Peer Response 1

Nasser explains well why agent-based systems are growing in complex organisations. I agree with Jaco and Ahmed that interoperability, human oversight and testing are central. I would add two practical measures that help integration and governance in daily work.

First, use human agent teaming as a design principle. Agents should cooperate with people as teammates, not only as tools. The coactive design approach gives concrete guidance for this cooperation. It focuses on interdependence and on making agent behaviour observable, predictable and directable by humans. In this way, teams can share control according to the situation and reduce coordination risk in high risk domains like healthcare or energy systems (Johnson et al., 2014; Klein et al., 2004).

Second, require systematic documentation and reporting for agent behaviour. The ODD protocol from the simulation community gives a clear template to describe agents, interactions, and learning so others can understand, replicate and audit models. Organisations can adopt ODD, including its checklists, inside review processes before deployment and during updates (Grimm et al., 2020). In addition, model cards can summarise intended use, data, performance and known limits of the models that drive agents. This supports informed decisions, monitoring, and communication with stakeholders who are not technical experts (Mitchell et al., 2019).

Together, human agent teaming and rigorous documentation create a direct line from organisational goals to agent actions. They also make auditing, onboarding of new staff, and future upgrades easier, while keeping flexibility and trust.

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Peer Response 2

Murthy, your explanation of ubiquity, interconnection and intelligence gives a clear understanding of how these trends support the growth of agent-based systems. The examples of smart grids, trading systems and e-commerce show well how these factors work together in practice.

Building on the points from other peers about emergent intelligence (Bonabeau, 2002) and organisational learning (Argote & Miron-Spektor, 2011), I think human–agent teaming is an important area for future development. In many high-risk domains such as disaster management, healthcare or energy systems, it is useful to combine the speed and autonomy of agents with the judgment and contextual knowledge of humans. This mixed-initiative interaction allows humans and agents to share control according to the situation (Bradshaw et al., 2013). It also helps to reduce problems with accountability and trust as Nasser mentioned, because humans can stay in or on the loop (Parasuraman & Riley, 1997).

Another aspect to consider is explainability. If agents can explain the reasons for their actions, it becomes easier for humans to trust them and to integrate them into organisational processes (Gunning & Aha, 2019). This transparency also supports learning and system improvement over time.

By focusing on human–agent collaboration and explainable decision-making, organisations can make sure that agent-based systems stay effective, adaptable and aligned with human values.

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