SAFWAN ALMODHAYAN



OPINION AND ANALYSIS

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The Employee Who Became the Center of the Company Without a Promotion

> The traditional management question was: to whom does the employee report? In a recent randomized experiment, the more intriguing question became: where do employees turn when they need to understand something? Between the two questions, the company may change twice without its organization chart changing once.

An Experiment Whose Portrait Was Never Hung in the Corridor

In September 2024, a European technical-services company began an experiment unlike the usual AI launch. The main measure was neither how many messages an assistant wrote nor employee amazement at its ability to summarize documents. The researchers had a question more sensitive than individual productivity: what happens to the network of people when some teams receive a tool that knows part of the company's memory?

Forty-two teams were randomized. Twenty-five received a generative AI assistant using internal company information; seventeen continued as usual. The assistant used models in the GPT-4 and then GPT-4o family, with retrieval-augmented generation from organizational material. Researchers observed knowledge and collaboration networks before the intervention and after three months. The analysis used 316 valid responses paired across the two periods.[1]

In a revised 2026 INSEAD research draft, the group receiving the assistant added an average 7.77 collaboration ties, compared with 1.12 in the comparison group, a difference in changes of 6.65. Knowledge-seeking ties rose by 5.21 against 0.84, a difference of 4.37. Both differences were highly statistically significant in this experimental context. This is not a 7.77 percent rise or a confirmed increase in friends. It is a change in the number of employee-reported links in the collaboration and knowledge networks as defined by the study.1

The researchers could have stopped at saying that the assistant made the organization more connected. The more important detail is the kind of connection. Collaboration means working together on a task; a knowledge network means approaching someone for advice or expertise. A person can work with more colleagues without becoming an intellectual reference, or become the person others consult without sharing their execution files. The forms of influence differ even when email and reports make them look alike.

Descriptive results by role showed that incoming knowledge ties to specialists rose by 6.26, compared with 2.28 for generalists. But specialization was not randomized, and the groups differed substantially at baseline; this difference cannot be read as experimental proof that the tool gave specialists a relative influence advantage. More precisely, the hypothesis that specialists would gain more collaboration centrality was not supported. Interesting science keeps inconvenient results beside convenient ones.1

“Without a promotion” in this article’s title is not a report about a real employee whose salary and title the study tracked. It did not measure promotions. The title names an institutional possibility worth studying: that a person’s position in colleagues’ network of dependence changes while their formal position may not. Inventing a name, department, and salary would make us the problem we are trying to understand.

One Company, Three Maps

An organization chart is usually boxes and vertical lines: board, chief executive, managers, teams, employees. Nothing is wrong with that map. It answers questions that cannot be left to personal relationships: who holds the budget, appoints, evaluates, and issues binding direction? It does not answer another question: when an idea stalls among engineering, sales, and customer service, who can actually make the parties understand one another?

Rob Cross, Stephen P. Borgatti, and Andrew Parker studied this hidden layer in 2002, before language models became consumer products. They showed how organizational network analysis can reveal patterns of knowledge exchange and collaboration absent from the formal chart. The “informal network” is not a secret conspiracy against management. It is often the everyday means through which an institution reaches what it already knows.2

Place three maps on one table. The first is formal authority: reporting lines and role boundaries. The second is knowledge: who asks whom, for what expertise, and whose answer is trusted. The third is joint work: who completes something with whom. Relationships may be directional. If Maha asks Nasser about software integration, the advice tie points from Maha to Nasser; it does not mean he consults her equally. If they deliver a project together, another tie may appear without recording who taught whom.

Three network-science concepts alter judgment. **In-degree centrality** is the number of people who approach someone in a directed network. **Out-degree centrality** is the number that person approaches. **Betweenness centrality** attempts to measure a node's position on short paths joining other node pairs. Linton C. Freeman's classic formulations distinguishing centrality measures date from the 1970s.[3]

An employee network can be represented as a graph $G = (V, E)$: people V and links E representing a specified question, collaboration, or exchange. But "tie" does not equal "influence"; message count is not trust; files passing through a person do not make them the best problem solver. No magic function converts a network into a fair ranking. Before calculating, we must define what a network tie represents, the period it covers, whether it is reciprocal, and how it can be verified.

Imagine a fictional organization. Layla works in data engineering without a management role. Procurement, legal, and beneficiary-service teams ask her about ambiguous fields in a shared database. She may have high in-degree as a knowledge reference. Khalid may work with more people on a project and be more central in collaboration. Sara, who connects cybersecurity specialists with product developers who rarely meet, may have the greatest betweenness despite few people consulting her. These are three forms of organizational presence, not three names for the same talent.

How Can a Machine Make a Person More Sought After?

The intuitive inference is the reverse: if internal search can answer many questions, why would employees need one another more? The objection is possible and valid. An assistant can replace routine conversations and shorten translation loops between departments. A ten-minute expert question may be answered in ten seconds without reaching the expert.

The European team study proposes two countervailing channels. The first is **self-automation**: when research and drafting take less time, employees can direct attention to projects requiring others. The second is **knowledge catalysis**: when specialists combine expertise with retrieved institutional context, they may explain complex problems better and attract more requests. These are theoretical mechanisms explaining possible results; the experiment did not causally decompose how many additional ties came from each.[1]

Possessing information differs from making it **usable by another person**. A database engineer may have known a defect for years without time to explain its exceptions to procurement. If retrieved records help produce a careful explanation and allow discussion of consequences, the engineer's expertise has wider effects without colleagues learning everything the engineer knows. The system does not create that judgment from nothing, but can alter its transmission cost.

The paradox resembles a station becoming busier after a new line opens, not after old lines close. Congestion must not be equated with value. The station may enable useful journeys or repeated traffic caused by bad signs. Measure the quality of resolution, not the number of routes passing through it.

In 2003, Borgatti and Cross explained information seeking without worshipping seniority: workers must know another person has valuable knowledge, regard it as useful, and be able to reach them in time. A knowledge system may expose buried expertise or make the right person easier to find. But the research predates generative AI and is not direct evidence for a particular language model.4

The Experiment That Made a Leader Without a Decree

In June 2026, Ray Reagans, Ronald Burt, and Donald Liu published in *Network Science* a study whose experiment ran in February and March 2023. It included 465 US-resident volunteers placed in teams of five and given different communication-channel patterns in a coordination game. Each team had to identify an abstract shape shared by its members through messaging. Nobody was a general manager, and the task was not a battle over budgets, but the researchers could observe who colleagues came to see as a leader over time.5

The study distinguished the relationship network before the experiment, the network randomly made available, and the network actually produced as people used channels differently. Random network assignment became an instrument to isolate part of the effect of brokerage emerging through behavior. Within this laboratory, brokerage in the message network causally contributed to being perceived as an informal leader. The experiment did not show that the person became a better manager, held deeper expertise, or would be nominated for promotion.5

The distinction touches the central idea: **a leadership impression can arise from a person's position among others, not an order granting authority over them**. Every step away from the laboratory has an epistemic price. A sub-hour abstract-shape task among small volunteer groups is not a multidivisional financial institution. The study did not use AI. It independently shows that communication structure can affect leadership perception; connecting it with the INSEAD experiment is a testable theoretical inference, not one team's joint result.

Ronald Burt's 2004 work examined "structural holes," gaps between groups with different knowledge. A person connecting two groups may see ideas unavailable to someone remaining on either side. In one electronics company, brokerage was associated with better evaluations of ideas and some rewards. These are observational relations in that setting, not a rule that every connector deserves money or office.[6]

Mark Granovetter's 1973 "The Strength of Weak Ties" is relevant again. Less frequent ties can connect communities separated by cognitive distance and bring information absent from a close circle. A weak tie is not valuable because it is weak, but because it may cross a gap that repeated ties do not. A useful broker does not monopolize the bridge; they make it passable.[7]

Did Collaboration Grow, or Only Its Digital Traces?

Another, newer and broader observational study resists simplification. On October 23, 2026, Giuseppe Soda, Alessandro Iorio, and Leonardo Rizzo posted an arXiv draft analyzing digital collaboration records from a 12,040-employee business unit of a multinational consumer-goods company. Observation ran from September 2024 through September 2025 as Microsoft Copilot was introduced gradually. They used Viva Insights data on email, meetings, and work-tool interaction, not only retrospective surveys.[8]

Their quasi-experimental estimates found that users increased connections and interactions with colleagues, while local clustering declined on some network measures. There were also indications of greater reliance on existing strong ties, though some estimates were less statistically decisive. One comparison estimated an increase of about 2.18 colleagues whom a user initiated contact with. This is an estimate in one design, not a fixed increment for every language-assistant user.[8]

Use was not randomized; the study exploits timing differences and statistical models requiring discussable assumptions. A recorded meeting is not proof of productivity. Taken together, however, the studies show an interesting scene: a smaller randomized experiment measures employee-reported networks, while a large behavioral observation shows changes in recorded communication. A shared direction does not erase measurement differences or equalize causal force.

An assistant may reduce the need to ask a colleague for a first draft, then increase the need for someone to verify it and explain its relevance to a client, and another person to connect it with product context. When answer production becomes cheap, establishing correctness and relevance may require more conversation. Meeting growth cannot tell us whether collaboration matured or coordination burden rose. The question is not whether people talked more, but what became possible because they talked and what it cost.

An Objection From the Institution That Still Believes in Rank

Another story breaks the easy claim that hierarchy is now office decoration. In February 2026, the World Bank issued *How Do Organizations Learn? The Diffusion of Scientific Evidence on Generative AI*. Mahvish Shaukat, Andreas Stegmann, and Mattie Toma ran an experiment across 511 divisions at World Bank headquarters, in two rounds between December 2023 and April 2024.9

They did not give everyone an assistant. Evidence on generative AI effects was sent to one divisional employee, whose seniority was selected within the design. More senior recipients were 14.2 percentage points more likely to report intending to share the evidence. Multiple clicks on the material link became 15.8 points more likely, and colleagues' chance of remembering at least one study feature rose by 5 points in the relevant comparison. The recall difference disappeared after four months, and the experiment did not establish better policy decisions.9

This measures knowledge diffusion, not an assistant's effect on collaboration. It says something important about our opening question: formal rank itself may alter listening, distribution, and recall. A person's position can be part of the real network, not merely a static box. We need not choose between "position" and "knowledge" as rival camps. A title may create one route for knowledge; untitled expertise another; the two forms of influence may meet in one person or compete for attention.

"AI abolishes hierarchy" is therefore comfortable and unsupported. A more defensible claim is that technology may change some ties on which an institution rests while formal authority and rank continue to shape knowledge diffusion. The executive question is not which side wins, but where dependencies remain unseen by ordinary measurement.

Influence That Generates an Invoice

If fictional Layla becomes the reference for twenty people rather than five, should her salary rise? Perhaps she deserves greater recognition, but the count is insufficient. People may consult her because she alone knows a legacy system, documentation is poor, or her answers cause repeat dependence. Or she may prevent costly decisions from real error. The network shape looks similar while economic and ethical effects differ profoundly.

In 2003 research on 182 work groups, Jonathon N. Cummings and Rob Cross found an association between certain highly centralized or hierarchical group structures and lower performance. This is observational evidence in context, not proof that all centrality harms. It

reminds us that a network dependent on one person can gain expertise and lose scalability simultaneously.10

More dangerously, reward may follow visibility rather than benefit. In a theoretical article published online in 2017, Lorenzo Bizzi discussed how an employee's network centrality can color a manager's performance evaluation. This was not an empirical measurement proving systematic overvaluation in every institution; it is a necessary objection to turning relationship surveys into automated promotion tables.11

There is also a cost absent from simple metrics. The reference employee can lose the time that made them a reference. They write for others, attend their meetings, explain exceptions, then find no hour to develop skill or document learning. Knowledge can withdraw from shared files into private conversations until expertise becomes a bottleneck. Rob Cross, Reb Rebele, and Adam Grant discussed this "collaborative overload" in 2016; it predates AI and is not evidence that AI caused it.12

A company needs something smarter than promoting everyone who receives many questions. Raising an expert's status without distributing access rewards congestion. Assigning mentoring without recognized time punishes trust. Making tie count an individual target creates a messaging contest rather than discovering expertise. Not everyone standing in the road is a bridge; some are warnings that the road was badly designed.

The Rank–Referral Gap: A Test Proposal, Not a Ready Metric

Call the difference between the position map and the expertise-seeking map the **rank–referral gap**. This is an analytical name proposed here, not an accepted scientific standard or published finding. It describes repeated reliance on an employee for decisive explanation or knowledge when that cognitive function is absent from the role description, allocated time, or institutional continuity mechanisms. Comparing two numerical ranks does not prove a problem: a heavily consulted expert may be enabled by position or trapped by requests a good document could answer.

A practical test separates four things. First, **question flow**: who approaches whom about a specified issue, with participant consent and privacy. Second, **outcome quality**: did time to the right solution and recurring errors fall? Third, **transferability**: can another colleague or documented source supply the help when the reference is absent? Fourth, **reference burden**: how much core work and learning time is lost to serving the network?

The stronger test does not merely photograph the network; it alters access to knowledge in an ethical, comparable way. Documented guidance and a retrieval assistant could be phased into similar groups, measuring independently resolved cases, those needing a person, decision quality and time, and repeat referrals to one source. Structured knowledge exchanges or

alternative channels can reduce dependence on one individual without withholding necessary help. If need for the employee falls while solution quality and durability rise, earlier centrality reflected a treatable bottleneck. If outcomes decline without them despite documents and tools, their tacit expertise has value the machine did not capture.

The network's true economics appears here: knowledge value is not the number seeking it but the difference it makes to outcomes difficult to achieve without it. This causal difference needs research design, not a colorful employee map. Results should improve knowledge and resource distribution, not surveil friendships or after-hours correspondence. Personal relationship maps and individual rankings must not be published as performance evaluations.

What Does This Mean for a Saudi Company With an Arabic Memory?

At a large Saudi institution, operating knowledge may be scattered among systems, contracts, meeting minutes, and people who explain abbreviations new employees do not understand. No comparable Saudi experiment or proven local result is assumed. But an explicit applied study is possible: randomize comparable units under appropriate ethical and operating conditions; give one group a permission-controlled institutional retrieval assistant while another temporarily continues existing procedures; then measure advice-seeking ties, joint work, output quality, exception-resolution time, and expert burden before and after.

Privacy is part of result validity, not a legal appendix. A model able to search a document is not necessarily authorized to disclose it to every employee. Public knowledge of "who is the expert?" differs from access to personal correspondence or restricted project documents. Network-measurement data should be separated from individual performance evaluation, minimized, grounded in valid consent or legal bases, assigned retention periods and clear access rights, and defined with employers and employees. A company is not more intelligent when it knows employee secrets better than the reasons its work stalls.

One result may be that a senior specialist has become a contact point disproportionate to working hours, requiring official time for documentation, training, and additional assistants. Another may be that retrieval exposes distributed expertise and reduces bottlenecks, improving access to correct information. A third may be that connections rise because automated answers require more checking, without meaningful outcome gain. Every possibility is scientifically acceptable if measurement distinguishes it; an attractive dashboard cannot decide in advance.

Executives need a double map: formal responsibility they cannot evade and actual organizational learning they cannot deny. Technology leaders must distinguish retrieving a document, facilitating an expert question, and helping employees create new knowledge

together. Employees must not have successful help become a silent reason for higher workload, or expertise disappear in value merely because it lacks a grand title.

The Map Worth Hanging

It would be easy to conclude that companies no longer need managers. The World Bank experiment says rank matters, the European team experiment says expertise ties change, and the laboratory experiment says communication position can shape perceived leadership. Each answers a different question. No one map fully replaces another.

An institution can know exactly who may issue an order for years without systematically knowing who can explain it when application becomes difficult. It gives employees an intelligent assistant and discovers that people did not leave the scene; they changed where they stand. Someone may become more sought after, less visible, or a broker between groups that never spoke, while their name remains in the old HR cell.

When we ask “who leads?” authority may answer with one name. When we ask “whom do we need in order to understand?” the network may answer with another. A mature company neither laughs at nor fears the contradiction. It measures and explains it, then prevents one employee from becoming the only memory of an entire institution.

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