

Digging into the sub-soil of the public service ecosystem: considering and theorising what lies at the sub-micro level.

Kate Broadhurst, University of Loughborough, UK

Steven Parker, Open University, UK

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Abstract

This article responds directly to Osborne et al.'s (2022) call to explore the underdeveloped sub-micro level of the public service ecosystem (PSE) framework. It develops the concept of "sub-soil"—the foundational family and community ecosystems that underpin public service value creation but remain largely invisible in current PSE theorisation. Drawing on family systems theory and community ecosystem research, we extend PSE theory by examining four critical dimensions: behavioural public administration as originally proposed; the dynamics of family and community ecosystems including their interconnections and conflicts; PSE turbulence created when 'dangerous' public service users are directed into formal systems; and the engineering of individual and family belief systems to align with PSE logic. The article introduces the novel concept of legislative and policy nodes as empirical connection points that illustrate how macro-level policy translates into micro-level practice and highlight the complex interconnections between family, community, and public service systems. We argue that overlooking these sub-soil dynamics substantially increases the risk of value co-destruction, particularly for marginalized communities and involuntary service users. The article concludes by identifying key implications for both public service ecosystem theory and practice, emphasizing the need for "sub-soil sensitivity" in public service design and delivery.

Introduction to the Public Service Ecosystem: qualities, deficiencies and opportunities

In their recent paper developing an integrative framework of the public service ecosystem (PSE), Osborne et al. (2022) state that the sub-micro PSE level is under-developed and requires significant exploration and evaluation, particularly emphasizing the importance of Behavioural Public Administration. In this theoretical paper, we take up this call by considering preliminary observations and provide theoretical perspectives on the sub-micro level of the PSE. This will complement current PSE scholarship by providing a more nuanced understanding of the sub-micro level which will in turn contribute to a better understanding of success and failure in the PSE.

The PSE framework (Petrescu, 2019; Osborne et al. 2022; Lebec and Dudau, 2024) has emerged as a promising integrative lens for understanding value creation in public services. The framework effectively integrates multiple theoretical perspectives (Public Value, Collaborative Governance, Public Service Logic, and Behavioural Public Administration), providing a multi-level approach to understanding value creation across institutional, organizational, and individual levels. This integration has successfully shifted focus from efficiency-driven paradigms toward value creation as the core objective of public service delivery (Trischler & Charles, 2019). By conceptualizing public services as part of a dynamic ecosystem, the PSE highlights interdependencies between various actors and processes, offering insights into how value is created, exchanged, and perceived within formal service contexts or conversely how value is destroyed for both the individual and the community/society through the poor design and/or delivery of public services (Dudau, et al. 2019; Engen et al., 2020; Cui & Osborne, 2022).

However, as the PSE moves closer to the private domain (for example families and communities), it becomes increasingly difficult to delineate boundaries at the micro and sub-micro levels. Osborne et al. (2022) explicitly identify several critical areas requiring further theoretical development, calling for research examining the interactions between the four levels of their framework and the development of more inclusive approaches to service design and delivery—particularly for marginalized communities and vulnerable service users. They emphasize that understanding context is essential for comprehending value creation, acknowledging that "value-in-context denotes the extent that a public service addresses the needs of a service user, within the unique setting both of their own life experiences and expectations and of the service ecosystem within which they are situated" (p.640).

Significantly, they highlight the under-developed nature of the sub-micro level in their framework and its connection to broader contextual elements. The authors specifically recognize the importance of "the local community as the milieu of service delivery" (p.639) and the value potentially added to "third parties who are not direct public service users... [including] the family, friends, and carers of a public service user" (p.640). In their recent paper, Osborne et al. (2025) acknowledge tensions in the system and recognise the potential

for conflict between individual and society about the value they seek, and recognise this tension needs resolution at a local level. The framework requires further conceptualization, and in particular how family systems—with their distinct cultural norms, power dynamics, and decision-making processes—interact with formal public services.

While Osborne et al. (2022) acknowledge the involvement of service users at the micro-level, there is a gap in theorizing how service users and family units are embedded within a PSE that mediates their interactions with public services. Families are not merely contexts for individual service users but represent distinct ecosystems with their own internal logics (Walsh, 2016; Broadhurst & Mason, 2017). Strokosch and Roy's (2025) call for "institutional integration" alongside structural and relational integration acknowledges that effective ecosystems require not just aligned structures and relationships but also compatible beliefs, values and work practices.

To address these limitations, we propose the concept of the sub-soil—an extension of the sub-micro level that foregrounds the often invisible but critical role of family and community systems in public service value creation. The metaphor of sub-soil captures the foundational, embedded belief systems that underpin user interactions with public services, corresponding with the visualisation of the layered ecological ecosystem (Tansley, 1935; cited in Osborne et al. 2022). These systems, while informal, significantly shape receptivity, resistance, and relational dynamics with formal public systems. We develop a more nuanced understanding of value creation that accounts for the multiple, sometimes competing value systems that coexist when public services interact with families and communities (Featherstone et al., 2018). This includes the mechanisms by which turbulence is created and managed when 'dangerous' public service users are directed into the PSE (Ferguson, 2017), as well as the processes through which public services seek to influence or realign family cultures and belief systems.

This paper is structured as follows: we begin by reviewing the current status of PSE theory, highlighting both its contributions and limitations; we then develop our sub-soil framework through four key dimensions—: (1) behavioural public administration, as originally proposed

as the core component of the sub-micro level by Osborne et al. (2022); (2) the dynamics of family and community ecosystems, including interconnections and points of conflict; (3) what we term 'PSE turbulence in dangerous waters', where the PSE is buffeted by crisis and hostility; and (4) engineering individual and family belief systems to ensure they dovetail with PSE logic; next, to provide an empirical foundation for this theorisation we introduce what we term legislative and policy nodes as empirical tools for understanding how strategic-level policy translates into micro-level practice within these complex ecosystem interactions; finally, we discuss theoretical and practical implications before identifying priorities for future research.

Digging into the sub-soil of the public service ecosystem

We term our analytical approach 'sub-soil sensitivity'—a disposition toward recognizing and engaging with the unseen ecosystems that shape public service experiences at ground level. This paper responds directly to limitations in current PSE theory by developing a theoretical framework that explicitly addresses the sub-micro level. We introduce the concept of 'sub-soil' to emphasize how family and community systems form the often unseen but essential foundation upon which public service value creation ultimately depends. Our framework extends PSE theory by conceptualizing how ecosystems interact, overlap, and sometimes conflict, offering a more comprehensive understanding of public service dynamics at this critical but undertheorized level.

The sub-micro level, as initially defined by Osborne et al. (2022), prioritizes individual and professional beliefs that shape perceptions of value. Yet this formulation stops short of accounting for other complex, situated – and even conflicting - ecosystems within which service users live; particularly familial and community contexts that fundamentally shape individual experiences of public services. For example, in their analysis of health and social care integration, Strokosch and Roy (2025) demonstrate how the PSE often operates within artificially 'self-contained' boundaries that narrowly focus on statutory sector actors, while marginalizing critical contributors like third sector organizations and community resources. Their research reveals how power relations shape these boundaries, determining "who is recognized as being involved and whose value contributions count" (Strokosch & Roy, 2025, p. 809), thereby limiting the potential dynamism of the service ecosystem.

Following Osborne et al. (2022), we extend the sub-soil by focusing on four key areas organized into two integrated sections: first, the actor ecosystems at the sub-micro level, examining both individual psychological processes (through BPA) and the collective family and community systems they inhabit; second, the system dynamics and transformation processes that occur when formal PSE structures encounter these informal ecosystems, including both turbulent conflicts and deliberate efforts to engineer belief system alignment.

The sub-micro level involves multiple types of actors whose beliefs and behaviours are shaped not only by individual psychology but also by their embeddedness within family and community ecosystems. To understand the sub-micro level fully, we must examine both the psychological processes of individual actors (as captured by BPA) and the collective ecosystems they inhabit, which serve as mediating structures between formal public services and individual experiences.

Individual and professional beliefs: The role of behavioural public administration

For Osborne et al (2022), BPA is the core theoretical approach at the sub-micro level, focusing on how personal and professional beliefs shape value creation within the PSE. BPA integrates insights from psychology, behavioural economics, and other behavioural sciences to understand the 'intersubjective' processes within or between individuals (Grimmelikhuijsen et al. 2017). For example, Gofen et al. (2021) demonstrate how behavioural perspectives deepen understanding of which psychological factors guide policy creation and connect 'real-world' individual actions with how policies are implemented, indicating connectivity between the sub-micro and other levels of the PSE.

BPA encompasses various related concepts including public service motivation (Perry and Hondeghem 2008; Breugh, Ritz, and Alfes 2018; Boyd 2025), individual values (der Wal 2008; Saliterer, and Guthrie 2020; Parker and Liddle 2024), public service ethos (Shand et al 2022; Witesman et al. 2023), and street level bureaucracy (Lipsky 1980; Gofen 2014; Marienfeldt 2024). Osborne et al. (2022) indicate that BPA informs how individual and professional beliefs construct the context for 'value in context', whereby service value creation is fundamentally situated within the user's broader life context, influenced by

personal circumstances, prior experiences, and the intersection of multiple ecosystems in which they participate.

However, a critical limitation of the BPA perspective within PSE is that it often treats the individual as an isolated actor, eclipsing the mediating role of families and communities, which are rarely neutral backdrops but rather normative systems with their own cultural logics and power dynamics. Grimmelikhuijsen et al. (2017) note that BPA draws on insights from individual psychology but also links to group behaviour, suggesting that groups are central to ecosystem connectivity at the sub-micro level. In the spirit of co-production and co-creation, BPA must relate to both professionals and service users, recognizing how their 'micro' behaviour integrates with and impacts upon the broader integrated PSE.

In summary, BPA focuses on the behaviours and belief systems of individual professionals and citizens, and as Osborne et al. (2022) imply, it seems valuable for PSE sub-soil sensitivity. Our principal reading of BPA is that it therefore provides a micro-level understanding of behaviour that connects individuals and groups, and therefore ecosystems. The question seems to be how actors' 'micro' behaviour integrates with and impacts upon on the broader concepts of the integrated PSE.

Family and community ecosystems as mediating structures

While BPA provides important insights into individual belief systems, it must be understood within the broader ecosystem context where families and communities serve as mediating structures that shape how individuals interpret and respond to public services. Family ecosystems and ecological perspectives are longstanding models taught in family therapy, social work and psychotherapy (Hill 2001; Eppler 2019). Resonating with Osborne et al's (2022) description of the micro and sub-micro levels of the PSE, family systems define ecosystems as interconnected contextual variables and patterns of functioning, usually describing the family as a 'micro ecosystem' surrounded by peripheral rings of social, cultural, built and natural environments.

A key distinction with the PSE is that the family gaze looks outward to other ecosystems, so scholars need to be mindful that actors may 'read' the ecosystem from their own vantage point. Examples of this 'reverse gaze' from families toward the PSE include engagement with universal public services, tax and benefits, or legislation mandating school attendance (Adams 2024). Conversely, there is a right to private family life and families choose the degree to which they interact with the PSE, become dependent upon it, or are controlled by it. Engaging with the PSE is not always voluntary - families can be mandated to collaborate as 'obligatees' (Alford 2016).

Furthermore, the layered ecosystem or peripheral rings diagrams are only one way of imagining the PSE and ecosystems. Another perspective on family ecosystems is the genogram—a pictorial family tree widely used by children and family professionals to illustrate complex family structures and points of tension. Genograms can be used to understand and evaluate family functioning, including high risk and crisis in family systems that may clash with the dominant PSE (Research in Practice 2019). Because of the privacy surrounding families, they provide a useful perspective for moving beyond the limitations of the PSE as currently designed.

Community ecosystems refer to actors, resources and processes organised around common values, ethnicities and beliefs to enable communities to gain control over their lives and resources (Turin et al. 2023). We must differentiate between 'geographical communities' in place (for example urban projects like Bristol Bites Back Better 2023) and 'communities of interest' specialising on specific needs groups dispersed across space. Examples include unpaid carers (Taylor et al. 2024) or community leaders progressing initiatives across a whole city, such as education projects for the Somalian community (Parker et al. 2025, in press).

While there is significant literature on partnership working and co-production between the PSE and citizens, indicating the importance of co-creation to increase public and social value, it is not easy to separate community ecosystems from the PSE since many community projects are maintained by short-term government policies and grants (Liddle et al. 2023).

However, community ecosystems can independently identify and address their own needs and aspirations (Turin et al. 2023) removed from PSE co-production narratives.

Understanding the actors within sub-micro ecosystems is only the first step. The critical challenge lies in managing the dynamic processes that occur when formal PSE structures encounter these informal family and community systems. These interactions can range from productive collaboration to destructive conflict, often requiring active intervention to realign belief systems and manage turbulence. As the new Osborne et al. (2025) paper emphasizes, effective place-based PSEs require a "robust approach predicated upon adapting to local conditions" rather than simply returning to prior states.

PSE turbulence in dangerous waters

The predominant premise of public value co-creation assumes a symbiotic relationship between public service professionals and service users to create value-in-context (Osborne et al. 2022; Broadhurst and Parker 2025). While often presented as consensual and cooperative, challenges arise when public service professionals engage with individuals or families who contest the PSE, creating turbulence that necessitates clear negotiation and communication at the micro and sub-micro levels.

Navigating daily tensions and micro-conflicts—disagreements between parents and professionals, or anger stemming from professional intervention in family life—is central to public service work. Relationships can frequently include mistrust, fear, hostility and hatred (Ferguson 2021). Street-level bureaucrats are often confident at navigating tensions to create 'value in use', with police officers, social workers, and nursing staff receiving specialist training for this purpose (Ghelani, 2021; Watson & Compton, 2019; Compton et al., 2008).

The current PSE framework, while acknowledging different levels of interaction, understates the power asymmetries between professional systems and family/community systems. This limitation becomes especially problematic when considering 'dangerous' or involuntary service users, where families may resist intervention rather than welcome it (Ferguson, 2017;

Littell and Tajima, 2000). One scenario involves withdrawal of cooperation, isolation, or failing to engage with statutory services. Although challenging for professionals, PSE procedures exist to manage these situations. However, a second scenario is more dangerous: when PSE professionals disengage from established practice through anxiety or detachment (Ratcliff 2024), or when children die or are seriously harmed due to known or suspected abuse, requiring 'Child Safeguarding Practice Reviews' (HM Government 2023). Such events may become crises for the PSE, creating turbulence and increased outside scrutiny. While it is assumed that citizens will interact with services, BPA may be less useful for understanding such 'outlier' belief systems that fundamentally reject PSE logic.

Re-engineering and aligning individual and family belief systems

When turbulence arises between PSE and family/community ecosystems, it often necessitates deliberate intervention to realign belief systems and create more productive relationships. If a key element of the PSE is as a continually transforming ecosystem, especially where other levels are being reviewed and actively managed, it seems logical to suggest that transformation of beliefs and intersubjective processes at the sub-micro level is part of this. This also necessitates consideration of the interaction between BPA and the challenge of belief systems. This is certainly the case with professionals who work with citizens, integrated processes which inform change and reflection in daily practice. Examples include police supervisory practices (College of Policing 2022) to integrate values in practice and continuous improvement, and social work supervision to reflect on and challenge practice, including ethical dilemmas, cultural issues and decision making (Social Work England 2019).

Challenging citizen belief systems is a core part of professional practice, ranging from polite questioning of beliefs alongside advice, guidance or counselling, to 'systemic practice' with families to understand their relationships and history in order to help them resolve issues within their own ecosystem and wider network (Stanford 2024). In addition to routine practice, more significant interventions evaluate parents' capacity to care for their children and safeguard their welfare, for example residential family centres providing accommodation for children with their parents (GOV.UK 2024).

This engineering process reflects what Osborne et al. (2025) describe as the need for intelligent performance management that considers ‘the existence of shared local resources, such as infrastructure, human capital and local artefacts’ and requires ‘integrating organizational with individual and community perspectives on performance.’ The emphasis on "habitus" versus "locus" is particularly relevant here—while traditional PSE focuses on spatial/geographic dimensions (locus), the sub-soil addresses the deeper cultural and belief dimensions (habitus) that shape how families and communities interact with formal services.

Advancing a theory of legislative and policy nodes connecting the PSE with family and community ecosystems

We now apply our sub-soil concept to two case examples bridging the PSE with family and community ecosystems, introducing what we term ‘legislative and policy nodes’ connecting them. Case example 1 is that UK legislation mandates a child must remain in the family or community ecosystem, rather than placing them in the state care system. Case example 2 is informal carers in the UK, represented in legislation and policy through a series of acts and policies which acknowledge their vital role to provide support. Our examples have a longstanding legislative and policy tradition connecting the PSE and other ecosystems. Although we predominantly focus on family ecosystems, the nodal connection with community ecosystems is also well integrated into our examples.

Our primary contribution is to draw attention that the PSE is not a singular ecosystem but is dependent upon other ecosystems. Furthermore, by introducing the centrality of family and community ecosystems into PSE, we progress interdisciplinarity between public management and human services scholars.

Whereas broader notions of collaboration between the state, communities and families are couched in terms of partnership, co-creation and co-production, these do not explain specific ‘nodal’ connections between ecosystems. By ‘nodes’ we specifically refer to precise intersections of connectivity between the ecosystems set out in legislation and policy; particularly how the state ‘hooks’ into and is in fact dependent upon other ecosystems. Our focus is therefore nodes *between* ecosystems rather than *within* ecosystems.

Child Protection System

The child protection system represents a compelling example of where legislative and policy nodes create formal bridges between public service ecosystems and family systems, typically in complex front line case work requiring considerations about safeguarding and future wellbeing. Whereas the legislative node is more formal, the policy node suggests a point of value co-creation between two ecosystems, although policy and legislation are frequently integrated.

Whereas previously state intervention often focused on removing children and placing them in state care, policy has increasingly emphasised prevention and support in the family and community (Heger and Scannapieco 1995; Jones 2007). Within this, the *ecosystems legislative and policy* nodes clearly demonstrate links between the PSE and family ecosystems, where it is directed that state professionals, such as social workers, need to use and rely on another ecosystem for support. This may be sometimes because there are insufficient or inappropriate resources within the state funded PSE, or that public value may be damaged by using a service from the PSE which may negatively impact value co-creation (Dudau et al, 2019).

For example, UK legislation mandates a child must remain in the family or community ecosystem, rather than placing them in the state care system. The overriding principle is that parents are best placed to care for their children, and the state's role is to support them. A key example of a legislative node between the PSE and family ecosystem is Part III of the UK Children Act 1989 which states: 'It is the duty of the state through local authorities to both safeguard and promote the welfare of vulnerable children; It is in the children's best interests to be brought up in their own families wherever possible'. This indicates trust and confidence by the PSE for the child to remain in the family ecosystem and if necessary, the wider 'kinship care' ecosystem, rather than state care. The link with the community ecosystem is demonstrated by kinship care (or family and friends care) where a child might be placed with a friend, or other connected person in the community (Department for Education, 2024). This is the most prevalent form of alternative care for children worldwide, reflecting the legal and policy commitment to supporting children to remain within their wider family networks whenever it is safe and in their best interests to do so (Department for Education, 2024)

Moreover, a nodal connection to the family ecosystem is demonstrated by 'Family Group Conferences' (Action for Children, 2009). Although professionals need to endorse the recommendations, these originate from the family and community ecosystem who are

thought to have an enhanced understanding of the family and community ecologies. The case example is explained in detail in Box 1.

Box 1: Child Protection System (Legislative and Policy Nodes)

Context: The child protection system represents a compelling example where legislative and policy nodes create formal bridges between public service ecosystems and family systems, often with complex consequences.

Legislative Nodes: The UK Children Act 1989 establishes a fundamental legislative node through its dual mandate to both protect children from harm while simultaneously preserving family units when possible. Section 17 of the Act creates a specific obligation for local authorities to provide "family support services" to maintain children within their families, while Section 47 creates investigative duties when harm is suspected.

Practical Example: Family Group Conference (FGC) model, originated in New Zealand's Maori communities and adapted into UK child protection systems. This represents both a legislative node (formally incorporated into child protection protocols) and a policy node (implemented differently across localities).

Value Creation/Destruction Dynamics: FGCs function as a:

- formal mechanism that explicitly acknowledges family ecosystem expertise
- site where PSE and family ecosystem values often clash
- process that can either enhance family capacity (value creation) or become a tokenistic exercise (value destruction)

Evidence Base: In the context of Family Group Conferences (FGCs), research has demonstrated how these formal interfaces between family systems and the PSE (child protection and social services) can both enable and constrain authentic family decision-making power (Morris & Connolly, 2012; Frost, Abram, & Burgess, 2014). Studies have documented how FGCs function as critical nodes where PSE and family ecosystem values either productively align or destructively clash, with outcomes heavily influenced by whether genuine decision-making authority is transferred to families or merely symbolically acknowledged (Holland & Rivett, 2008; Pennell & Burford, 2000).

Key Insight: This case illustrates how even well-designed nodes can produce contradictory outcomes depending on implementation and power dynamics.

Informal Family Carers

The second case example is the interface between the state and informal (unpaid) carers, where legislative and policy nodes create both formal and informal bridges between the PSE and family ecosystems. A carer is anyone who cares, unpaid, for a friend or family member who due to illness, disability, a mental health problem or an addiction cannot cope without their support (Carers Trust, 2021). The caring responsibilities can range from a few hours a week to seven days a week, and this means that the interface between the PSE, carers and

family ecosystems will depend on the extent of caring responsibilities, whether they have received a carer's assessment or are in receipt carer's allowance (Carers UK, 2023). The proximity of informal care to the PSE will depend on vulnerability and age, particularly when a young carer (under the age of 18) is caring for a relative with a disability, illness, mental health condition, or drug or alcohol problem (Action for Children, 2025).

Although there is a plethora of legislative and policy for carers, including legal acts and improvement strategies, this is not easy to navigate, and additionally challenging for the state to assess and fund. The core legislation is the Care Act 2014 (England). Specific legislative nodal connections include a 'wellbeing principle for adult and young carers' (Section 1) emphasizing that local authorities must consider a person's overall wellbeing when making decisions about care and support, including those related to family life and carers. A second, and core, legislative node between the PSE and family ecosystems are Carer's Assessments (Section 10) providing carers the legal right to an assessment of their own support needs, regardless of the needs of the person they care for, or how much care they provide (legislation.gov.uk)

A significant concern are discussions and debates about the 'gap' between state services and unpaid carers (Taylor et al. 2023) and that family carers contribute an estimated £162 billion per year worth of unpaid care (CSJ, 2024). Informal caring provides a testing ground for the limits of the PSE and its integration with and reliance on other ecosystems. Ecosystem overlaps may not be easily divisible and will depend on the scope and interpretation of the PSE boundary (Burn and Needham 2023). This indicates that value creation at this ecosystem nodal juncture may involve co-creation but also tension (Halliday, 2025). The case example is explained in detail in Box 2.

Box 2: Informal Family Carers (Legislative and Policy Nodes)

Context: Informal carers a clear example where legislative and policy nodes create formal bridges between public service ecosystems and family systems.

Legislative Nodes: Informal carers in the UK are represented in legislation and policy through a series of acts and policies which acknowledge their vital role to provide support.

Key pieces of legislation and policy include:

- **The Care Act 2014 (England):** This is a cornerstone of adult social care legislation in England and significantly impacts informal carers.
 - **Carer's Assessments:** It gives adult carers the legal right to an assessment of their own support needs, regardless of the needs of the person they care for, or how much care they provide.
 - **National Eligibility Criteria:** If a carer's needs meet national eligibility criteria, the local authority has a duty to meet those needs. This can be through direct support to the carer or via help for the person being cared for (e.g., respite care).
 - **Wellbeing Principle:** Local authorities have a general duty to promote an individual's "wellbeing," which applies to carers as well. This means considering their physical and mental health, social and economic wellbeing, and ability to participate in work, education, or recreation.
 - **Information and Advice:** Local authorities are required to provide information and advice to all residents, including carers, about their rights and available support.
 - **Preventing, Reducing, and Delaying Needs:** The Act places a duty on local councils to prevent, reduce, and delay the need for support, including the needs of carers.
- **Children and Families Act 2014 (England):** This Act covers young carers and parent carers of disabled children.
 - **Young Carer's Assessments:** Young carers have the same right to an assessment of their needs as parent carers of disabled children. The assessment must consider whether it's appropriate for the child to be providing care given their own needs.
 - **Parent Carer's Needs Assessments:** Parent carers of disabled children also have a right to an assessment of their needs for support.
- **Carers (Recognition and Services) Act 1995, Carers and Disabled Children Act 2000, and Carers (Equal Opportunities) Act 2004 (England and Wales):** These earlier acts laid the groundwork for carer's assessments and expanded their scope. The 2000 Act, for example, gave local authorities the power to provide services or direct payments to carers. The 2004 Act required local authorities to inform identified carers of their right to an assessment and to consider their wishes regarding work, leisure, education, and training.
- **Carer's Leave Act 2023 (England, Wales, and Scotland):** This significant recent legislation, effective from April 2024, provides employed carers with a statutory entitlement to one week of

unpaid leave per year to provide or arrange care for someone with a long-term care need. This is a "day one right" and offers employment protections.

- **Equality Act 2010:** This Act protects carers from discrimination by association with a disabled person, which is a protected characteristic. This applies in areas like employment and services.

Policy and Strategy:

- **National Carers Strategy (2008):** The Labour government published a ten-year national carers strategy in 2008. While a standalone strategy hasn't been re-published since, the government has made subsequent commitments.
- **Carer's Action Plan 2018-2020:** This plan outlined specific government commitments to support unpaid carers.
- **People at the Heart of Care (2021 White Paper):** This white paper on adult social care reform committed to building on the carers' action plan and included funding for supporting unpaid carers.
- **Civil Service Carers' Strategy (2020-2025):** This strategy focuses on supporting carers within the Civil Service, aiming to create a carer-inclusive workplace.
- **Proposed New National Carers Strategy:** A cross-party group of MPs and Peers launched a survey in early 2024 to gather views on a proposed new National Carers Strategy, highlighting ongoing efforts to address the challenges faced by carers.

Challenges and Gaps:

Despite this legislative and policy framework, challenges remain:

- **Awareness:** Many carers are still unaware of their rights and the support available to them.
- **Implementation:** The effectiveness of legislation often depends on how local authorities implement the duties and provisions.
- **Funding:** The level of funding available for carer support can impact the services provided.
- **Identification:** Identifying "hidden" carers who don't recognize themselves as such or who are not known to services remains a challenge.
- **Quality of Life:** Data from surveys like the Personal Social Services Survey of Adult Carers in England (SACE) indicates that the quality of life for many carers has deteriorated, and their involvement in discussions about care services has decreased.

In summary, informal carers in the UK have increasing legal recognition and rights, particularly through the Care Act 2014 and the Carer's Leave Act 2023. However, ongoing efforts are needed to ensure these rights translate into tangible support and improved wellbeing for the millions of people providing vital unpaid care.

Discussion: Looking within and without - internal and external ecosystem nodes

We now reflect on connections between the PSE and other ecosystems. Determining the scope of an ecosystem is not easy (Burns and Needham 2023) and will depend on interpretation, leading to nuanced differences between the way the PSE framework has been applied (Osborne

et.al 2025). In addition to variations of understanding, Osborne et al. (2022) identify PSE levels of macro, meso, micro and sub-micro. Because of the breadth of research on partnership working in public services, we wonder whether it is easier to theorise the PSE at the macro and meso levels of policy and organisation. However, as the PSE moves closer to the private domain, it becomes increasingly difficult to describe the exact boundary of the PSE at the micro and sub-micro levels. Indeed, Osborne et al. (2022) note the micro and sub-micro levels require further theoretical development.

Our exploration of the sub-soil level makes several significant contributions to PSE theory. First, we demonstrate that the current PSE framework, while valuable, operates with what we term a "macro-centric gaze"—viewing ecosystems primarily from the perspective of formal public service structures. This perspective, while necessary, is incomplete when attempting to understand value creation and destruction at the most intimate levels of public service interaction.

The concept of sub-soil sensitivity extends PSE theory by recognizing that family and community ecosystems operate according to their own internal logics, cultural norms, and decision-making processes that may align with, complement, or actively resist formal PSE objectives. This recognition challenges the implicit assumption in much PSE literature that value co-creation is inherently collaborative and consensual. Our analysis of PSE turbulence reveals that significant portions of public service work involve managing conflict, resistance, and competing value systems rather than fostering harmonious co-production.

The legislative and policy nodes framework provides a conceptual bridge between macro and meso level public policy and service intentions and micro-level family realities. These nodes function as translation mechanisms, illustrating how strategic and operation decisions become embedded in the daily practices of families and communities. This contributes to understanding what Strokosch and Roy (2025) term "institutional integration"—the alignment of beliefs, values, and work practices across ecosystem levels.

Our findings have particular relevance for the development of Behavioural Public Administration (BPA) as conceptualized by Osborne et al. (2022). While BPA traditionally focuses on individual cognitive biases and decision-making processes, our sub-soil analysis reveals that individual behaviour is deeply embedded within family and community systems that operate according to collective rather than individual logics.

This suggests that effective BPA approaches must account for what we term "ecosystem-embedded cognition"—the ways in which individual beliefs and behaviours are shaped by and responsive to family and community dynamics. For instance, a parent's response to child protection intervention cannot be understood solely through individual psychological frameworks but must account for family loyalty systems, community cultural norms, and intergenerational patterns of interaction with authority.

Conclusion

The work within this paper remains in its developmental stage, but our aim has been to illustrate that public service ecosystems have formalised connections with other ecosystems. At present the PSE 'gaze' is from the public management perspective, but we must be aware that that is our 'gaze' and actors from other ecosystems will look outwardly from their ecosystem to other ecosystems. In the forthcoming discussion of this paper at conference, we take the position that there are different ecosystems which requires more exploration, and consideration of how they connect via the legislative, policy and therapeutic nodes. We argue that this development will help us to understand more clearly the different levels of the ecosystems – in particular, the sub-micro level which as Osborne et al. (2021, 2022) note, has hardly been explored.

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