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What makes human contribution recognisable in AI-mediated work? Attributional labour and gendered recognition in apprenticeships in England

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Article

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Abstract

Debates around generative artificial intelligence frequently organise workplace change through automation and augmentation, leaving less visible the organisational work through which human contribution remains interpretable once production is shared with generative systems. Drawing on semi-structured interviews with 18 women in business-related apprenticeships in England, analysed through reflexive thematic analysis and abductive engagement with sociotechnical AI research, labour-process scholarship and feminist accounts of recognition, the study develops a mechanism-oriented account in which organisational rules delimit legitimate AI use, selected execution tasks accelerate, and verification, contextual judgement and accountable decision-making remain attached to apprentices. Where AI-mediated production made polished output a weaker standalone indicator of individual capability, some participants described supplementing performance with additional evidentiary work that rendered contribution, judgement and responsibility more legible to evaluators. This evaluator-facing work is conceptualised as attributional labour, a reconfiguration of pre-existing recognition demands whose form changes when technologically mediated artefacts reveal less about the human competence behind them. The organisational costs and returns associated with this work appeared to vary with occupational hierarchy, managerial proximity and the valuation of administrative and relational work. Augmentation consequently emerges as an organisational recognition settlement in which technical capacity, hidden human work and evaluative authority are redistributed together.

Keywords: generative artificial intelligence; apprenticeship; attributional labour; gender; recognition; labour process; sociotechnical change

Introduction

Technological change has long been bound up with employment struggles over control of work, definitions of skill and recognition of labour, and English apprenticeship gives those struggles an unusually explicit institutional form through an employer-led route that combines occupational standards, workplace participation and formal assessment (Fuller and Unwin 2009; Hordern 2021). Standards specify occupational knowledge, skills and behaviours, while employers retain extensive control over day-to-day task allocation, supervision and opportunities to demonstrate competence. During 2026, apprenticeship assessment moved through a phased reform in which some cohorts remained under End-Point Assessment while revised standards adopted apprenticeship assessment at different stages of training (Department for Work and Pensions 2026). Competence is therefore stabilised through formal expectations whose practical meaning still depends on the organisational settings in which apprentices learn, perform and become visible to evaluators.

GenAI enters this already mediated relation between work and recognition through uneven task exposure and organisational adoption. A 2026 UK government assessment reports IMF estimates that around 70% of UK workers are in occupations containing tasks that AI could potentially perform or enhance, while the same assessment distinguishes technical exposure from realised changes in jobs and organisations (Department for Science, Innovation and Technology and AI Security Institute 2026). International evidence adds a gendered distribution to this exposure: the International Labour Organization (2026) reports GenAI exposure in 29% of female-dominated occupations and 16% of male-dominated occupations, with 16% of female-dominated occupations located in the highest exposure categories compared with 3% of male-dominated occupations. Business-related apprenticeships consequently bring information-intensive work, formal competence recognition and women's occupational concentration into the same empirical setting, while leaving the social meaning of exposure open to organisational mediation.

Technical exposure acquires social consequence only through the organisational

arrangements that redistribute tasks, responsibility and evaluative authority, which shifts the analytical problem from what GenAI can perform towards how mediated work is incorporated into particular labour processes. Automation research increasingly treats technological change through task reconfiguration, workflow integration and residual human judgement (Raisch and Krakowski 2021; Brynjolfsson, Li and Raymond 2025; Lebovitz, Lifshitz-Assaf and Levina 2022), while apprenticeship research shows that formal standards acquire practical force through the quality and content of workplace participation (Fuller and Unwin 2009; Brockmann and Smith 2023). Employability scholarship adds a further layer by separating capability from its organisational recognition through signalling, visibility and access to evaluators (Holmes 2013; Tomlinson 2017). Taken together, these traditions locate the unresolved problem at the point where AI-mediated production changes the evidentiary traces from which organisations infer individual competence.

Once GenAI is treated as part of a sociotechnical relation, the same technical capacity can generate divergent effects across recruitment, assessment and routine production as organisations negotiate efficiency, authenticity, confidentiality and accountability through local rules. These arrangements place power inside augmentation itself: managerial and assessment actors govern where generative systems may enter work, which residual human activities remain answerable, and which traces of contribution become credible evidence of competence. The resulting relation between production and evaluation makes recognition analytically endogenous to AI-mediated work, since changes in how output is produced can also change what that output allows an evaluator to infer about the worker.

The study examines how GenAI-mediated task change reorganises the conditions through which apprentice competence becomes attributable and recognisable across 18 business-related placements in England. It asks how women apprentices experience shifts in execution, verification and judgement, how organisational rules and apprenticeship institutions configure legitimate human contribution, and how evaluator-facing recognition demands are navigated within gendered occupational

relations. The design supports interpretation of situated mechanisms and meaning-making across heterogeneous placements, while population prevalence, objective organisational effects and comparative gender estimates remain outside its inferential scope.

Across these placements, the empirical material exposes a recurrent separation between successful task completion and the evidence through which evaluators recognise who exercised competence within that task. Attributional labour captures the additional work through which workers make contribution, judgement and responsibility identifiable when AI-mediated production weakens completed output as a standalone indicator of individual capability, while the distribution of this evidentiary burden links sociotechnical co-production to labour-process control and gendered relations of recognition. Augmentation thereby becomes intelligible as a reorganisation of production and evaluation together, allowing faster execution to coexist with intensified human responsibility and stratified access to organisational credibility.

Literature review and analytical framework

Apprenticeship standards, workplace participation and gendered recognition

Apprenticeship coordinates competence through occupational standards while leaving its practical formation dependent on employer-controlled participation, so formal specification and workplace enactment operate as interdependent parts of the same evidentiary system. Standards establish knowledge, skills and behaviours and connect them to assessment, yet apprentices acquire and display those capabilities through tasks, feedback, supervision and workplace responsibility (Hordern 2021; Brockmann and Smith 2023). Hordern (2021, p. 148) notes that English standards were intended to emphasise "full competence" and assessment capable of providing "consistent and reliable judgements", locating apprenticeship within an explicitly evidentiary architecture. Fuller and Unwin’s (2003) distinction between expansive and restrictive

learning environments qualifies this formal promise by showing how task breadth and supported participation enlarge or constrain what apprentices can learn and demonstrate under a common qualification framework. Current assessment reforms alter when and by whom competence is judged while occupational standards continue to stabilise the categories through which that competence becomes formally legible (Department for Work and Pensions 2026). Formal assessment therefore supplies consistency through categories whose evidentiary force still depends on the workplace opportunities through which competence is produced and observed.

The stabilising function of occupational standards coexists with a temporal coordination problem whenever workplace technologies, employer practices and local expectations change faster than formal categories can be revised. In 2026 the Business Administrator standard represented within the sample remained approved for delivery while undergoing revision, illustrating how a benchmark can preserve continuity during an active redesign process (Skills England 2026). Winch et al. (2025) place this temporality within a broader apprenticeship system shaped by negotiated relations among employers, providers and regulatory actors, where occupational change is translated through institutional processes before it reaches training practice. The resulting tension therefore lies between the consistency that standards are designed to secure and the heterogeneous workplaces whose changing practices continually re-specify what competent performance looks like.

Recognition within this coordination problem is already socially differentiated before GenAI enters the labour process, since the organisational settings through which apprentices acquire, display and have their competence judged are themselves structured by occupational segregation, status hierarchies and unequal access to evaluative authority. Gender segregation has long shaped apprenticeship pathways and the occupational locations in which women’s work is organised, while socially constructed definitions of skill influence the status attached to administrative, communicative and relational contributions (Beck, Fuller and Unwin 2006; Steinberg 1990). This distinction between performing work and having that work recognised

becomes sharper once evaluation is treated as a relational process, since organisational actors differ in both their capacity to confer credibility and the presumptive authority attached to their judgements. Acker's (1990) account of gendered organisations and Ridgeway's (1997) analysis of status beliefs therefore extend the problem from occupational location to evaluative conversion, showing how formally neutral organisational processes can reproduce patterned differences in whose competence is readily believed, whose judgement carries authority and whose contribution requires additional demonstration. Gender consequently enters the analysis through the passage from performed contribution to recognised competence, including the occupational positioning of workers, the status attached to particular forms of work, access to senior evaluators and the credibility accorded to claims of judgement or expertise. The women-only design supports analysis of how participants located their experiences within these organisational relations, while comparative gender prevalence remains outside the study's evidentiary reach.

From task reconfiguration to attributional uncertainty

Early automation research estimated occupational susceptibility to computerisation through the technical tractability of job tasks (Frey and Osborne 2017), whereas GenAI exposure research increasingly measures whether language models can accelerate task completion while preserving output quality (Eloundou et al. 2024). The 2026 UK labour-market assessment adopts the same distinction, treating exposure as an indicator of tasks AI may perform or enhance and reserving realised employment effects for empirical observation within organisations (Department for Science, Innovation and Technology and AI Security Institute 2026). This task-based shift is analytically consequential since occupations combine activities that differ in codifiability, contextual dependence and need for judgement (Autor 2022; Acemoglu and Restrepo 2019), while skills-displacing technological change can reorganise job content even when occupational titles persist (McGuinness, Pouliakas and Redmond 2023). GenAI therefore changes the composition and valuation of work through selective task reallocation long before any occupation-level outcome becomes settled.

Once technologies enter workflow, automation and augmentation become a moving organisational relation shaped by workflow. Raisch and Krakowski's (2021) paradox captures the interdependence through which removing execution from one task segment creates new human demands elsewhere; Brynjolfsson, Li and Raymond's (2025) customer-support study grounds that proposition in a workflow where generative assistance produced heterogeneous productivity effects across workers. Lebovitz, Lifshitz-Assaf and Levina (2022) extend the problem into professional judgement, where opaque AI requires practitioners to decide when generated claims warrant acceptance, interrogation or rejection. Together, these studies shift analysis towards redistributed execution, verification and decision responsibility while leaving the evidentiary consequences for judging individual competence comparatively under-specified.

Task redistribution also reorganises control, since digital mediation alters what becomes observable, recordable and available for organisational judgement. Faraj, Pachidi and Sayegh (2018) describe black-boxed performance, comprehensive digitisation, anticipatory quantification and hidden politics as mechanisms through which learning algorithms reconfigure expertise and coordination; Kellogg, Valentine and Christin (2020) locate the same transformation within an evaluative infrastructure capable of directing, recording, rating and rewarding workers. GenAI adds a generative and conversational production layer to this established problem, so organisational significance arises through rules that determine what is recorded, who interprets mediated performance and how those interpretations enter decisions about value. Altered production traces therefore connect workflow redesign to recognition, since the evidence available to an evaluator changes alongside the distribution of the work itself.

Labour-process research identifies the hidden human activity that can sustain apparent automation, while visibility scholarship shows why the same activity can become organisationally legible in some settings and obscure in others. Ekbia and Nardi's (2014) heteromation captures digital systems that relocate critical work to users while

technological narratives foreground system performance; Suchman (1995) and Star and Strauss (1999, p. 9) shift attention to the representational practices through which organisations select what counts as observable work, with the latter noting that "No work is inherently either visible or invisible". GenAI intensifies this representational problem when polished output emerges through prompting, generation, checking and revision distributed across worker and system. The artefact may remain technically adequate while offering a longer and less determinate inferential path from completed performance to the knowledge, judgement and responsibility exercised by the worker.

Human–AI credit research makes this provenance problem explicit beyond employment settings, where successful co-production still leaves contribution open to interpretation. In a preregistered four-country experiment, Earp et al. (2024) show that credit assigned to AI-generated content varies with how the human–system relationship is configured, while Khosrowi, Finn and Clark (2025) frame GenAI production as a many-hands problem in which legitimate credit turns on the significance of distributed contributions. Workplace evaluation adds institutional consequence to this ambiguity: supervisors, assessors and recruiters translate attributions of contribution into judgements about capability, progression and occupational standing. The worker-facing problem begins when a co-produced artefact remains acceptable as output while supplying insufficient evidence for an evaluator to identify whose competence the artefact should represent.

Employability, visibility and evaluator authority

Employability becomes relevant to this problem once capability is treated as socially conferred through organisational interpretation as well as possessed through education and experience. Human-capital accounts connect accumulated capability to productivity (Becker 1964), while Brown, Lauder and Cheung (2020) show how labour-market value is mediated by institutional and competitive conditions; Holmes’s (2013) process perspective then places employability within identity, positioning and recognition. Spence’s (1973) signalling framework supplies the evidentiary mechanism, since qualifications and performance acquire value through conventions

that allow evaluators to infer otherwise unobservable qualities. AI-mediated production can disturb those conventions by changing what a polished artefact reveals about the person behind it, making employability partly a question of how capability becomes credible under altered conditions of evidence.

Relational resources become consequential when evidence of capability must reach actors who possess the authority to interpret and validate it. Brown, Hesketh and Williams (2004) show how competitive labour markets require individuals to read selection criteria and present themselves within evaluative settings, while Tomlinson (2017) identifies social and identity resources through which capability gains organisational recognition. Fejes's (2010) account of employability responsibilisation places continuous self-development within the same individualising trajectory. Self-presentation, networking and skill accumulation therefore predate GenAI and enter the present analysis only when their function narrows towards supplying evaluators with evidence about human contribution that the mediated artefact leaves ambiguous.

The credibility assigned to such evidence is socially stratified, which brings feminist organisation and skill scholarship into the mechanism at the point where visibility is converted into recognition. Steinberg (1990) shows that skill classifications emerge through social valuation as well as task complexity, while Wajcman (1991) situates technological change within gendered labour relations that shape associations between technical authority and particular workers. Informal proximity to managers and professional networks can therefore broker the organisational value of otherwise similar evidence, separating the production of a competence claim from the authority through which that claim becomes believable. For AI social science, the resulting question concerns how evidentiary uncertainty is distributed across workers and which organisational relations determine whether supplementary proof of contribution becomes recognised competence.

Across these literatures, the unresolved relation lies between technologically redistributed work and the organisational judgement through which individual capability is inferred. Task and labour-process research explains how human activity

moves or disappears from view within mediated production, while visibility and employability scholarship traces how selected signals and relationships make capability legible to evaluators; feminist organisation research then shows that evaluative authority itself is unequally positioned. The remaining analytical problem concerns the worker-facing labour that arises when a co-produced artefact remains acceptable as output yet becomes a weaker indicator of who exercised the knowledge, judgement and responsibility embedded in it. That relation requires a concept capable of distinguishing hidden production work and general self-presentation from additional evidence generated specifically for attribution and recognition.

From mediated production to differentiated recognition

The analytical sequence follows the mechanism that the empirical material requires. Sociotechnical research first establishes why identical GenAI capabilities acquire different workplace effects under divergent organisational rules, making local configuration more informative than exposure alone (Faraj, Pachidi and Sayegh 2018; Raisch and Krakowski 2021). Once those rules redistribute execution, labour-process analysis traces how verification, responsibility and control are reallocated across worker and system, including forms of human activity obscured by apparent efficiency (Thompson 1989; Ekbia and Nardi 2014; Kellogg, Valentine and Christin 2020). The analysis then reaches a further problem when mediated performance must be translated into recognised competence, since evidence becomes consequential only through evaluators positioned within status hierarchies and occupational relations. Feminist organisation and skill scholarship locates this conversion within credibility, managerial proximity and the social valuation of work (Acker 1990; Ridgeway 1997; Steinberg 1990), allowing the framework to explain why equally visible evidence can acquire unequal organisational force.

This ordering embeds recognition within the labour process itself, since a shift in who performs execution also alters the traces from which competence can be inferred and may leave residual checking or judgement human yet weakly visible in the finished artefact. The organisational capacity to interpret those traces rests with actors

occupying unequal evaluative positions. Attributional labour emerges at this intersection as the work through which workers reconstruct a credible relation between mediated performance and personal competence, linking production to the distribution of recognition.

Attributional labour was developed abductively from the empirical relation between AI-mediated production and competence recognition, with coding initially organised around contribution visibility, managerial recognition, checking, ownership and authenticity before concept formation. The concept applies when GenAI materially mediates production, completed output leaves individual contribution or judgement partially indeterminate, and recognition depends on an evaluator who must infer what the worker knew, checked, decided or owned. Contribution becomes evidentially relevant when workers identify their role within jointly produced output; judgement becomes legible through demonstrated checking, contextual reasoning or decision ownership; recognition follows when such evidence reaches actors able to confer credibility, progression or occupational standing. Production-facing verification and general career practices enter attributional labour only when mobilised to resolve contribution-legibility under evaluative conditions.

Methods

Design and participants

This qualitative design reconstructed situated mechanisms through which women apprentices interpreted GenAI-related change across heterogeneous business settings, centring meaning, process and organisational variation. Eighteen self-identified women held active apprenticeship placements in England across administration, operations, marketing, finance, consulting, HR, property, sales and related functions. Purposive recruitment followed a maximum-variation logic across sector, apprenticeship level and programme stage so a shared work-training problem could be examined across contrasting organisational contexts (Patton 2015). Recruitment

began through flyers and later extended to LinkedIn, widening access across dispersed employers while plausibly favouring participants already comfortable with professional self-presentation.

Interviews were conducted through Microsoft Teams between February and May 2026, lasted approximately 45–60 minutes and were transcribed with consent before manual checking. Semi-structured interviewing provided a sufficiently consistent set of domains for cross-case interpretation while preserving space for participants to develop situated accounts in their own terms (Mason 2002). Discussion covered current GenAI use, changes in task allocation and expectations, organisational permission and restriction, training and assessment, employability, visibility, progression and interpretations of gender within workplace and apprenticeship. Open questioning also allowed limited AI use, scepticism and gender irrelevance to enter the dataset as substantive variation, while sector, level and stage contextualised accounts without converting the study into a statistical subgroup comparison. Table 1 summarises participant characteristics across sector, apprenticeship or role, qualification level and programme stage, providing the contextual profile through which cross-case patterns were interpreted across the heterogeneous business-related placements.

Table 1 Participant characteristics

Code	Pseudonym	Sector	Apprenticeship or role	Level	Stage
P1	Charlotte	Construction	Business and Data Excellence	Level 4	Early stage
P2	Sofea	Financial services	Financial Services	Level 4	Advanced
P3	Sarah	Professional services	Accounting	Degree	Year 1
P4	Layla	Technology and	Multi-channel Marketing	Level 3	Mid-stage

Code	Pseudonym	Sector	Apprenticeship or role	Level	Stage
		retail			
P5	Christabel	Energy	Business Management	Degree	Year 3
P6	Christy	Business administration	Business Administration	Level 3	Near completion
P7	Izelda	Print production	Sales Estimating and Business Admin	Level 3	End-stage
P8	Rebecca	Financial services	Business Management	Degree	Year 3.5
P9	Rachel	Insurance	Business Operations	Level 3	Year 1
P10	Claire	Legal services	Business Management	Level 4	Year 2
P11	Jessica	Management consulting	Business Analyst	Degree	Year 2
P12	Rose	HR and recruitment	HR Business Partner	Level 3	Year 1.5
P13	Sophie	Real estate	Property Operations	Level 4	Year 2.5
P14	Kate	Retail and e-commerce	Business Administration	Level 3	Year 2
P15	Lucy	Advertising and marketing	Marketing Coordinator	Level 3	Year 1.5
P16	Margaret	Government and public sector	Business Administration	Level 3	Year 2.5
P17	Olivia	Telecommunications	Business Operations	Level 4	Year 1.5
P18	Diana	Hospitality and events	Business Administration	Degree	Year 2

Analytical strategy

The interviews were analysed through reflexive thematic analysis, with validity located in reflexive interpretation, coherent pattern development and transparent movement between data and argument, consistent with Braun and Clarke's (2019, 2022) formulation of themes as researcher-constructed patterns of shared meaning. Analysis proceeded recursively through familiarisation, semantic and latent coding, within- and cross-case comparison, candidate pattern construction, review against the full dataset, theme definition and writing. Abductive reasoning supported movement between participant accounts and sensitising concepts, allowing empirical tensions to revise the theoretical framing as interpretation developed (Timmermans and Tavory 2022). Accounts that complicated the emerging explanation remained analytically active throughout, including participants who described gendered organisational hierarchy while rejecting a direct gender interpretation and participants who reported AI-related task change in the absence of additional recognition work.

Attributional labour emerged during cross-case theme refinement when codes concerning contribution visibility, managerial recognition, checking, ownership, authenticity and demonstrable judgement converged across task-change and employability themes. Their recurrence exposed a distinction between work required to produce usable AI-mediated output and supplementary work directed towards making the worker's contribution recognisable to an evaluator. Comparison with networking, upskilling and visibility practices whose primary function lay in broader employability kept the concept anchored to a specific contribution-legibility problem and prevented generic career behaviour from defining its empirical boundaries.

A case-by-case evidence audit tested concept development against four empirically different relationships. Core cases linked an AI-related change in work to attributional uncertainty and a participant response oriented towards recognition; contextual cases connected technological change to attributional uncertainty while leaving the worker response unspecified; pre-existing cases contained recognition work whose primary reference point lay outside AI mediation; and general career practices lacked a contribution-legibility function. This comparison preserved the distinction between

participant quotation and researcher-developed mechanism claims while requiring each core instance of attributional labour to retain an identifiable evidentiary chain from technological mediation through evaluation to worker response. The final themes therefore rest on patterned interpretation across cases with deviant and boundary cases contributing directly to conceptual scope.

Sample adequacy was considered through information power, with a specific population, rich interviews and a mechanism-oriented interpretive aim supporting analytical depth at N=18 (Malterud, Siersma and Guassora 2016). Cross-sector variation extends analytical transfer across business-related pathways while claims remain concentrated on shared mechanisms across standards and occupations. The women-only sample supports analysis of how participants situated recognition within gendered occupational hierarchies, status relations and informal evaluator access; comparative estimates of women's and men's attributional labour belong to designs built around gender comparison.

Reflexivity

The researcher's position as a female undergraduate student created partial experiential proximity to participants while retaining important differences in occupational setting, apprenticeship trajectory and organisational experience, making reflexive attention necessary throughout data collection and analysis. This proximity supported sensitivity to participants' accounts of workplace expectations, progression and organisational relationships, while the researcher's control over questioning, coding, theme development and interpretive emphasis introduced an asymmetry that required sustained scrutiny. Reflexive memoing was used across the analytical process to examine how prior assumptions concerning gender, apprenticeship, workplace hierarchy and technological change shaped the interpretation of emerging patterns, drawing on Berger's (2015) account of researcher positionality and Haraway's (1988) formulation of situated knowledge. Particular attention was given to divergent, qualified and ambiguous accounts so that analytical development remained responsive to variation within the dataset and was not driven

disproportionately by cases that appeared most immediately coherent with the researcher's initial expectations. Reflexive practice therefore operated as a continuing examination of how standpoint, theoretical sensitivity and evidentiary selection influenced the movement from interview material to interpretation. Participant accounts were consequently treated as situated constructions of organisational conditions whose analytical value lay in how those conditions were experienced and made meaningful.

Findings

Legitimate AI use was organised through attribution boundaries

Participants encountered GenAI through organisational boundaries that regulated when AI-mediated work remained legitimate evidence of a person's contribution, making authenticity an explicit concern before efficiency entered the evaluation. Recruitment and assessment supplied the clearest cases: Charlotte described colleagues rejecting formulaic AI-assisted applications through the criterion "We want to know who you are as a person", Rose recalled AI being discouraged where employers sought access to the "real" candidate, and Christy described an organisational expectation that employees "fully present yourself, like your ability your time and contribution, not the tools". Across these accounts, legitimacy depended on preserving an interpretable relation between the person under judgement and the text or performance presented as evidence of competence.

Confidentiality established a second route through which identical technical capabilities acquired different organisational meanings. Rachel treated external GenAI as incompatible with sensitive organisational data, describing it as "never going to be 100% secure" for her work, while Margaret reported comparable restrictions around confidential information and Sophie's organisation channelled use through proprietary tools. Sarah differentiated coursework settings that permitted AI from examinations where assessment rules reserved performance for the candidate, and she emphasised

maintaining independent judgement in permitted contexts. Permission was therefore structured by the evidentiary and governance stakes of the task, with authenticity, security and formal assessment each redefining what counted as legitimate AI-mediated contribution.

Taken together, these restrictions isolate provenance governance from attributional labour itself: organisations may regulate AI use for security, tool control or assessment legitimacy while workers experience little need to repair the visibility of their own contribution. Rose's recruitment account marks the stronger attributional condition, since AI was constrained precisely where evaluators needed observable performance to remain interpretable as evidence about the individual. Rachel, Sophie and Sarah provide boundary cases in which governance remained institutionally salient while personal recognition work stayed peripheral. A contribution-legibility problem therefore emerges selectively where mediated output enters an evaluative setting that requires a credible link between the artefact and the competence attributed to the person behind it.

Execution was compressed while verification and accountable judgement expanded

Within permitted uses, participants located GenAI's most immediate benefit in compressed execution while responsibility for usable output remained attached to the worker. Sofea contrasted a task that "used to take an hour" with GenAI-assisted completion in "5 minutes", Christabel described automating mapping information that previously required manual collection of latitude and longitude data, and Jessica associated GenAI with simplifying tedious or low-value activity. Layla anticipated a similar redistribution in future roles extensively supported by AI. These accounts concentrate the technical gain in speed and information handling, leaving the wider labour process dependent on how organisations reallocate the judgement, verification and accountability surrounding that faster execution.

Work whose value remained anchored in contextual judgement or relational

accountability retained a distinctively human locus even as generative systems assumed more routine execution. Sofea's role centred on relationship building, where AI "can't compete with actual face-to-face interaction" with clients, while Claire described legal-service work through comparable relational limits and Izelda characterised GenAI as "quite unreliable" when crucial contextual information could be misread. Her conclusion that "nothing is more convincing to a human than another human" parallels Charlotte's distinction between fluent generation and situated understanding. The redistribution therefore moved selected execution towards the system while preserving human authority over contextual interpretation, relational credibility and responsibility for consequential decisions.

In several accounts, faster execution was accompanied by higher expectations of speed and accuracy, with participants describing residual human work as more demanding even as execution time contracted. Christy described an emerging standard of completing work "faster and more accurately, no mistakes", Sophie linked productivity expectations to AI-assisted acceleration, and Izelda reported pressure to finish work "done quicker" even when checking and integration made the process "in fact get much slower". Olivia likewise described added checking and integration within an ostensibly accelerated workflow. Productivity gains therefore coexisted with verification whose time and cognitive demands remained necessary for dependable output.

This verification work aligns with heteromation insofar as system performance depends on human activity that can disappear from narratives of technological efficiency (Ekbia and Nardi 2014); its immediate object is output usability, while organisational recognition forms a downstream issue. Participants checked, corrected and contextualised generated material to meet local standards, and Lebovitz, Lifshitz-Assaf and Levina's (2022) account of critical professional judgement locates expertise in deciding when an AI claim warrants acceptance, interrogation or rejection. Responsibility therefore remains with workers even when initial drafting, retrieval or formatting accelerates, creating conditions under which reliable production and

recognisable competence diverge.

The same redistribution exposed uneven coordination between formal provision and rapidly changing workplace expectations. Christy reported that "Some tech-skills that we've learned are out of date. That's something I can only discover and figure out outside", while Sofea, Claire, Kate, Lucy and Diana described training-practice distances in which usable capability developed through workplace experience or extra-programme learning. Charlotte's account of regular mentoring and small-team proximity supplied a counterpoint, showing how organisational feedback can connect changing practice with skill formation even while formal provision moves more slowly. The instability observed across cases therefore concerned the coordination of training, work and evaluation across heterogeneous placements, with standards offering continuity while local practices altered the capabilities that employers treated as current.

Where faster execution was treated as an organisational baseline, participants also described a shift in what employers expected humans to contribute and what forms of competence retained differentiating value. Rebecca observed that digital fluency had become expected and that, with AI supporting tasks, "Our time's expected into critical analysis, judgement, and innovative thinking"; Lucy likewise described greater emphasis on critical thinking as technical and clerical production became easier to support, while Layla located higher-order competence in retaining "your own decisions" under GenAI assistance. Routine digital production consequently became less distinctive at the same time that accountable judgement acquired greater organisational value, creating a transition from task redistribution towards the evidentiary problem of how that judgement becomes attributable to a particular worker.

Attributional uncertainty could generate additional labour of recognition

Task redistribution intersected with a recognition problem several participants already experienced independently of AI, establishing a pre-existing separation between

competent performance and organisational recognition. Christy described having to "actively show that I'm doing well alongside actually doing well", with preparation for management encounters leaving her "not able to do anything else" at times; Rebecca noted that "it’s important to make sure your contributions are known, otherwise it can be easily overlooked", while Sofea stated that "if you’re not seen, then you won’t get much further". Visibility work therefore predates GenAI, while AI reconfigures its object and evidentiary content.

GenAI reconfigured that object most clearly in Rebecca’s account, where a direct temporal comparison linked polished AI-assisted output to uncertainty over personal contribution and to an additional explanatory response. "Before we started using ChatGPT, if I produced a good report, people could see that I knew what I was doing. Now everyone can produce something polished quite quickly, so I feel like I have to explain how I got there and what decisions were actually mine." She located the same problem within managerial evaluation: "My manager sees the final deck, but she cannot really tell which parts came from the tool and which parts came from my own judgement. So I've started talking through my reasoning much more in meetings." Within a single case, AI-mediated production, contribution-provenance uncertainty and process narration therefore form a continuous evidentiary chain through which the worker reconstructs the connection between output and judgement.

Attributional labour names additional evaluator-facing work entering the gap between technologically mediated performance and organisational inference. Workers may evidence contribution by preserving or explaining how a joint artefact was produced, render judgement legible through checking, contextual reasoning or decision ownership, and secure recognition by carrying that evidence into relationships with people able to confer credibility, progression or standing. Conceptual membership follows the function an activity performs within an evaluative relation, while surface form alone remains analytically indeterminate: checking serves production when directed at output quality and becomes attributional when its performance is mobilised as evidence of human judgement.

Rebecca’s account makes these functional differences empirically concrete by showing how ordinary GenAI use shifted the evidentiary basis of distinction. As basic GenAI use became normalised, she became "more conscious now of showing that I can challenge what it gives me and make the final judgement myself", relocating differentiation from tool access towards demonstrable evaluative control. Highly polished work could also trigger provenance suspicion, leading her to describe "keeping drafts and explaining what I changed, just so they can see that I actually understand it". Process narration, retained drafts and explicit decision ownership supplied evaluators with evidence that the finished artefact left underdetermined, giving contribution evidencing and judgement evidencing observable organisational forms.

Relational visibility enters attributional labour when interaction functions as a route through which evidentiary claims reach evaluative authority. Sofea described "networking", sustained proactivity with her line manager and colleagues, and "asking tons of questions" until she could "land the respect of them", a sequence in which repeated contact created occasions for organisationally powerful actors to observe and interpret her contribution. Olivia’s effort to "engage with as many people in my company as I can" and learn across the organisation, by contrast, was framed as broader employability networking with the AI-related attribution link left unspecified. Treating Olivia’s account as contextual recognition work preserves the boundary between general relational investment and interaction mobilised specifically to resolve contribution-legibility.

Anticipatory skill-building sits at a neighbouring boundary for the same functional reason, since additional learning can strengthen employability while carrying no specific evidentiary relation to AI-mediated output. Christabel wanted "maybe even too many skills" to maximise employability, Rebecca undertook AI and large-language-model courses, and Layla described acquiring experience for the transition into permanent employment. These practices exemplify the individualised self-development identified by Fejes (2010), while their contribution to attributional

labour depends on whether newly acquired capability is mobilised as evidence that distinguishes human judgement within mediated production. Skill accumulation therefore remains an adjacent anticipatory strategy whose conceptual status changes only when its organisational function becomes contribution-legibility.

Boundary cases specify the conditions under which attributional labour becomes salient. Rachel, Claire, Jessica, Sophie and Kate described AI restrictions, task simplification, training lag or changing expectations while their accounts centred on governance or work redesign and kept supplementary self-evidencing peripheral. Their experiences isolate technological change from attributional response, indicating that mediated production becomes attributionally consequential when evaluative uncertainty over human contribution intersects with worker responsibility for supplying additional evidence. The concept therefore tracks a conditional transfer of evidentiary responsibility, distinct from AI use, checking, networking or upskilling in themselves.

Managerial proximity and gendered status conditioned recognition

The conversion of evidentiary work into recognition depended on access to evaluators whose authority was unevenly distributed across organisational hierarchies. Sofea described a workplace where relationship managers, relationship directors and her director were men while assistant relationship managers were mostly women, making her strategy of becoming "the loudest" an attempt to secure audibility within a visibly gendered senior structure. Christy described an anticipated promotion going to a male colleague who became the "leader figure", alongside male social grouping and informal contact with management through weekend sports and drinks, while Charlotte located related inequality within the masculine trade-based imagery through which apprenticeship itself remained socially recognisable. These accounts position evaluator proximity, occupational hierarchy and pathway legitimacy as organisational conditions through which evidence acquires authority beyond the quality of performance alone.

The value attached to contribution was similarly mediated by gendered skill classifications. Business-related apprenticeship work included administrative, communicative and relational activity whose organisational necessity carried no automatic guarantee of higher-order status, consistent with Steinberg's (1990) account of socially constructed skill hierarchies. GenAI's compression of routine information processing increased the relative importance of judgement and relationship work while inherited status classifications continued to shape valuation. Attributional labour therefore entered a field in which evidentiary credibility was already stratified within an inherited gender order.

Variation across Sarah, Olivia and Rebecca shows how gendered organisational relations can remain consequential while acquiring different levels of salience in participants' interpretations. Sarah treated gender as irrelevant to her experience, Olivia resisted a women-specific account of AI's workforce effects, and Rebecca combined formal equal opportunity with the observation that women worked intensely "to excel and to be heard". Formal equality discourse, individual merit narratives and gendered hierarchy can coexist, making recognition contingent on local seniority structures, occupational positioning and access to endorsement across multiple interpretive frames.

The women-only design locates gender within participants' accounts of recognition while leaving comparative prevalence to research that includes differently gendered groups. Several participants situated the conversion of contribution into credibility within male-dominated senior hierarchies and informal managerial relations, while others qualified or rejected a gender interpretation. Apprentice and junior status creates an intersecting source of recognition dependence through limited authority and reliance on supervisors for tasks, feedback and progression. Gender is therefore treated as one organising relation within evaluator access whose effects are mediated by occupational position, apprenticeship status and local hierarchy.

Across the four findings, organisational rules delimit when AI-mediated work can stand as legitimate evidence of personal contribution; permitted use then redistributes

execution, verification and accountable judgement; and evaluative settings determine whether the resulting artefact still provides an adequate signal of individual capability. Where that signal weakens, workers generate supplementary evidence of contribution and judgement, while the credibility of such evidence depends on access to people able to recognise it. Attributional labour therefore describes a conditional transfer of evidentiary responsibility from the artefact towards the worker, with its organisational returns filtered through evaluator authority and social position.

Discussion

Organised augmentation and the attribution problem

The findings recast augmentation as an organisational settlement linking technical performance to legitimacy, verification and recognition, with divergent effects emerging from how particular placements governed the same broad class of generative capability. Organisations restricted use where authenticity or confidentiality made provenance consequential, permitted it where efficiency could be captured under local controls, and retained human responsibility for contextual judgement even when execution accelerated. This pattern extends Raisch and Krakowski's (2021) automation–augmentation paradox by locating a further interdependence between task redistribution and evaluation: removing execution from the worker can increase the organisational importance of evidence showing where human competence remains operative. Augmentation therefore becomes a problem of attribution and workflow design simultaneously, since technical assistance reconfigures both what workers do and what completed work can evidence about them.

Power enters this settlement through the organisational authority to define legitimate use and to translate mediated performance into competence. Faraj, Pachidi and Sayegh (2018) locate hidden politics within algorithmic reorganisation of expertise and coordination, while Kellogg, Valentine and Christin (2020) show how digital

systems extend control through mechanisms of direction, recording, evaluation and reward. In the present material, the same authority stretches from deciding where GenAI may enter work to judging whether resulting performance counts as authentic, competent and progression-worthy. Faster execution is therefore inseparable from institutional decisions over provenance, accountability and credibility, placing evaluative power inside the production of apparently technical outcomes.

The attribution problem becomes acute when evaluators infer capability from observable output whose production has distributed agency across a worker and a generative system. Star and Strauss (1999) show that organisational visibility depends on selected indicators and chains of inference, while Suchman (1995) locates legibility in representational practices that make some aspects of work available for organisational judgement. GenAI lengthens this inferential chain when a polished report, analysis or communication confirms task completion yet leaves the distribution of substantive knowledge, verification and contextual judgement partially opaque. Recruitment and assessment restrictions reveal the stakes of that opacity, since organisations preserve human-readable provenance precisely where evaluators require evidence about the person beyond the artefact itself.

Productivity gains can consequently coexist with intensified human responsibility through two analytically distinct forms of labour. Ekbia and Nardi's (2014) heteromation captures checking and integration that keep digitally mediated production functioning, while Lebovitz, Lifshitz-Assaf and Levina (2022) show how AI-supported professional judgement relocates expertise towards interrogation and decision responsibility. Reliable output can therefore be achieved while the worker's competence remains weakly visible, creating an evaluative problem after the production problem has been solved. The resulting divergence between work that secures output quality and work that secures credit for human judgement marks the point at which attributional labour becomes organisationally distinct.

Attributional labour as contribution-evidencing work

Attributional labour captures evaluator-facing work generated when AI-mediated production weakens completed output as a standalone signal of human contribution, judgement and responsibility. Contribution may be evidenced through retained drafts, process explanation or explicit delineation of one's role; judgement becomes recognisable through demonstrated checking, contextual reasoning and decision ownership; recognition then depends on carrying those traces into relations where evaluators can confer credibility, progression or standing. Explanation, documentation, demonstration and relational access differ in form, but share the function of resolving contribution-provenance uncertainty for consequential evaluation.

This formulation separates attributional labour from neighbouring concepts by following where each explanatory account reaches its limit. Heteromation identifies hidden human activity that sustains system performance, while attributional labour begins when ownership of that activity itself requires evidentiary reconstruction for an evaluator. Verification secures a usable artefact, whereas attributional labour turns the performance of checking or judgement into recognisable competence. Impression management and networking encompass broader attempts to shape professional perception, and generic skill investment addresses future employability; each enters attributional labour only where its organisational function is to establish human contribution within technologically mediated production.

The phrase has an earlier organisational lineage in Thompson and McHugh's (2002) discussion of managerial "attributional labour", drawing on McHugh's earlier work on the regulation and ascription of intent and commitment. The present formulation retains attribution as its organising concern while re-specifying actor, object and mechanism: workers undertake the labour, the object is the provenance and ownership of competence within human–AI production, and the mechanism is supplementary evidentiary work oriented towards evaluators. Conceptual novelty therefore resides in linking technologically mediated production to worker-facing recognition through a distinct organisational process, with lexical priority playing no role in the contribution

claim.

Human–AI credit research clarifies why this organisational step becomes necessary. Earp et al. (2024) show experimentally that credit assigned to a human user changes with the configured relationship between person and system, while Khosrowi, Finn and Clark (2025) treat GenAI output as a many-hands product in which legitimate credit depends on the significance of distributed contributions. Workplace attribution carries a different consequence, since the worker's task is to make a specific contribution interpretable to an evaluator whose judgement affects competence, progression or employment. Ambiguity over human–AI credit is therefore converted into organisational labour when workers must generate evidence that allows consequential evaluators to recognise whose judgement deserves occupational value.

The analysis suggests that attributional labour is likely to be less salient where contribution provenance is already recorded, individual performance remains directly observable, AI use carries little relevance for evaluation, or workers possess sufficient positional authority for their judgement to be presumptively credible. It appears more salient under the inverse configuration, where co-produced artefacts offer weak provenance signals and evaluators require a defensible account of human capability before conferring recognition. The negative and contextual cases in this study locate the concept within this conditional space, since AI restrictions, task change and training lag frequently appeared as organisationally significant changes while attributional response remained peripheral.

Figure 1 condenses this conditional sequence by linking organisational rules to task redistribution, attributional uncertainty and evaluator-facing evidentiary work, while locating evaluator authority, apprentice status and gendered occupational relations at the point where evidence is converted into recognition.

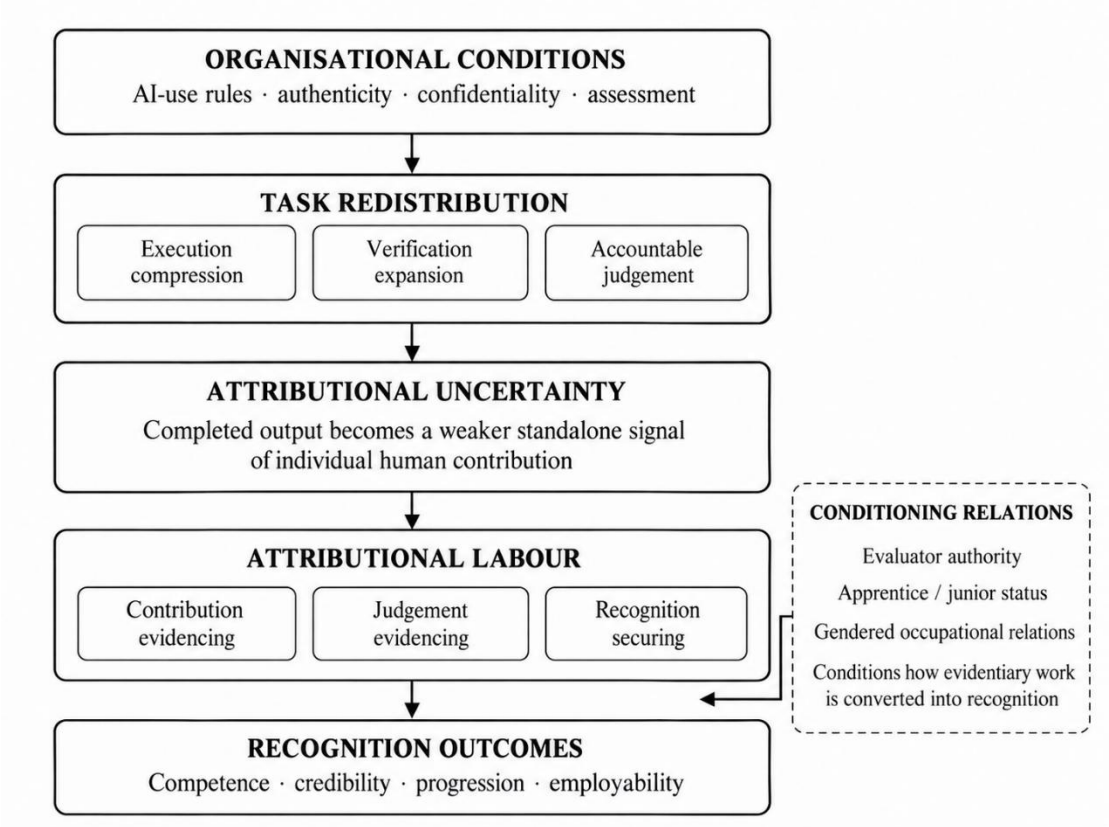


Fig. 1 | From AI-mediated production to attributional labour and recognition. Organisational rules condition when GenAI-mediated work is legitimate, while task redistribution can compress execution and retain or expand verification and accountable judgement. Where completed output provides an incomplete signal of individual human contribution, workers may undertake contribution evidencing, judgement evidencing and recognition securing. The conversion of this attributional labour into recognised competence is conditioned by evaluator authority, apprenticeship or junior status and gendered occupational relations. The sequence is conditional, with attributional labour becoming more salient where mediated output weakens provenance signals under consequential evaluation.

Heteromation, visibility scholarship and employability research therefore meet at different points in the same organisational sequence while leaving a residual transition between hidden human contribution and evaluator-facing proof. Heteromation explains the checking and integration that sustain system performance, visibility scholarship explains how selected traces become organisationally observable, and

employability research explains why workers cultivate signals and relationships through which capability acquires value. Attributional labour specifies the narrower transfer that occurs when uncertainty generated within human–AI co-production is externalised to workers as a requirement to produce supplementary evidence for organisational judgement. The concept is consequently most useful where production has already succeeded technically yet recognition still depends on reconstructing the worker's contribution from evidence beyond the finished artefact.

Institutional desynchronisation and responsibility

Apprenticeship intensifies the attribution problem through its dual dependence on workplace performance and formalised competence categories, particularly where expectations around speed, AI fluency and judgement move at a different temporal rhythm from training content. Participants described partial misalignment among certification, workplace practice and local evaluator expectations, with some capabilities developed through situated work or extra-programme learning while formal standards continued to organise assessment. Current reforms make this institutional mobility explicit by redesigning apprenticeship assessment while employers retain control over day-to-day opportunities for demonstrating capability (Department for Work and Pensions 2026). The relevant instability concerns coordination among evidence systems, while credential value remains a separate empirical question.

Such desynchronisation can externalise adaptation towards apprentices when formal provision leaves emerging workplace expectations only partially specified. Participants responded through situated learning, external courses, informal feedback and anticipatory self-development, a pattern that Fejes's (2010) account of employability responsibilisation helps interpret while preserving a distinction between capability formation and capability legibility. Skill acquisition addresses uncertainty over what future competence will require; attributional labour addresses uncertainty over how exercised competence becomes attributable in evaluation. Their coexistence shows how technological change can individualise two different organisational gaps,

one in the production of capability and another in the recognition of capability.

Apprentice status supplies an intersecting explanation for recognition vulnerability, since junior workers depend heavily on supervisors for task access, feedback and progression across workplaces with varying levels of GenAI use. The present material suggests that generative systems can redirect this pre-existing dependency when routine output becomes easier to reproduce and accountable judgement becomes more valuable, thereby changing the evidence through which supervisors interpret capability. Comparative designs across seniority levels and within the same occupational standard would allow the relative contribution of AI mediation, apprenticeship position and their interaction to be estimated more directly, while the current study establishes how those relations become experientially entangled.

Participants' accounts point to an institutional asymmetry in how evidentiary uncertainty can be carried within apprenticeship. Formal standards seek stable criteria for occupational competence, while employers control much of the situated work through which those criteria become observable; when GenAI alters evidence production faster than interpretive conventions stabilise, supervisors, recruiters and assessors become practical translators between mediated performance and competence claims. Recognition is brokered through organisational judgement, with standards and tools supplying inputs to that judgement. For work-based learning, coordination failures among technology, workplace organisation and assessment can therefore be absorbed by apprentices as additional self-evidencing work.

Gendered recognition and evaluator authority

Gendered recognition extends the attribution argument from the production of evidence to the organisation of credibility, since making contribution visible leaves the authority to value that contribution concentrated elsewhere. Sofea's account of male concentration in senior relationship roles, Christy's description of informal male access to management and Rebecca's observation that women worked hard "to be heard" position evaluator authority within gendered organisational relations.

Steinberg's (1990) analysis of skill valuation and Acker's (1990) account of gendered organisations explain how apparently neutral evidence enters hierarchies where administrative, relational and communicative work carries differentiated status. Attributional labour can therefore increase individual recognisability while leaving the distribution of evaluative authority intact.

Sarah, Olivia and Rebecca articulate three different relations to gender that make local organisational configuration more analytically informative than a singular disadvantage narrative. Sarah treated gender as irrelevant to her experience, Olivia questioned a women-specific AI effect, and Rebecca simultaneously described formal equal opportunity and intensified effort among women to "excel and to be heard". Their divergence allows formal equality discourse, individual merit language and gendered hierarchy to coexist within the same explanatory field, with gender becoming more or less salient according to occupational position, managerial proximity and the status assigned to particular forms of work. Recognition is therefore socially differentiated through organisational relations even when participants themselves interpret those relations through contrasting gender narratives.

The politics of augmentation consequently turns on the separation between increased individual recognisability and redistributed evaluative authority. Workers may explain, document and display judgement more effectively while the organisational power to validate those claims remains concentrated in managerial and assessment roles. Clear provenance practices, formal recognition of verification and accountable judgement, and structured opportunities for apprentices to evidence contribution can reduce dependence on informal visibility by relocating part of the evidentiary burden into organisational design. Responsible AI governance in work-based learning thus includes decisions about who must generate evidence of human contribution and who possesses the authority to convert that evidence into recognised competence.

Conclusion

Across the dataset, the analysis identified a conditional sequence in which rules of legitimate use framed task redistribution, faster execution could alter the evidentiary value of completed output, and evaluators retained authority over whether residual human judgement became recognisable as competence. In the clearest attributional cases, where technologically mediated artefacts provided a weaker signal of individual contribution, participants supplied supplementary explanations, provenance traces and demonstrations of judgement that helped re-establish a credible connection between performance and person. Attributional labour captures this conditional transfer of evidentiary responsibility from the artefact towards the worker, locating a hidden cost of augmentation within the organisation of recognition itself.

This mechanism brings several established literatures into a more precise relation without collapsing their distinct objects. Heteromated labour accounts for human activity that sustains system performance, visibility research explains how selected traces of work become organisationally legible, and employability scholarship establishes why capability acquires value through evaluative conventions and relational access; attributional labour occupies the point at which these processes converge around uncertainty over contribution provenance. GenAI's significance in participants' accounts lay in reconfiguring what successful performance could evidence and in increasing the organisational value of demonstrable judgement as routine digital production became easier to reproduce. Augmentation therefore reorganises an evidentiary architecture as well as a workflow, redistributing productive capacity, responsibility and the labour through which human contribution secures recognition.

The study's inferential reach is concentrated on situated mechanisms within a women-only, single-stakeholder and cross-sectional design, with recruitment through a platform structured around professional visibility adding a further contextual condition. Employer, provider and assessor perspectives would extend the analysis towards institutional handling of attribution, while longitudinal research could trace whether evidentiary demands persist as AI-use rules and assessment practices

stabilise. Comparative research across occupations, seniority, gender, class, race and disability would establish how attributional labour is distributed across differently positioned workers and which organisational arrangements attenuate its costs. These extensions would test the portability and limits of the mechanism while preserving the central proposition that human–AI collaboration acquires social consequence through the evidentiary relations by which organisations recognise competence.

Data availability

The full interview transcripts are not publicly available because the combination of workplace, apprenticeship and demographic information creates a risk of deductive identification. An anonymised semi-structured interview topic guide and an anonymised reflexive thematic analysis record, including the evolving code register, theme-development materials, case-comparison matrices and selected coded extracts, are supplied with the submission as supporting research materials. Any further sharing of de-identified transcript material would be subject to participant consent, ethical approval and applicable data-protection requirements.

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Author contributions

The author conceived the study, conducted the interviews, analysed the data and wrote the manuscript.

Competing interests

The author declares no competing interests.

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