion is a systemic property of these overlapping layers, not merely an aggregation of individual ties.
2. **From shared identity to collaboration across difference:** We broaden the conceptual framework for how people and groups with diverse identities, views, and preferences remain connected, including the network conditions for collaboration toward collective goals. Cohesion is not uniformity or assimilation. Rather, it is sustained connection and cooperation across difference.
3. **From quantity of connections to quality of relationships seeking collective benefit:** We move beyond social capital, which focuses on bonding and bridging ties, and the resources embedded within networks, to conceptualise social cohesion as a macro-level condition in which interactions are oriented toward shared rules, democratic norms, and collective goods that sustain society as a whole.

Social cohesion is operationalised through three interrelated dimensions:

a) **durability** (social connectivity, robustness);
b) **inclusivity** across categorical boundaries; and
c) **quality** (collaborative orientation toward collective benefit).

This framework shifts measurement from individual attitudes to the structural and relational dynamics that sustain coordination despite difference. While analytically separating cohesion from specific value commitments, we acknowledge that collective orientation introduces a bounded normative dimension.

The paper outlines a staged measurement agenda integrating surveys, social media interaction networks, administrative data, and public discourse. Rather than presenting a fully specified protocol, it establishes the conceptual and analytical architecture for systematic testing, validation, and multi-source monitoring of social cohesion within Australia's evolving data environment. This paper seeks to open a discussion about how a broadened conceptual framework of social cohesion can enable a system level approach to strengthening social cohesion. It opens the discussion for what information is needed for different decision needs, and how a conceptual framework can enable these approaches.

1 Introduction and overview

In a previous Discussion Paper in this series (Link et al. 2026), we examined how social cohesion is defined across academic disciplines and policy frameworks, and identified persistent tensions in its conceptualisation and use. We showed that sociology, political theory, psychology, and public policy emphasise different dimensions, including social bonds, institutional legitimacy, belonging, trust, inclusion, and participation. Although these perspectives are complementary, their coexistence has produced broad and overlapping definitions that are difficult to operationalise consistently.

In practice, most national frameworks rely heavily on surveys of individual attitudes and experiences. While these instruments are valuable for tracking trends in belonging or institutional trust, they are not designed to diagnose causal drivers, identify structural constraints, or inform place based and programmatic interventions. As a result, social cohesion is often monitored descriptively rather than used as a system level framework to guide decision making.

This current paper builds on that analysis by proposing a multi-level framework that moves beyond survey data and treats social cohesion as a property of relationships, institutions, and coordinated collective action. It seeks to provide an approach to test new ways to measure social cohesion as part of a wider monitoring system. We do not seek to propose a singular definition for all purposes. Rather, we seek a conceptual approach that allows measurement using a range of data sources that goes beyond traditional survey data. We also propose a framework that goes beyond those focused mainly on normative attitudinal indicators such as shared values, trust in institutions, or national belonging. While we use Australian examples and have a particular focus on the Australian data environment, the theoretical and conceptual discussion can be applied sub-nationally. It can also be applied to similar contexts, or countries that may be on a trajectory to the high levels of migration and diversity that Australia has experienced.

Specifically, this paper explores an inclusive measurement framework for social cohesion which can be operationalised for policy, research and program design in the Australian context. This framework is grounded in the following definition of social cohesion, or a cohesive society. Specifically, it is:

> ***A condition in which people, groups and institutions with heterogeneous identities, views, and preferences are connected through durable, inclusive, high-quality relationships that enable collaboration towards collective goals across the whole of society.***

We propose to conceptualise social cohesion as a property of social networks wherein networks are socially cohesive through the durability, inclusivity, and quality of their connections. Our conceptualisation thus focuses on the structure and the quality of the relationships within and across networks at different scales (from neighbourhoods to the national level). This definition also recognises that social cohesion of networks is not only a property of individual relationships, but also the relationships mediated through and within our institutions which

create rules and conditions for engagement such as the information ecosystems, the community organisations, and government services including social and physical security services.

At this stage, we do not present a fully specified measurement protocol. Rather, we outline a staged research and implementation agenda that identifies conceptual dimensions, candidate indicators, and feasible data environments. The purpose of this paper is to establish the architecture of a monitoring system and the logic of measurement, with empirical specification and validation to follow in subsequent phases.

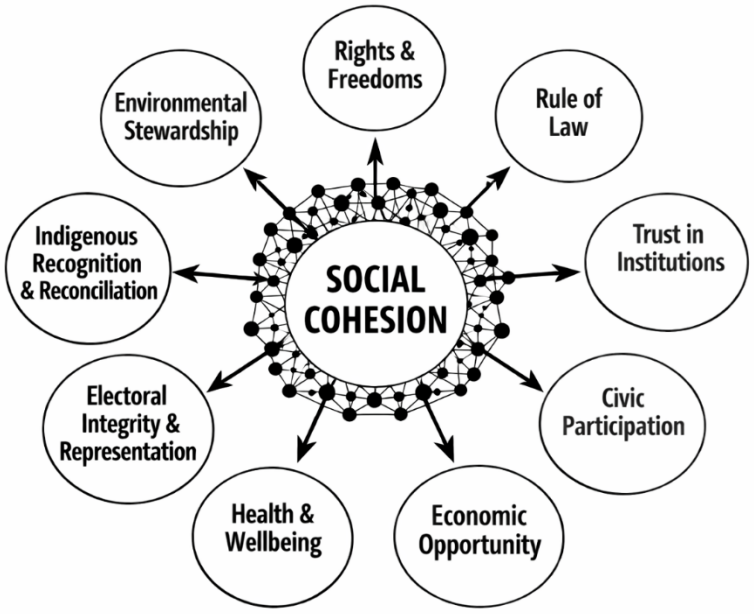
With this context in mind, the remainder of the paper is structured in three parts.

- First, we clarify the conceptual boundaries of social cohesion and distinguish it from related democratic, institutional, and socio-economic conditions.
- Second, we develop a network-based definition grounded in network durability, inclusivity, and quality (collaborative orientation), and contrast it with prevailing attitudinal approaches.
- Third, we outline measurement implications across multiple data environments, including surveys, social media, administrative data, and public discourse, and identify a staged research agenda for implementation and validation in the Australian context.

2 Social Cohesion and its Context

This section clarifies the relationship between social cohesion and the broader democratic, institutional and socio-economic contexts within which it operates. It distinguishes cohesion as a property of social connections from the normative and structural factors that coexist with, shape, and are shaped by those patterns of relationships.

Figure 1 Conceptual representation of social cohesion introduced in this paper.



As Figure 1 shows, we understand social cohesion as both shaping and being shaped by a wide range of social, political and economic conditions. Democratic values such as the rule of law, freedom of expression and association, respect for human dignity, and equality before the law do not constitute social cohesion, but create the normative and institutional environment in which inclusive and durable connections can emerge, and at the same time affect them.

Similarly, civic space is understood by the OECD as the legal, policy, institutional, and practical conditions that enable people and organisations to access information, associate, express themselves, and participate in public life. In our framework, this conceptualisation of civic space affects, and is affected by, cohesive networks. That is, it is not a measure of cohesion in its own right. Where civic space is open, accessible, and trusted, networks are more likely to overlap in durable ways, bridge difference inclusively, and support collaboration toward collective goals. Where it is constrained, fragmented, controlled or unevenly distributed, relational networks become brittle, segmented, or exclusionary, weakening social cohesion even if individual attitudes or sub-groups appear stable.

Societal health, including economic dignity, financial inclusion, and equitable access to education, employment, and essential services, similarly functions as an enabling condition by shaping people's capacity to participate in social, civic, and economic life on fair terms.

Distinguishing social cohesion from contextual factors associated with it allows social cohesion to be measured through patterns of connection and collaboration. Democratic values

and civic space still remain central objects of policy attention in the Australian context as the foundations that sustain those patterns over time. The commitment to democratic principles such as civic freedoms, the rule of law, human rights as well as social inclusion and equity provides a normative foundation for social cohesion in Australia, in that these principles define the fair terms of cooperation among people and groups with diverse identities, views and preferences.

Social cohesion is constituted through the quality and structure of social infrastructure that enables coordination and bridges differences, including physical and digital spaces, civic institutions and governance frameworks. When this infrastructure is inclusive, accessible and trusted, it supports dense and overlapping connections across society; when it is fragmented or exclusionary, it constrains such connections and weakens social cohesion.

Social cohesion is further placed under strain by structural socio-economic stressors, including housing insecurity, precarious work, and unequal access to healthcare and essential services, which limit opportunities for participation and cross-cutting social ties. When social cohesion is strong, it tends to be associated with a set of emergent societal conditions, including social stability, resilience in the face of shocks, inclusive participation in civic life, and widespread experiences of belonging within a shared democratic order.

While this paper conceptualises the core elements of social cohesion as a network property in terms of the durability, inclusivity and quality of connections across society, we do not recommend a narrow analysis only on these terms. Rather, we emphasise the importance of examining social cohesion comprehensively, including its predictors, antecedents, and consequences. The measurement approach proposed in this paper provides a foundation for future research to systematically map these factors and their relationships over time and to test whether consensus on shared values, such as trust in institutions and the rule of law, is a precondition for social cohesion in Australia. To us, such an approach shifts discussions from what social cohesion ought to be to the legitimate and evidence-based means to foster social cohesion in a pluralist democracy like Australia's. Thereby, we conceptualise social cohesion as an analytic concept concerned with social relations (durability, inclusivity, quality), while questions of human dignity, civic and human rights, democracy and justice re-enter through debates about legitimacy, governance, and democratic justification.

3 Social cohesion as a property of networks: Expanding the Australian approach

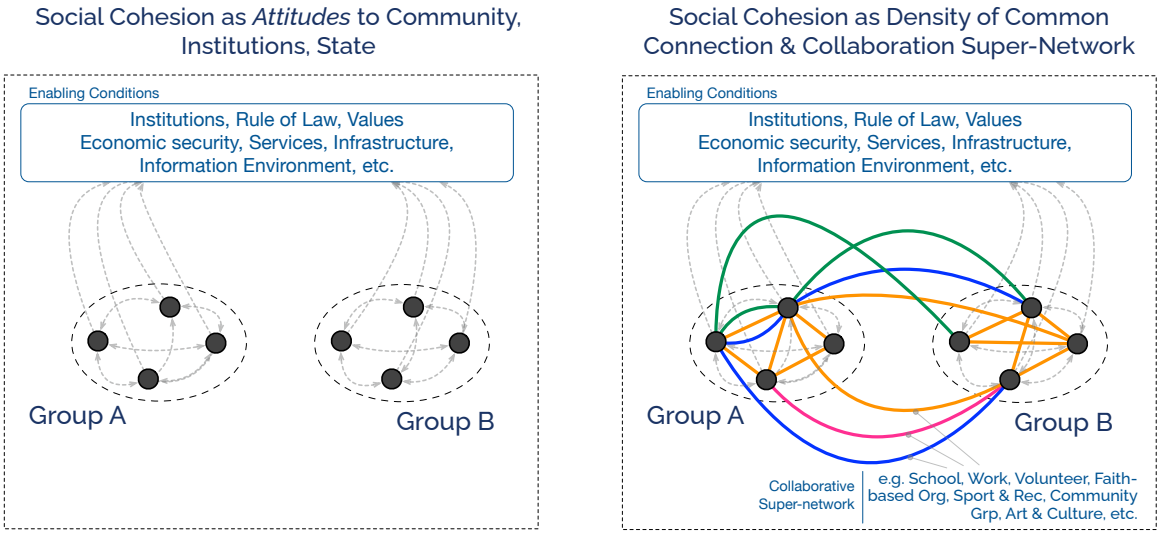
This section explores how Australian community, policy and research communities might broaden their conceptual definition of social cohesion to include both individual and systems dynamics, but also expand measurement approaches with additional data sources and analytic methods. This should not involve stopping other forms of measurement in Australia, but instead involve additional measures to inform multiple decision needs.

This paper proposes to frame social cohesion as a network property, or a cohesive society as one where individuals are connected and work towards collective benefit across a multiplicity of social dimensions (for example, family, schools, sport, religious and political organisations), but no dimension can split the population into fully separate networks. This contributes to both practice, as well as academic debates in sociology, social psychology, population health, and systems thinking.

3.1 Social cohesion as durability, inclusivity and quality in social networks

In socially cohesive societies, it is the sum of the different layers of social networks and the conditions around those interactions which strengthen our resilience to pressures on our social fabric and institutions. For example, social cohesion is a reflection of family interactions, work settings, neighbourhood and local engagement, leisure activities and civic life, as well as increasingly online activities. This gives rise to a *communal* super-network. This super network is made of overlapping, multi-faceted, social structures, rather than isolated, self-consistent groups. In cohesive societies, we jointly expect people and groups to differ on many attributes including demographic characteristics, socio-economic circumstances, political opinions, values and attitudes, or faith, and to connect to each other in one or multiple dimensions (Dixon & Biddle, 2025).

Figure 2 Contrasting conceptualisations of Social Cohesion.



Note: *Traditional survey-based approaches (left) largely focus on attitudes of individuals towards each other, institutions, and the state. Our proposal (right) views social cohesion as a densely connected super-network among individuals, in particular, connecting sub-groups within society through a multiplex of network ties including schools, sports, work, community organisations and volunteering, religious affiliations, and interests.*

Social cohesion in this approach is a property of *social networks* (Fig 2). It is based on the argument that social cohesion, at its core, is about relationships (Windzio & Kaminski, 2023) – among people, groups, institutions and systems in a society. Analytically, people, groups, institutions and systems are commonly thought of in terms of operating at different levels: micro (individual or group level), meso (institutional level) and macro (system level) (Aruqaj, 2023). Relationships can extend horizontally, connecting elements on the same level, and vertically, connecting elements across levels (Chan et al., 2006). Social cohesion can be observed in the interactions within and across those levels (Bottoni, 2018). These relationships within and across analytical levels form complex, multi-level networks that connect people, groups, institutions and systems.

Our approach contrasts with (and complements) traditional approaches which typically use surveys to identify *individual* attitudes towards institutions and the state (Figure 2: left panel), rather than conceptualising social cohesion as the durability of complex inter-connections *between* people in society (right panel).

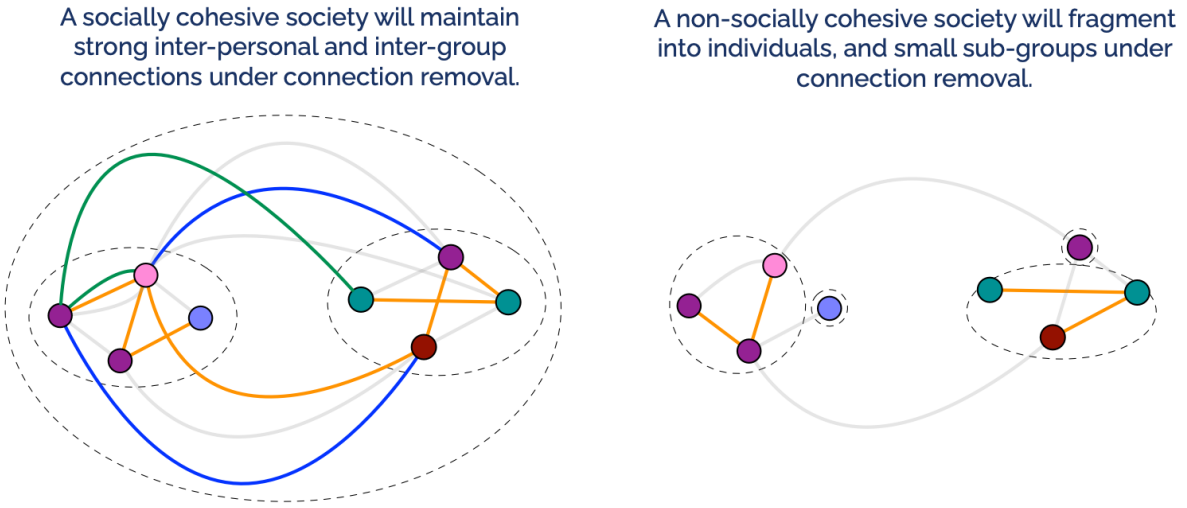
Formally, these complex networks can be thought of as multilayer networks (Kivelä et al., 2014). Multilayer networks recognise that people form part of multiple networks simultaneously. These multiple networks can, but need not be geographically based. For example, people may be part of a family, have friends, work acquaintances, or belong to a religious organisation, a sports club, and a political party. They will also interact with state institutions as well as media and digital platforms, which provide the infrastructure for positive relationships to be maintained in cohesive societies.

Schools provide a clear illustration of these dynamics. A school brings together several interconnected layers: students, their families, teachers, other school staff, and the education system more broadly. A multi-layer network made of families, schools and friendships identifies a multiplicity of relationships that are more than the sum of its parts. For example, children attending the same class form part of a network. Their parents are (directly or

indirectly) connected. At the same time, both the parents and their children are connected to teachers and school staff, the school as an institution itself, and through those connections to the broader education system. Colloquially, these actors belong to "the same school community," but analytically they form a dense, multilayer school network embedded within wider social and institutional networks.

Crucially, individuals in one school network are not isolated from others. Parents, students, and staff typically participate in multiple school communities over time and are simultaneously connected to neighbourhoods, workplaces, sporting clubs, and civic organisations. These overlapping connections mean that people are linked through multiple pathways across different parts of society. We argue that the more people's networks overlap across multiple levels of society, that is the more *redundant* connections appear in the super-network, the more socially cohesive society is. We conceptually illustrate this idea in Figure 3 below.

Figure 3 Contrasting examples of two societies exhibiting high (left) or low (right) social cohesion.



Note: *(left) High social cohesion (our definition) implies that even if a proportion of connections were removed between individuals within groups or across groups (greyed out lines), there would be sufficient thickness in the ties that bind groups and society as a whole that the super-network would remain connected across large fractions of society. (right) Low social cohesion on the other hand would not lead to this resilience, even a few connections removed would see social isolation for individuals, and fracture in the super-network into disconnected sub-groups. (Node colouring indicates categorical membership criteria in the spirit of Rawlings et al., 2023.)*

Our argument is that both the structure of people's networks and their inclusiveness matter to social cohesion. According to the concept of structural cohesion (Moody & Mucha, 2024; Moody & White, 2003; White & Harary, 2001), networks are cohesive when people are connected, directly or indirectly, through multiple pathways, while networks held together by a small number of bridging actors are less cohesive and more segregated (Currarini, Jackson and Pin, 2009 and 2010). Rawlings et al. (2023) expand on this idea and suggest that networks are *socially cohesive* when they exhibit a high degree of social connectivity (defined similarly to structural cohesion in terms of a network's robustness to the removal of a node) and porous nominal group boundaries (categorical distinctions that differentiate in-groups from out-groups barely constrain interactions between members of different groups). Put simply, ***networks are***

more socially cohesive the more inclusive are their social connections, i.e. to people from backgrounds different to their own.

This conceptualisation of social cohesion differs from social capital (e.g. Kyne et al., 2026) because it refers to a systemic, multi-level condition of the overall "super-network" (system), rather than to resources and capacities embedded in specific ties. Social capital concerns what actors and communities can *access through* bonding, bridging, and linking relationships (including ties to institutions). Social cohesion, by contrast, is a property of the entire system. That is, it is based on whether these and other ties *aggregate into* a durable, inclusive, cross-layer configuration that sustains cooperation across difference, for all. In this sense, high social capital may contribute to high social cohesion in some sub-group, but it does not guarantee cohesion at the societal level.

In multilayer networks, we expect that each network layer varies both in terms of its connectivity and inclusivity. A socially cohesive society can accommodate less connected and less inclusive network layers if these do not result in the entrenchment of socio-economic divisions and a loss of people's ability to understand other people's lived realities (Teichler et al., 2023). Many networks have membership criteria that govern who is considered or can become a member. For example, a religious organisation may not allow people of a different faith to become a member or limit their participation to specific activities. However, as long as the organisation does not restrict its members' (ability to form) relationships with people of a different faith outside of the organisational network, such membership criteria are of little consequence for social cohesion at large.

Importantly, social cohesion depends not only on the presence and durability of network connections but on the inclusiveness and quality of those connections and the conditions which enable them. Intuitively, a network made up of predominantly positive relationships – relationships that are constructive and collaborative even in the face of disagreement or conflict – is more *socially* cohesive than a network of predominantly negative relationships. Collaboration involves 'people working together towards a common goal, sharing the costs and likely the benefits' (Amici & Bietti, 2015, p. 383). Collaboration is a form of cooperation in which all parties benefit (i.e., 'mutualistic cooperation'; van Schaik & Kappeler, 2006, p. 3), whereas cooperation may benefit only those receiving active assistance or support but not those providing it (i.e., 'altruistic cooperation'; van Schaik & Kappeler, p. 3). The emphasis on the pursuit of collective outcomes in collaboration makes it particularly relevant to social cohesion as a marker of positive relationships.

The quality of relationships, which for social cohesion to exist must be oriented towards collective benefit, can be inferred in several ways. From an attitudinal perspective, relationship quality can be examined through indicators such as trust in others, sense of belonging, or support for shared democratic principles, including human rights. These orientations are typically captured through survey data, but need not be. They may also be inferred from patterns of language use in public discourse, such as social media communication or political speeches. From a network perspective, relationship quality can be inferred from structural and dynamic properties of networks themselves. In this approach, positive relationships are those that are durable under conditions of disagreement or stress, meaning that ties persist rather than dissolve when conflict or tension arises. In network terms, such relationships contribute to redundancy, alternative pathways, and robustness, allowing interaction and coordination to continue despite shocks or disputes. Relationships that collapse under conflict, by contrast, indicate weak or brittle ties that reduce the overall cohesiveness of the network.

Positive relationships are conditional upon mutual recognition and respect, trust in other people, and a willingness to set aside differences to work together towards common goals for

the benefit of wider society beyond someone's immediate social networks. These orientations towards people beyond someone's own networks distinguish social cohesion from concepts like social capital (Aruqaj, 2023) as well as similar concepts in social psychology. For example, the concept of cohesiveness (Lott & Lott, 1961; see Hogg, 2010, for a critical review) explains the importance of positive relationships, defining cohesiveness as '*that group property which is inferred from the number and strength of mutual positive attitudes among the members of a group*' (Lott 1961; italics in original).

Friedkin (2004) suggests that social cohesion rests on a self-reinforcing causal relationship between group-level conditions, positive membership attitudes and behaviours, and members' interpersonal interactions. From this perspective, mutually beneficial interactions among people in a network, or beneficial decisions taken by influential actors within a network, create such positive relationships. In the context of social cohesion, however, this represents a narrow view of what 'positive' relationships are because of its focus on benefits to the group and its members. These kinds of relationships may be empirically present in small group-based networks that are harmful to social cohesion, such as in extremist networks. We argue that to foster social cohesion at national level, the benefits of positive relationships within society should extend beyond one group.

3.2 Different ways of measuring social cohesion in social networks

The way positive relationships are defined, qualified, and measured is a key point of divergence across social cohesion frameworks, with some approaches grounding measurement in normative attitudinal indicators, while others adopt a more agnostic stance based on network structure and dynamics, potentially leading to substantially different measurement strategies and empirical findings. Within the framework we propose, these approaches can be understood as positions along a continuum.

At one end of the spectrum, positive relationships are defined normatively, and social cohesion is treated as a value laden condition in which shared commitments, such as support for human rights, democracy, and the rule of law, are constitutive elements of cohesion itself. At the other end, positive relationships are defined and measured solely as a relational network property, and social cohesion is conceptualised as an analytically distinct feature of social structure, captured through observable network characteristics, with values understood as antecedents, correlates, or consequences rather than as components. The distinction between these positions is conceptual rather than methodological, reflecting different assumptions about the explanatory role social cohesion is expected to play in accounts of social order, conflict, and societal wellbeing.

We operationalise our definition of social cohesion through three interrelated network dimensions: social connectivity (durability), inclusivity, and the pursuit of collective benefits (quality). Together, these dimensions capture both the structural properties of social networks and the positive relational orientation of ties that sustain coordination across difference, without presuming shared values as constitutive elements of cohesion itself.

Social connectivity refers to the robustness of a network to the removal of nodes or ties, or entire layers (i.e., blocks of ties) (Rawlings et al., 2023), capturing the extent to which interaction and coordination persist under disruption or conflict. It can be measured through structural properties such as redundancy of ties, alternative pathways between actors, and the resilience of the largest connected component.

Inclusivity captures the extent to which categorical differences among actors do not translate into structural segregation (Rawlings et al., 2023). In network terms, this can be operationalised as topological heterogeneity across layers of the super network. Higher inter-layer

heterogeneity reduces the likelihood that any single layer systematically segregates the population and increases the probability that the aggregated network exhibits relational structure not reducible to any individual domain.

The pursuit of collective benefits refers to relationships oriented towards mutually beneficial outcomes that extend beyond immediate or in-group interests. This dimension can be represented as a distinct relational layer capturing pro-social activity, such as volunteering, mutual aid or supporting discourse (e.g. in social media). Where present, linking patterns in this layer should not be fully explained by other network layers, but instead connect actors across otherwise weakly linked parts of the super network, reinforcing cohesion through additional bridging ties.

We acknowledge a potential tension in this formulation. While we seek to treat social cohesion as analytically distinct from specific value commitments, the notion of collective benefit necessarily carries normative content. Our position is that collaboration toward broadly shared societal goods functions as an observable relational orientation rather than as endorsement of a predefined ideological consensus. In this sense, the framework remains analytically bounded while recognising that cohesion cannot be entirely norm-free.

Example: An anti-bullying initiative in a local high school

To illustrate how these notions can be operationalised in a real-life setting, consider a local council working with a high school to curb escalating bullying and other anti-cohesive behaviours. For simplicity (but without loss of generality) in this example we assume that the problem is contained within the setting of the school. In similar situations, individual-based strategies (such as disciplinary action, counselling or awareness campaigns) are often necessary but difficult to design, enforce and evaluate because bullying is an inherently relational and cultural phenomenon and as such, highly persistent: it is sustained by peer reinforcement, local status hierarchies, bystander dynamics, and can rapidly percolate across settings (classroom, sport clubs, or even online) even when a specific channel is blocked. In terms of measurement, survey-based assessments of individual students in isolation, while useful to provide an aggregate snapshot of individual feelings and attitudes, would likely fail to positively contour what is an *interactional* phenomenon.

In this context, our approach begins by reconstructing the super-network of student relationships using feasible combinations of student surveys and school registry data, such as friendship nominations, family ties (e.g., siblings/caregiver links), co-enrolment in classes and group assignments, extra-curricular clubs and sport teams and shared commuting and catchment proximity (interacted with geo-based administrative data). The resulting structure would allow analysts to statistically identify: (1) whether the student population forms a robust connected network or fragments into segregated clusters, (2) whether certain layers dominate (e.g., co-enrolment acting as the only bridge across groups), (3) whether categorical differences (e.g. year group, program track, ethnic/social background) are embedded across layers rather than producing separation along a single dimension, (4) rank clusters of students by the number of geometrical anomalies relative to the average properties of the super-network. On top of these layers, co-bullying relationships could also be included as a separate layer.

Suppose the super-network reveals that bullying incidents are concentrated within a tightly knit but self-isolated subgroup of students characterized by an anomalously high internal density, weak bridging ties to the largest connected component, and low inter-layer heterogeneity (i.e., the same students remain separated across multiple layers), all indicators pointing to fractures in our notion of social cohesion. A policy response can then be designed explicitly around collective benefits and directly measured through our approach. Example of cohesion-

enhancing policies coherent with our definition are, for example, incentivised cross-group participation in mixed clubs, service-learning or volunteering programs, peer mentoring, and school-community projects where collaboration is required and visibility is shared across cohorts. The policy's impact can be evaluated by tracking whether this "collective benefits" layer generates new bridging ties that persist and propagate into other layers (friendship, classroom collaboration) across the school, thereby increasing network robustness (i.e. higher connectivity) and reducing systematic separation (leading to higher inclusivity).

In practical terms, through the above approach, regulators gain an interpretable, auditable way to (1) detect structural vulnerabilities that may precede harm, (2) target interventions to the network mechanisms most associated with harm, and (3) measure whether programs deliver durable improvements in cohesion and abatement of harmful dynamics rather than short-lived changes in self-reported attitudes alone.

3.3 Measurement Implications

Our operationalisation of social cohesion has clear measurement advantages because it integrates geometrical properties of a super network, including social connectivity and inclusivity, with the quality of relationships within the network, namely collaboration in the pursuit of collective benefits. It is replicable across contexts and agnostic to national characteristics such as political or economic form, legal frameworks, or culture broadly defined. Rather than relying on context specific norms or values, it focuses on observable patterns of connection, overlap and separation within and across social networks.

Conceptually, the framework can be deployed at large scale, including population wide multilayer networks. In measurement terms, this approach supports the integration of standard demographic and socio-economic information characterising individuals and groups with relational data broadly defined and available from a range of sources. A super network is modular in nature, as it is constructed by summing relationships across multiple planes, each corresponding to a distinct domain of social interaction, such as household, family, neighbourhood, work or education. This modularity allows relational layers to be combined or analysed separately, depending on data availability, data linkage opportunities and analytical purpose.

Social cohesion can therefore be measured at different analytical scales. Metrics capturing whole of network properties of the super network can indicate the extent to which a society is fragmented or integrated, track changes over time, assess the relative importance of different layers of connection and identify structural boundaries between core and peripheral components without reference to normative benchmarks. At the same time, comparing metrics across clusters or sub networks enables the identification of groups that are densely connected internally but weakly connected to the broader system. Component based statistics allow estimation of baseline structural properties across clusters, against which deviations can be identified and used to derive indicators of statistical anomaly. This makes it possible to detect structural exposure to isolation without relying on predefined social categories, thereby supporting targeted and non discriminatory interventions grounded in observable vulnerability rather than group based labels.

Importantly, the measurement logic is structurally agnostic to specific political, cultural, or institutional contexts. While enabling conditions such as democratic freedoms or welfare systems vary across countries, the core network properties of connectivity, inclusivity, and collaborative orientation can be specified and measured independently of these contextual differences. Context shapes levels of cohesion; it does not alter the measurement architecture itself.

4 Data sources

Developing a comprehensive measurement strategy such as the one outlined above requires systematic testing and validation of each component, including the specification of network layers, the operationalisation of relational quality, and the robustness of proposed metrics. The discussion that follows provides an initial sketch of potential data sources that could inform this framework. It is intended as a conceptual mapping rather than an exhaustive inventory, highlighting how existing datasets may be mobilised not only for measurement but also for iterative refinement, triangulation, and external validation of the proposed approach.

4.1 Survey data

Data availability

There is a wealth of large-scale surveys measuring (aspects relevant to) social cohesion (Kamp, 2024). Yet, these surveys do not collect comprehensive information about people's social networks. In contrast, other large-scale survey programs like the Household, Income and Labour Dynamics in Australia (HILDA) Survey and the Australian Temperament Project (ATP) collect information about people's social networks but not about the wide range of social and political attitudes and behaviours found in survey-based social cohesion research. *Therefore, our ability to measure social cohesion as a network property and model its relationships with people's attitudes and behaviours using existing surveys is currently limited*.

Measuring network properties: social connectivity and inclusivity

Surveys can be used to measure social connectivity by asking respondents to nominate contacts they interact with in various capacities (e.g. friends). For surveys in which the set of nominations is restricted to other participants in the same survey (such as the ADD Health survey, see Harris, 2013 and Currarini, Jackson and Pin, 2009 and 2010 for recent applications), the super-network can be reconstructed by interlinking participants. Absent such restriction, respondents are asked network-based questions, for example to indicate whether nominated contacts also know one another (Burt, 1984). Such items allow the derivation of basic network properties, including network density, redundancy of ties and the presence of alternative pathways for interaction and coordination. While these measures do not reconstruct complete networks, they help embedding participants within a measurable inter-personal social setting.

Inclusivity can be assessed through survey questions capturing the heterogeneity of respondents' social ties across key characteristics such as age, gender, socio-economic background, religion or political orientation (Burt, 1984). From a social cohesion perspective, these measures indicate the extent to which categorical differences translate into network homogeneity or whether networks cut across group boundaries (Teichler et al., 2023).

Measuring the pursuit of collective benefits

The pursuit of collective benefits can be captured in surveys in two complementary ways. First, it could be operationalised using well-established survey items measuring what activities people engage in with other people in their networks, such as political participation, volunteering, or pro-social behaviours (Burt, 1984; de Lange et al., 2004). Questions about who respondents turn to for advice, help or assistance in their networks could also be used to infer collaborative orientations (Burt, 1984; de Lange et al., 2004).

Second, surveys can incorporate experimental designs that simulate social dilemmas (van Lange et al., 2013), such as public goods or cooperation scenarios. These approaches provide behavioural indicators of participants' willingness to cooperate for collective benefit, rather

than relying solely on attitudinal self-reports. While more resource-intensive, such designs offer valuable insights into the quality and orientation of social relationships underpinning social cohesion.

Strengths for measuring social cohesion

Surveys remain a cornerstone of social cohesion research. They are a well-established, familiar and trusted source of evidence for policymakers and the public, and they enable population-level monitoring over time. Surveys are particularly well suited to capturing subjective dimensions of social cohesion, including attitudes, perceptions and self-reported behaviours, and allow for disaggregation across socio-demographic groups and geographic areas. Well-designed surveys can be used to infer population-level trends and characteristics. In the Australian context, their accessibility and familiarity make them an essential component of any comprehensive social cohesion measurement framework. These strengths of surveys can be further amplified through data linkage with other data sources, such as administrative data or social media data described below.

Limitations for measuring social cohesion

Surveys face important limitations. They are in practice conducted too infrequently to be useful for real-time monitoring or early-warning systems. The generalisability of their findings also depends heavily on the sample and research design. Many existing surveys rely on nationally representative surveys, limiting their applicability to smaller geographical units, such as Local Government Areas, or population sub-groups. This limits the capacity of surveys to inform place-based or community-specific programs. Furthermore, on their own, survey data provide limited diagnostic insight into the structural drivers of social cohesion or the institutional and infrastructural contexts that shape it. Finally, the self-reporting nature of surveys artificially constrains the extension of the network structures they are able to capture to participants' self-networks.

4.2 Social media data

Current data availability

Social media platforms generate large volumes of relational data through users' routine interactions. Across major platforms such as X, Facebook, YouTube, Instagram, and TikTok, users can publicly create content, react to or share others' content, and form explicit or implicit social ties through following, befriending, replying, mentioning, or co engaging with the same content. These interactions are time stamped and sometimes linked to socio geographic metadata (at least in X) at varying levels of granularity, allowing analysis of how connections form and evolve across space as well as over time. As a result, social media data provide a naturally relational data environment in which social networks can be observed at scale and in near real time.

Measuring network properties: social connectivity and inclusivity

Social media data enable the construction of interaction networks in which nodes represent users and ties represent repeated or salient interactions, such as replies, mentions, sharing, or co engagement around the same content. These networks can be decomposed into multiple layers based on topics or domains, such as politics, identity, sport, or civic issues, enabling the analysis of multilayer network structures.

Social connectivity can be measured using network metrics that capture robustness and redundancy, including the size and resilience of connected components, density of ties, availability of alternative interaction pathways, and sensitivity of the network to the removal

of highly connected nodes. Inclusivity can be assessed by examining the extent to which interactions cut across categorical and socio geographic boundaries, such as political orientation, identity markers, or location. Measures of assortativity, segregation, and overlap across layers provide indicators of whether categorical differences translate into structural separation or whether interaction patterns remain porous across groups and places.

Measuring the pursuit of collective benefits

The pursuit of collective benefits on social media can be operationalised in two complementary ways. From an attitudinal or discursive perspective, it can be inferred from the content and tone of communication, for example through expressions of solidarity, civility of interactions, mutual support, collective problem solving, or mobilisation around shared civic goals, identified via text analysis of posts, comments, or speeches. From a relational and behavioural perspective, it can be measured through observed patterns of constructive communication, such as sustained cross group engagement, collective action, or the formation of bridging ties between communities across multiple layers.

In both approaches, the quality of relationships can be further characterised by distinguishing between positive interactions, which reinforce cooperation and coordination, and aversive interactions, such as harassment, hostility, or antagonistic mobilisation, which may increase connectivity (at least on some layers) while undermining cohesion. This distinction is critical, as highly connected networks may still be weakly cohesive if interaction is predominantly adversarial and segregated by a limited number of layers.

Strengths for measuring social cohesion

Social media data (when made available to researchers) are well suited to the proposed conceptualisation of social cohesion as a property of networks. They allow direct observation of both self-reported attitudes and relational structures, thus supporting the analysis of social connectivity, inclusivity, and collective action within one analytical framework. Their high-frequency temporal resolution enables the examination of how cohesion responds to events, shocks, and emerging narratives. Importantly, network features such as the thinning of bridges between sub communities, the concentration of cross group ties in a small number of actors, and the evolution of these structures over time help identify weak spots in the system, and can serve as building bricks for early signal indicators of tensions brewing in (certain segments of) society more in general.

Critically, these properties also support the identification of potential intervention points. By analysing connectivity at user, community, or layer level, it becomes possible to design and assess boundaries for targeted and rapid intervention, for example by strengthening bridging ties, disrupting harmful coordination, or amplifying positive connective activity across fragmented parts of the network.

Limitations for measuring social cohesion

Despite these strengths, social media data have important limitations. As online participation varies systematically across demographic and socio-economic groups, platform user bases are not representative of the general population. Furthermore, observed interaction patterns are shaped by platform specific affordances and algorithmic curation. Measures of relationship quality inferred from online behaviour require careful validation, and online collaboration does not necessarily translate into offline cooperation. Geographic meta-data can also be patchy, depending on platform, with users either updating their location infrequently, or opting out of sharing location information completely. Whilst (imperfect) geo-spatial inference methods exist to fill gaps, grounding social media data to geographic units remains a challenge. Ethical, legal, and governance constraints further limit data access and the granularity of analysis. For

these reasons, social media data are best treated as a complementary source within a broader, multi-source measurement framework, rather than as a standalone measure of social cohesion.

4.3 Administrative data

Current data availability

As described in more detail in a previous paper in this series (Dixon & Biddle, 2025), the data environment in Australia has experienced a rapid growth in the quality, depth, and availability of large, linked administrative datasets. Access to that data has also expanded, partly through the introduction of the Australian Bureau of Statistics' (ABS') DataLab.[1]

There are two major linked data assets available for researchers. The Person Level Integrated Data Asset (PLIDA), previously known as the Multi-Agency Data Integration Project (MADIP), is a nationally representative administrative data asset combining information on population demographics, income and taxation, employment, and health. The unit of analysis is the individual, but information can also be aggregated to families, households, and geographic communities. The other major asset is the Business Longitudinal Analysis Data Environment (BLADE), which is a linked dataset for firms from 2001/02 to 2020/21. The dataset combines administrative records from the ATO with firm survey data from the ABS and the Department of Industry, Innovation and Science. There are also administrative datasets that have not been integrated or linked with PLIDA or BLADE, both at the federal (e.g., Australian Curriculum, Assessment and Reporting Authority Data Access Program) and state/territory levels (e.g., NSW Bureau of Crime Statistics and Research). For individual jurisdictions, data assets focus on areas covered by state/territory governments, including but not limited to hospitals, education, and the justice system.

Administrative datasets have significant potential for the study of social cohesion as a property of networks because they enable the creation of comprehensive population-level networks. Data assets like PLIDA have already been used to create population-wide networks in other countries, such as Denmark (Cremers et al., 2025), Sweden (Panayiotou et al., 2025) and the Netherlands (van der Laan et al., 2023; see also Bokányi et al., 2023; Hedde-von Westernhagen et al., 2024; Kazmina et al., 2024). For example, a population-level network dataset based on data from the official Dutch population register in 2018 contains information about 1.4 billion relationships between all 17 million people living in the Netherlands (van der Laan et al., 2023). It captures relationships within households, among extended family, as well as between people living in close proximity, attending the same educational institution, and working for the same employer. Very similar data is in theory available within PLIDA, subject to privacy constraints.

Measuring network properties: social connectivity and inclusivity

Social connectivity and inclusivity of population-level networks constructed from administrative data – in terms of their structure and patterns – can be measured using traditional and emerging metrics in network science (Bokányi et al., 2023) and put in relationship with established measures of social inclusion and development (e.g., income, education, health) routinely produced by national statistical agencies. For example, the number of relationships aggregated over time can be correlated with the position in the income distribution (see Cremers et al., 2025), or measures of shortest path can be deployed to explore the link between economic and social segregation.

Measuring the pursuit of collective benefits

[1] https://www.abs.gov.au/statistics/microdata-tablebuilder/datalab

Measures of the quality of the relationships between people in the network will depend on data availability and rigorous testing and validation. A large literature in economics and other social sciences traditionally relies on administrative data produced by the treasury and welfare, justice and other agencies for the measurement of individual and social welfare. For example, measures of aggregate economic output (e.g., added value generated along a certain value chain) can be interacted with demographic, justice and accounting information (e.g. tax evasion within the households of individuals employed in the value chain) to measure how wealth concentrates and is redistributed across the society.

Strengths for measuring social cohesion

Administrative data are suited to the study of social cohesion because they are the most comprehensive source of information about people's social networks. Compared to self-reported data, administrative data is transparent, it is based upon rigorous and universal protocols, it is robust to manipulation, and the data generating process is rigorously established. Critically, administrative data allows for the reconstruction of a plethora of layers that cannot be altered, manipulated or hidden by individuals (e.g., incarceration).

Limitations for measuring social cohesion

The main limitation of using administrative data for measuring social cohesion is data availability. Although the administrative data is available and accessible in theory, the creation of a whole-of-population network dataset raises significant privacy and ethical considerations and requires considerable technical expertise. It will also likely require extensive stakeholder engagement to ensure institutional buy-in and support. Another limitation is that the nature of the collected data generally relates to measurable actions and observed behaviours rather than professed preferences and values, and as such, analysis based upon this data requires the construction and validation of a mapping between these two realms relative to data sources relying on self-reported data.

4.4 Media and political speeches

Current data availability

Whilst the target unit of much of the foregoing discussion of social cohesion measurement is the quality, connectivity and inclusivity of *person-to-person* ties in a society, there are other potentially vast, geographically grounded, and relatively granular sources of discourse that could be considered as important complementary targets of inquiry. News-media and political speeches are important to a society's social cohesion at least because of their role in shaping personal beliefs through the framing of topics, groups, and issues (Somers, 1994), but also because they provide a window into the interactions of groups in society (e.g. groups participating in a sporting event, or show) and the stated values and preferences of one representative spokesperson from a given constituency towards others (e.g. positive or negative views of other's actions towards the self group). In other words, the three constituents of our proposed social cohesion framework may be present in these sources, albeit at a higher level of aggregation than the individual.

That said, data availability for these materials is sparse, and technically challenging. For news articles, online, open news media such as *ABC News* and *The Guardian Australia* provide full-text sources of national and state news text, via automated downloading methods, but for the main private providers (News Corp, Seven West, Nine Entertainment etc.) historical full-text news text must be accessed via paid providers where often access is limited to a given period and a certain volume of articles downloaded. Depending on scope, the costs can range from tens to hundreds of thousands of dollars for research-grade projects. Perhaps more pertinently

for the current aims, Australia continues to retain many regional newspapers, often providing a mix of national, state, and local news. Whilst ownership concentration is a major challenge in this domain (see for example reporting by the Public Interest Journalism Initiative, piji.com.au), these sources give voice to key local events and concerns which would be highly useful to the social cohesion measurement effort. However, local news ingestion would require paid subscription, by provider, and historical access is not assured.

For parliamentary speech, despite the Australian government's advances in other data areas mentioned above, parliamentary discourse is not easily obtained at scale across our deliberative chambers (see previous paper in this series: Angus, 2024). To date, only the NSW Parliament has an Application Programming Interface (API) for researchers to access Parliamentary Hansard in an automated way. Whilst an API for Federal Hansard is available via a civic effort, OpenAustralia.org, the project has faced resourcing issues and is not always reliable. Other parliaments would need researchers to set up bespoke scraping infrastructure from Hansard websites to obtain speeches, adding significant burden (and duplication) to the analysis effort. As mentioned elsewhere, the lack of API infrastructure to Parliamentary discourse across the nation is significantly hampering critical research related to social cohesion, democratic resilience, and a wide range of related quantitative humanities fields that would benefit policy makers across jurisdictions.

Local Council deliberations would be another valuable locale for analysis given their more granular geographic distribution, although again, whilst some councils provide a video or audio feed, this would need significant technical expertise to obtain accurate transcripts where each speaker is correctly distinguished and attributed – necessary for representative analysis of the kind described below.

Measuring network properties: social connectivity and inclusivity

For news media, the aim of processing would be to extract individuals and groups mentioned, their characteristics (either from within the piece or linked to a lookup database of the same), and any durable relational ties among these entities that emerge from the piece. For example, a report from a local outlet concerning the primary school's bi-annual visit to a regional Aboriginal or Torres Strait Islander community, where students and Indigenous elders provided quotes on the experience and activities to the reporting journalist, would provide the kind of evidence of durable bi-directional social connections between inner-city children of a certain demographic and regional indigenous community members. Recent advances in natural language processing (NLP) powered by transformer-backed AI methods bring this kind of hitherto highly manual data extraction into the realm of automation at high accuracy (Angus, 2024). Parliamentary discourse would likewise be amenable to such analysis, with the added advantage that the speaker (and their constituency) would be well known from biographical databases providing further context to the way that topics and groups are mentioned in their comments.

Measuring the pursuit of collective benefits

In a similar vein, with relational aspects of inter-group mixing and characteristics extracted from textual sources, measuring the pursuit of collective benefits could likewise be assessed with modern methods. Beyond mere sentiment (positive/negative), more complex constructs around collective good, cooperative affect or public benefit could be identified, especially where the news article or speech gave sufficient description of the nature of the relationship at play. Whilst modern automated methods have been shown to perform at, or above, human labelling of text at scale (Gilardi, 2023; Törnberg, 2023), rigorous human validation on the specific extraction task at hand would be required to ensure data validity.

Strengths for measuring social cohesion

Together, one could conceive of a complementary measure of social cohesion based on news and political discourse, via the three dimensions above, that provides a representative, geographically grounded, and regularly updated view of social cohesion through the 'windows' of news-media and deliberative discourse. One could imagine indicators that show local news containing diminishing heterogeneous interactions, or declining pursuit of collective benefits as early warning signals of deteriorating social cohesion in a locale. Or, in parliamentary discourse, one could identify speakers who routinely depict or frame other parliamentarians in a negative light, perhaps in line with, or despite, local indicators, or other evidence from surveys, social media or administrative data, moving in a different direction. Here, one could leverage the strength of complementary measurement channels to pinpoint whether social cohesion is perhaps threatened in a locale across the board (all indicators moving in the same direction), or if instead, perhaps underlying cohesion is strong, but actors are using discourse to frame deteriorating social cohesion for political purposes.

Significantly, despite some challenges to overcome with data access, like social media channels, news and political discourse have the clear strength that they are generated at a high frequency (hourly to daily), can be relatively low cost to obtain and process, and typically offer a consistent data generating process across a very wide geographical area, making inter-unit comparison, aggregation and analysis more robust.

Limitations for measuring social cohesion

The clear, major limitation of working with news and political discourse for social cohesion measurement is that of *proximity*: indicators based on news and discourse can only ever be considered proximate measures of underlying social cohesion at the individual, one step removed from the underlying communities and dynamics at play. Standing between individual level social cohesion and the signal that arises from this concept in news and political discourse are several potential layers of selection bias, political bias, and framing bias. Together, a careful research agenda focussing on validity and reproducibility would need to be undertaken by teams skilled in intersectional fields of machine-learning, NLP, AI and social sciences to overcome these challenges such that the very large promise of these data for social cohesion measurement can be realised.

5 Concluding comments and next steps

The central theoretical contribution of this paper is to reposition social cohesion as a measurable property of multilayer relational structures rather than primarily as an aggregate of individual attitudes. By distinguishing cohesion from its enabling conditions and specifying it in terms of the durability, inclusivity, and quality of connections, we provide a conceptually bounded construct that can be operationalised across data sources and levels of analysis.

To complement existing approaches, the paper explores how an expanded conceptualisation of social cohesion as a property of networks might enable wider application of analysis: the durability, inclusivity, and quality of connections among people, groups, institutions, and the infrastructures that link them. In a cohesive society, people's multiple social ties form an overlapping "super-network" across domains such as family, education, work, sport, faith, civic organisations, and digital life. They are shaped by the conditions around them including public narratives, information environments, and mechanisms to navigate disagreement. No single domain should split the population into isolated, self-contained networks. This network framing clarifies what social cohesion is at its core: the relational structures and conditions that enable cooperation across difference and resilience under stress.

5.1 What this enables for policy and practice

The use of the super-network definition expands the potential monitoring and diagnostic approaches available for different system levels. It supports decisions in three linked areas.

First, it supports decisions about enabling conditions for cohesion. Institutions shape whether networks are inclusive, accessible, and trusted through service quality, procedural fairness, civic infrastructure, and the design of physical and digital spaces. Second, it supports decisions about structural stressors. Housing insecurity, precarious work, and unequal access to essential services reduce opportunities for participation and weaken cross-cutting ties. Third, it supports decisions following events and disruptions. Shocks can thin bridging ties, intensify fragmentation, and amplify harmful narratives. Or, if managed well, can have the opposite (positive) impact. A super-network approach makes these dynamics measurable and therefore governable.

In the Australian policy landscape, this shift has practical implications. It moves social cohesion from a largely descriptive indicator set toward a system-level diagnostic tool. Instead of relying primarily on periodic survey snapshots, policymakers gain the capacity to identify structural fragmentation, monitor cross-group connectivity, and evaluate whether programs strengthen bridging ties across domains. This repositions social cohesion from a narrative goal to an operational policy variable.

5.2 Broadening data sources beyond surveys

Operationalising this approach can rely on multiple data sources, each suited to different decision needs. Surveys remain essential because they capture subjective dimensions, including trust, belonging, perceived fairness, and self-reported behaviours. Yet surveys are typically infrequent, limited in local granularity, and constrained in their ability to capture network structure. A practical next step is to add social network questions to existing surveys, and to explore linkages with surveys that already collect network information, allowing attitudes to be connected to relational structure.

Social media platforms offer high-frequency relational data that can reveal how interaction networks form, segregate, and shift in response to events. They also support analysis of discourse that shapes the conditions for connection. Used carefully, social media can provide early signals, such as thinning bridges between communities, rising adversarial interaction, or concentration of cross-group ties in a small number of actors. However, these data are not population-representative and are shaped by platform design and algorithms. They work best as a complementary signal, validated against other sources.

Administrative data offers a strong foundation for constructing population-level networks, including layers such as households, workplaces, education pathways, and geographic proximity. Australia's linked data assets provide an (untapped and under-utilised) pathway to measure connectivity and segregation at scale, and to relate network structure to outcomes such as service access, employment, education, and health. The constraints are substantial: privacy, governance, technical capability, and social licence. These constraints imply staged development, careful safeguards, and close partnership with data custodians.

Finally, news media and political discourse shape and reflect social cohesion through framing of groups, issues, and civic norms. Advances in language processing enable the extraction of relational signals and pro-social or exclusionary orientations at scale. These sources are proximate and must be interpreted with care due to selection and framing bias, but their frequency and geographic reach make them promising for monitoring narrative conditions and detecting emerging tensions.

5.3 Recommended next steps

We recommend a connected, three-part agenda.

1. Test and refine the conceptual definition of social cohesion in the context of relational super-networks through decision-focused workshops. Convene policymakers, community leaders, service providers, and researchers to specify priority decision needs, identify feasible indicators, and agree where continuity is essential and where operational variation is appropriate.
2. Run multiple practical measurement pilots in parallel. Ideally, these measurement pilots would focus on a small number (3-5) of strategically targeted locales, providing diversity in characteristics (e.g. regional/metro; ethnic/linguistic diversity; stable/unstable recent event history (e.g. natural disasters); and so on):
    a) Social Media Network Observatory: develop and validate network-based indicators of connectivity, inclusivity, and collaborative orientation using large-scale social media interaction data. Construct multilayer interaction networks (e.g., replies, mentions, co-engagement, shared narratives) and assess structural robustness, cross-group bridging, and concentration of connective ties. Explicitly test sensitivity to events and shocks, and validate indicators against survey and administrative benchmarks. Ensure strong ethical governance, transparency, and replicability.
    b) Social Cohesion Network Mapping: prototype network indicators of connectivity and inclusivity in one or two settings (for example, schools, councils, or a place-based initiative) using feasible combinations of surveys and administrative records.
    c) Narratives Observatory: develop a repeatable approach to track narrative conditions for cohesion across social media and public discourse, with explicit validation and ethical safeguards. Include practices of event identification and

sentiment shifts in addition to trends of community concerns and tensions in our multiple discourse fragments.

d) Local administrative data partnership: Test at a local level what can be measured in formal engagement settings, and whether service interactions and community infrastructure data can be used to build actionable, place-based cohesion diagnostics.

3. Build an evaluation and governance pathway. Adapt evaluation frameworks to enable measurement of program and service impacts which strengthen cohesion rather than undermining it.

Together, these steps translate social cohesion from a high-level narrative and indicator set into a system-oriented framework that can inform design, prioritisation, early warning, and accountability across Australia's democratic and social context.

Future work will focus on empirical validation of proposed indicators, including construct validation across data sources, sensitivity to shocks and events, and predictive capacity for outcomes associated with resilience or fragmentation. Establishing scientific robustness through replication, benchmarking, and transparency will be essential to ensure that network-based measures meet the evidentiary standards required for public decision-making.

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