

More than Nomadicity: The Paradoxical Affordances of Liminality

Mohammad Hossein Jarrahi *,
Steve Sawyer **

* University of North Carolina,
Chapel Hill NC, the United States
jarrahi@unc.edu

** Syracuse University,
Syracuse NY, the United States
ssawyer@syr.edu

Abstract. Building on the concept of liminality as articulated in organization studies, we theorize many mobile knowledge workers may find themselves in liminal spaces – working across multiple organizations and projects. To be productive in these liminal spaces, mobile knowledge workers must constantly contend with organizational, contextual, and social boundaries, gaps in technological resources, and emerging interaction norms.

1 Introduction

The concept of nomadicity has been used in CSCW research to highlight how workers accomplish their work while moving among different physical spaces and information infrastructures (de Carvalho et al., 2017). This work makes clear that nomadicity is more than merely spatial movement; other factors such as contextual shifts—in personal arrangements, organizational connections, and social engagement—as well as temporal incongruities can also be prominently on display (Cousins and Robey, 2005; Erickson et al., 2014; Kakihara and Sørensen,

2001). Seen this way, the concept of nomadicity emphasize workers' separation and independence from any one organization's physical and digital boundaries (even as it implies their reliance – or at least engagement – with several), their need to mobilize technological resources to maintain productivity (Nelson et al., 2017; Su and Mark, 2008), the blurring of the professional and personal aspects of their lives (Grönvall et al., 2016; Jarrahi and Thomson, 2017), and the production of new forms of social interaction to account for their mobile lives (Brown and O'Hara, 2003).

1.1 Liminality

While the conceptualization of nomadicity is rich and useful, it may overlook an important aspect related to mobile knowledge workers' experiences—namely, that they may occupy positions that can be considered *liminal*. Organizational scientists describe liminality as the state of being “betwixt and between different organizational settings and projects.” Being so situated, mobile knowledge workers need to adjust continuously to maintain momentum relative to multiple projects, assignments, and organizations (e.g., Borg and Söderlund, 2013; Nissim and De Vries, 2014). They also need to proactively manage a set of weak organizational ties rather than relying on the resources of being an organizational insider (Borg and Söderlund, 2013). Nomadicity, then, while not the same as liminality, can often be compounded by it, and this amplifies the need for a worker to contend agilely with organizational, contextual, and social boundaries, gaps in technological resources, and new interaction norms.

2 Empirical evidence

The empirical basis for our theorizing builds from the 37 interviews with mobile knowledge workers (mostly from the North Carolina Research Triangle) that we have completed. Research Triangle Park is a leading area for high-tech research and development. And, increasingly, these industrial sectors (and geographic locales) are supporting mobile work.

Interview subjects were identified via snowball sampling from known members of our respective communities as well as via cold-calling workers who publically identified themselves as “nomads” in their online LinkedIn profiles. Interviews focused on establishing (1) interviewees' professional background, working situation, work tasks, and work arrangements; (2) their experiences of mobility and nomadicity, and (3) the ways that different technologies and infrastructures play a role in their work. All interviews were tape recorded and transcribed to support interpretive analysis by members of the research team.

Interviews followed a structured protocol that allowed for probes and follow-up questions. The interview protocol evolved across the 37 interviews, and the

open-ended nature of the questions allowed the research team to adapt the interview as needed. Interviews were taped, with permission, and then transcribed for analysis.

3 Findings

Analysis of these data helps us to see that liminality has affordances as well as challenges. In this section we specifically focus on two aspects of liminality – the freedom of mobile knowledge workers to assemble their arrangements and the freedom to articulate or adapt to the situations that arise.

3.1 Free to Assemble

Because of either weak ties to an organization, or ties to multiple different organizations, mobile knowledge workers often have a great deal of freedom to craft the means by which they conduct their work. As others have shown, knowledge work relies heavily on digital tools and resources, or when taken as a whole, something we call a ‘digital assemblage’ (Sawyer et al., 2014). Liminal nomadicity, in other words, can allow for a high degree of worker customization when it comes to coupling work practices and digital assemblages.

Sometimes these digital assemblages mirror worker interest or preference. For example, Participant 3 in our sample notes: *“I work from my tablet, I work from my laptop, I work from my phone, and it’s whatever’s convenient at the time.”* Participant 6 utilizes Google Drive rather than the internal system in operation at [his] employer, and participant 4 uses his personal laptop to install and run various software (e.g., Photoshop) to facilitate his work. More often, however, workers create digital assemblages to address gaps or otherwise maintain their professional momentum when it is somehow being thwarted. The same participant 4 who uses his personal laptop also explained to us that he emails files from one laptop to the other because the use of flash drives or cloud services is restricted by one of his employers. Participants 11 and 12, similarly, mindfully take advantage of being in, or move to, locations with pre-specified IP addresses so that they can log onto needed corporate resources.

Being liminal as a worker often means being left to one’s own devices—in this case, literally. Yet, this freedom to assemble not only necessitates that workers source their own alternative tools and engage in sometimes convoluted workaround practices, but that they also maintain an up-to-date knowledge base regarding which combinations of tools and practices work best for certain intended ends. Moreover, each of these digital assemblages needs to be different for each organization or project that a liminal worker is engaged in. This leads us to our second paradoxical finding: the paradox of articulation.

3.2 Free to Articulate

If liminal workers are afforded the freedom to create their own work practices and personal infrastructures to manage their work, the ways in which they collaborate across multiple organizational and contextual boundaries compels them to engage in extra articulation work to be successful. Over two decades ago, Schmidt and Bannon (1992: 51) suggested that “*cooperating workers have to articulate (divide, allocate, coordinate, schedule, mesh, interrelate, etc.) their distributed individual activities.*” This is ever truer with the liminal worker, not merely because of their nomadic status, but more directly because they are juggling among various forms of collaboration with each project or organization they are affiliated with.

Among our interviewees, Participant 19 describes the need for articulation succinctly: “*If you have three clients that have different requirements you’re obviously stuck with three different ways of doing things.*” A liminal worker, in this sense, has all the freedom to engage in multiple projects, but the concomitant cost of that flexibility can be a rather exhausting array of articulation work. Should one fail to engage in this extra collaborative step, the liminal worker risks being seen as unadaptable, at best, or unemployable, at worst. Participant 30 highlights the need for adaptability when articulation work is bound-up with normative tool-uses: “*I use my planner if it’s something that I need to share with a client or someone working for me. I’ll use a project management system and my system of choice is Asana, but I’ll use Base Camp if the client prefers it; I like Asana a lot more.*”

Being nomadic, necessitates adaptability and agility in the face of various sociotechnical seams (Erickson and Jarrahi, 2016). We observe that a key part of nomadicity is the liminal state of work, which highlights how much workers must engage in activities such as assembling their digital arrangements and constantly pursuing articulation work to make their specific sets of expertise accessible and cogent within and across the various professional environments in which they are readily traversing. Liminality, seen this way, is what mobility demands.

4 Discussion and conclusion

Mobile knowledge workers are nomadic, working across different locations and contexts, and this requires them to regularly mobilize resources and work around constraints. Increasingly these workers also find themselves within liminal spaces due to their weak organizational ties and project-based affiliations. We suggest that nomadicity within liminal spaces highlights several paradoxes incumbent with this style of working. Whereas workers are able to choose and put into practice preferred personal tools and technologies, they are also required to adapt these freedoms—sometimes exponentially—to accommodate organizational

constraints. In other words, when nomads find themselves in liminal organizational spaces, the seams they encounter and their ability to manage them extend well beyond what we many have become accustomed to focusing on in CSCW studies of nomadicity. We suggest that our field take up the challenge of expanding our understanding of these complicated modern forms of work to better account for how liminality and nomadicity engage one another.

5 References

- Borg, E., and Söderlund, J. (2013). Moving in, moving on: liminality practices in project-based work. *Employee Relations*, 36(2), 182–197. doi:10.1108/ER-11-2012-0081
- Brown, B., and O’Hara, K. (2003). Places as Practical Concern for Mobile Workers. *Environment and Planning*, 35(9), 1565–1578.
- Cousins, K. C., and Robey, D. (2005). Human Agency in a Wireless World: Patterns of Technology Use in Nomadic Computing Environments. *Information and Organization*, 15(2), 151–180. doi:http://dx.doi.org/10.1016/j.infoandorg.2005.02.008
- de Carvalho, A. F. P., Ciolfi, L., and Gray, B. (2017). Detailing a Spectrum of Motivational Forces Shaping Nomadic Practices. In *Proceedings of the 2017 ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW 2017)*, New York, NY, USA: ACM, 962–977. doi:10.1145/2998181.2998313
- Erickson, I., and Jarrahi, M. H. (2016). Infrastructuring and the Challenge of Dynamic Seams in Mobile Knowledge Work. In *Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work and Social Computing*. San Francisco, California, USA: ACM. doi:http://dx.doi.org/10.1145/2818048.2820015
- Erickson, I., Jarrahi, M. H., Thomson, L., and Sawyer, S. (2014). More than nomads: Mobility, knowledge work, and infrastrucur. In *The European Group for Organizational Studies Colloquium*. Rotterdam, The Netherlands.
- Grönvall, E., Ciolfi, L., Avram, G., Rossitto, C., and Barkhuus, L. (2016). HCI at the boundary of work and life. *Personal and Ubiquitous Computing*, 20(4), 481–485. doi:10.1007/s00779-016-0937-5
- Jarrahi, M. H., and Thomson, L. (2017). The Interplay Between Information Practices and Information Context: The Case of Mobile Knowledge Workers. *Journal of the Association for Information Science and Technology*, 68(5), 90–103. doi:10.1002/asi
- Kakihara, M., and Sørensen, C. (2001). Expanding the “Mobility” Concept. *ACM SIGGROUP Bulletin*, 22(3), 33–37. doi:http://doi.acm.org/10.1145/567352.567358
- Nelson, S. B., Jarrahi, M. H., and Thomson, L. (2017). Mobility of knowledge work and affordances of digital technologies. *International Journal of Information Management*, 37(2), 54–62. doi:10.1016/j.ijinfomgt.2016.11.008
- Nissim, G., and De Vries, D. (2014). Permanent liminality: The impact of non-standard forms of employment on workers’ committees in Israel. *International Labour Review*, 153(3), 435–454. doi:10.1111/j.1564-913X.2014.00010.x
- Sawyer, S., Crowston, K., and Wigand, R. T. (2014). Digital assemblages : evidence and theorising from the computerisation of the US residential real estate industry, 40–56.
- Schmidt, K., and Bannon, L. (1992). Taking CSCW seriously. *Computer Supported Cooperative Work (CSCW)*, 1(1), 7–40. doi:http://dx.doi.org/10.1007/BF00752449
- Su, N. M., and Mark, G. (2008). Designing for Nomadic Work. In *Proceedings of the 7th ACM Conference on Designing Interactive Systems*. Cape Town, South Africa: ACM Press, 305–314. doi:http://doi.acm.org/10.1145/1394445.1394478