

Technology-triggered Social Affordances: A Netnography Study of Digital Nomads (Part 2)

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Abstract

The smart devices, the high-speed network, and the cloud computing with other technology infrastructures provide the mobility and accessibility of resources and enable the lifestyle of digital nomads. In the author's latest research on Digital nomads¹⁾, Digital nomads were introduced and nine technology affordances in the digital nomad community were identified. In Part 2, the structure of Technology-triggered social affordances is proposed based on in-deep analysis and interpretation of four types of digital nomads. The findings show the mechanism of Technology-triggered social affordances, in which the interplay between the features of technology and the social characteristics of group enable specific social behaviors through the process of individual technology affordance over larger periods and collections of actors.

1. Introduction

"I'm living a 'digital nomad' (ish) lifestyle. I call one country home, I live in another, and I work in many more. I travel a lot for work and some for pleasure."

In 1999, Timothy Ferriss with his book "The 4-Hour Workweek" advocates a concept, called "the new rich" which refers to people with time and mobility²⁸⁾. He also mentions the term 'geoarbitrage' (e.g., gaining a west salary and living in the southeast) which makes this lifestyle more attainable. Other than the term of digital nomads, there are many other names of this lifestyle, such as location-independent freelancers, online entrepreneurs, remote workers, etc. It is said that their length of travel and decision not to have a home base is what makes digital nomads distinct from others²⁾.

In Part 1¹⁾ of the author's research on Digital nomads, the author makes sure to cover a thorough literature on digital nomads, technology affordance, and the Netnography method which is adopted to gather and analyze the research data. In the information system (IS) research field, digital nomads have received little attention. In the other fields, the digital nomads' research⁷⁾ focus on labor mobility and the mobility behavior (travel behavior and leisure activities) of digital nomads⁷⁾. In the IS discipline, considerable studies^{4) 5) 10) ~ 15)} have taken a technology affordance perspective, which were summarized around four main steps of the affordance process^{9) 16) 17)} (Table 1), to not only explore the features of technology but also the behaviors afforded by technology¹⁴⁾. Nevertheless, very little research is conducted on the lifestyle's characteristics of digital nomads and its implications on the future of work and technology³⁾. This research draws on the theoretical perspective of technology affordance²⁾ to examine the rational relationship between technology, work style, and social behaviors of digital nomads. *The addressed research question is: How are the social behaviors of digital nomads triggered by technology?* This research serves as a foundation for digital nomads studies concerned with the dynamic relationships between nomadic behavior and the future of work. This research focuses on identifying new technology affordances in the digital nomad community.

2. Literature review

One outcome of an affordance actualization might be to enable conditions for social affordance^{9) 19)}. A social affordance, similarly as the origin of affordance, is used in the field of Ecological Psychology by Valenti and Gold²⁰⁾ on their article “Social affordances and interaction I: Introduction” to extend the application of the concept of affordance to the topics of social knowing and social interaction. The term social affordance was first used by Ackerman and Palen²¹⁾ in the field of Computer Science as “social and technical affordances”. They discussed that systems’ technical features combining with social practices could enable the collective use of the system. Three years later, Bradner *et al.*²²⁾ gave social affordance an explicit definition, as “the relationship between the properties of an object and the social characteristics of a group that enables particular kinds of interaction among members of that group”. They suggested, “the concept of social affordances offers a way of getting a handle on the interplay between a communicative practice and the social characteristics of the users’ group, particularly with respect to practices that the group recognized as legitimate.”. Nevertheless, affordance there was only used as a theoretical lens to discuss the adoption, use, and design of systems and computer interfaces.

In the IS field, to explore the social side of technology affordance^{13) 18) 23)} is still rare but drawing more and more attention these years. Fayard and Weeks¹³⁾ asserted that social affordance is what missing in the application of affordance, which is “an explanation of how the social construction of technology impacts the practices afforded by that environment.”. Zheng and Yu¹⁸⁾ used the term “socialized affordance” to investigate the ‘affordance-for-practice’ rather than ‘functional affordances’ of technology. They argued that “affordances are thus necessarily ‘socialized’, as far as we are talking about a meaningful social action involving artifacts in a social context, instead of an animal acting in a physical environment.”¹⁸⁾. Affordance is not only about technology, but more about actions that involve technology^{18) 23)}. A social affordance is an action possibility for social behavior²⁴⁾. Further, Suthers²⁴⁾ asks “What are the social affordances of technologies for patterns of participation over larger spans of time and collections of actors?”, and which is what this research is trying to answer.

Table 1 Definitions on steps of affordance process^{9) 17)}

Affordance Process	Definition
Affordance Existence	Affordances emerge in the interaction of an object and its user.
Affordance Perception	The perception of a possibility for goal-oriented action afforded by an object for its user.
Affordance Actualization	The actions taken by an actor as he/she takes advantage of an affordance through the use of the technology to achieve a goal.
Affordance Effect	The outcomes attributed to the actualization of an affordance.

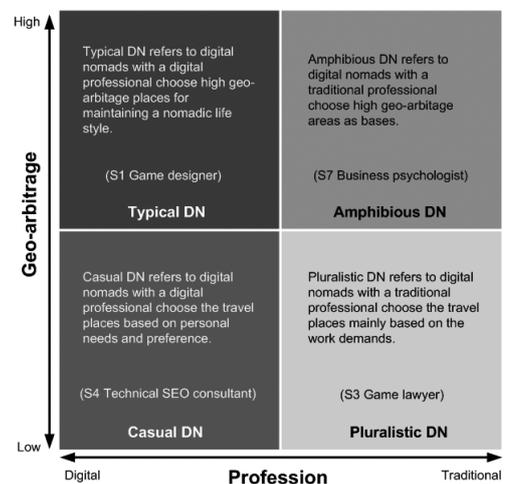


Figure 1 Four types of digital nomads

The affordance perspective, both technological and social, chosen as the theoretical lens is most appropriate given that it focuses on the relationship between the properties of an object or environment and the implications for individuals’ behaviors^{10) 12)} and the social characteristics of a group²²⁾. Hence, it is particularly suited for the study which is interested in not only the technology affordance on the individual level but also the social affordance on the level of the larger society. Digital nomads, as a unique group with prevailed life and work style, have proliferated and drowned lots of attention over the past several years^{3) 7)}. Nevertheless, the existing studies of digital nomads on the technological perspective only covered the adopted technology^{2) 3)}, the work styles³⁾,

and the distinguish behaviors^{6) 7)}. The affordance perspective offers excellent theoretical strength to fill up this research gap—the rational relationship between technology, work style, and social behaviors.

3. Research Design

In order to gathering the necessary data consists of digital nomads' behaviors, actions, thoughts, and feelings in a large span of their lives. the Netnography is chosen as the research method. Followed the procedure of Kozinets²⁵⁾, the author details the steps as:

(a) Planning and Preparation. the Nomad List (nomadlist.com) —the most popular community of digital nomads—is selected for gathering the research objects by carefully reading the structuralized introductions from 633 members.

(b) Data Collection and Creation. Based on the preliminary analysis of research objects in the first round, four types of fulltime digital nomads for representing the digital nomads community were identified. Four types of digital nomads arranged along two axes, in the familiar 2x2 business quadrant (Figure 1) . The X-axis refers to the type of professional work of digital nomads, whether it belongs to the traditional professions that work-on-site or whether it belongs to the digital work. The Y-axis concerns the geoarbitrage, which shows the nomadic behavior of digital nomads, whether it has a financial concern or not. The two ends of this axis are labeled High and Low. High geoarbitrage means those digital nomads tend to take advantage of the lower costs of a country (PLS rephrase this sentence)²⁶⁾. They choose travel locations mostly by considering more economic factors. Low geoarbitrage means the opposite—they choose each place meanly by their interests. The author named these four types of digital nomads as Typical digital nomads, Amphibious digital nomads, Casual digital nomads, and Pluralistic digital nomads. One research object of each type was selected from the research object group for further analysis.

(c) Analysis and interpretation. The volume of data in this research consists of 223 blog postings and 11,334 postings on social media. The research question guided the coding and interpretation, such as pinpointing many common elements and patterns in their thoughts and words and summing the netnographic data up into several topics¹⁾.

4. Analysis and Findings

In sum, the author identified four Technology-triggered social affordances and nine concrete outcomes along with the nine technology affordances identifies in the latest research (Table 2) .

4.1 Technology-triggered social affordance of earning one's own living

Digital nomads as location independent professionals must face the most significant question—how to earn their living. It is not difficult for us to image an IT professional, such as web designer, programmer, etc., whose outcome of work is digital to become one member of digital nomads. However, many traditional professionals are fighting to keep the digital nomads' lifestyle to achieve the goal of being location-independent professionals.

One behavior of digital nomads caused by technology afforded (1) can be recognized as 'Maintaining online presence.' It is a social behavior related to exploring new work, projects, clients, etc. For instance, one method for digital nomads to attract clients is a personal website, usually, one for personal thoughts and one for professionals. One of the research objects even remains three websites at the same time. They provide professional opinions, knowledge, and some tips on their professional website on a regular basis and promote them on their personal website as well.

Table 3 Main findings¹⁾

Technology-triggered social affordance	Technology affordance*	Concrete outcome
Earning one's own living	Work hunting affordance (1)	Digital nomads experience service
	Work proceeding affordance (2)	Work-related tools for Digital nomads
	Work supporting affordance (3)	Insurance service for digital nomads
Maintaining work-life balance	Reminder (4)	Assistant tools for Digital nomads
	Enabler (5)	Experience sharing platform
Managing oneself physically and mentally	Community building (6)	Digital nomads gathering
	Self-healing (7)	Fitness Apps and health insurance
Learning for a lifetime	Knowledge-sharing (8)	Information and knowledge sharing platform
	Culture emerging (9)	Learning resources/services

* The technology affordance will be placed by the number behind it in the following contents.

Meanwhile, the appealing of their digital nomads' lifestyle also has a significant impact on people that want to become digital nomads. The online presence of digital nomads, especially the personal website, was set up usually soon after they decided to live as digital nomads. Hence, people can overview the whole experience by reading their blogs from the first article. More blogs of digital nomads can be found online means more regular people might encounter one and generate some ideas, such as how can one become digital nomads? Can one experience the lifestyle of digital nomads? Different from the original concept of Immediate concrete outcome⁴⁾, the author uses 'Concrete outcome' here to represent the collective short-term affordance effects generated from social behavior because it takes some time for the social behavior to causes actual outcome in the society. In this case, one concrete outcome is the 'Digital nomads experience service.' There are many companies engaged in bringing digital nomads' experience to people, such as Co-Boat, Remote Year, Project Getaway, etc. Usually, they provide trips around the world for carefully selected groups of people who want to pursue their love of travel, without putting their careers on hold.

The next social behavior of digital nomads caused by technology affordance (2) can be recognized as 'Remaining information accessible.' One concrete outcome from this social behavior is the 'Work-related tools for Digital nomads.' Other than everyday products and software for anyone to access information at any time, some particular needs of digital nomads generate some services consist of virtual mailbox service which digitalizes postal mails and sends them to the user, job board just for digital nomads, co-working space and community, etc. When people work at a company, they do not need to worry about insurance, banking services, legal issues, etc. However, digital nomads work, travel, and live by themselves, which means that they must prepare plans for their health, finance, working data, etc. in advance.

The social behavior caused by technology affordance (3) can be recognized as 'Ensuring security plan.' Besides being aware of knowledge about the business entity, intellectual property, tax, contracts, and internet-based legal issues, digital nomads need insurance plans for global healthcare, travel, digital equipment, etc. and even a retirement plan. Because of these above needs, the concrete outcome is the 'Insurance service for digital nomads.' Insurance products for digital nomads are developed, which can be bought anywhere and claim online as well. They can provide 24/7 emergency assistance, cover adventure activities, protect personal belongings, cover trip cancelation, etc.

4.2 Technology-triggered social affordance of maintaining work-life balance

The most referred motivation to becoming digital nomads is to the pursuit of freedom. However, the reality usually says otherwise, especially for the beginning of the digital nomads' lives. Nevertheless, even if one has successfully earned his/her living, the next big challenge is how to maintain a work-life balance.

Self-discipline has to be one main skill if one wants to maintain the digital nomads' lifestyle. It is a social behavior because of the lesson learned from more and more successful digital nomads. Nowadays, they tend to

technology for certain assistants. technology affordance (4) provides the functions to remind the boundary between work and leisure. The concrete outcome is the 'Assistant tools for Digital nomads.' Assistant tools enhance and enable the decision-making of digital nomads. They can help assistant people to prevent work interference with personal life and to enable one to work or have a good time without the limitation of time and place.

Another social behavior relates to sharing and requiring the above practical experience, which causes by the technology affordance (5) . The concrete outcome is the 'Experience sharing platform.' It can be where to obtain the mentioned products and also to give one's experience.

4.3 Technology-triggered social affordance of managing oneself physically and mentally

All the above two social affordances are about work mostly, which is the essential task in the life of digital nomads. After reaching the financially independent, the author noticed other frequently mentioned issues by the research objects, named it 'Managing oneself physically and mentally.'

The identity of digital nomads was "reinforced by an active and social population of digital nomads, who made efforts to connect with other digital nomads and build the community as an informational and technical resource." ²⁾ . Socializing as a natural identified social behavior caused by technology affordance (6) for digital nomads is complicated. On the one hand, they seem to be able to make friends all over the world. On the other hand, it is difficult for perpetual travelers to maintain long-term relationships. According to Sutherland and Jarrahi ²⁾ , community building can consolidate the digital nomad identity, which might be the reason for digital nomads to conduct interactions with each other online and offline. The concrete outcome here is the 'Digital nomads gathering.' Countless online digital nomads communities, retreats/camps, and gathering/events are thriving. There are many offline events for digital nomads these days. Almost every online digital nomads community has a regular gathering for members. Conferences and retreats for digital nomads are also great places to make some friends, to exchange information, or to relieve stress.

The social behavior of remaining healthy related to technology affordance (7) is very critical for digital nomads. Additionally, emotional health is as important as physical health. The concrete outcome here is the 'Fitness Apps and health insurance.' For digital nomads, gyms and personal trainers might not be available everywhere. Hence, workout Apps on smart devices can be handy for digital nomads keeping exercise regularly, even when they are on the road. It is designed to allow the user to workout anywhere and requires little or no equipment. On the other hand, health insurance for living and working overseas can be different from traveling. There are many specific articles and insurance plans for digital nomads to make decisions.

4.4 Technology-triggered social affordance of learning for a lifetime

The other frequently mentioned topic by the research objects is 'Learning for a lifetime.' Digital nomads' behavior of sharing their knowledge and information about the cities they lived, the Apps they preferred, etc. is due to the technology affordance (8) . The concrete outcome here is the 'Information and knowledge sharing platform.' Besides the above common platforms usually in written, video, audio, and image forms, there are real-time chatrooms for digital nomads to interact with each other as well. Experiencing something new constantly is what encourages 9 to 5 workers to become digital nomads. Travel is one kind of learning itself. Digital nomads enjoy keeping themselves open to new things. They learn new languages, new sports, arts, new living attitudes, such as minimalism, etc.

The concrete outcome draws by the social behavior caused by technology affordance (9) is the 'Learning resources/services.' Other than the learning facilities as the above example, online learning resources are enormous and easy to access these days. One of the research objects talked about he has no trouble understanding and communicate in Japanese, only because he had watched Japanese anime for eight years.

5. Discussions and Implications

The author would like to explain the findings (Figure 2) in specific and to propose the following insights. The Technology-triggered social affordances structure consists of Technology-triggered social affordance, actualization process, and affordance effect. Each actualization process of four Technology-triggered social affordances identified in this research consists of multiple technology affordances, social behaviors, and concrete outcomes. This is the mechanism from individual technology affordances to social affordances triggered by technologies. According to the definition of social affordance in the section of Literature review, the interplay between the features of technology and the social characteristics of digital nomads enable social behaviors through the process of individual technology affordance over larger spans of time and collections of actors. Concrete outcomes as a collective short-term affordance effect generate from social behaviors and interplay with it as well. The ‘short-term’ here is relativity speaking. It is longer than the concept of immediate concrete outcome⁴⁾ because it takes some time for social behavior to cause actual outcomes in society.

5.1 Technology-triggered social affordances structure

According to the findings, the first building block of the mechanism of Technology-triggered social affordance is technology affordance on the individual level. These technology affordances afford all the actors in the social group of digital nomads, and the actions and the interplay among themselves and others in society generate particular social behaviors. What must be explained here is that the above social affordances are not a collection of individual technology affordances at an organizational level. According to Leonardi¹¹⁾, the technology affordance generated by the interaction with a particular technology can only be actuated at an organizational level when all actors agree on the use of similar technology features. There are lots of technologies with unique technology features in the digital nomads community. Hence, social behavior can be seen as the result of partial actors agreeing on the use of similar technology features, and the technology affordance triggers the social affordance. This research not only reveals the social side of technology affordances on the individual level but also explores multiple social affordances of technology over large collections of actors and time spans.

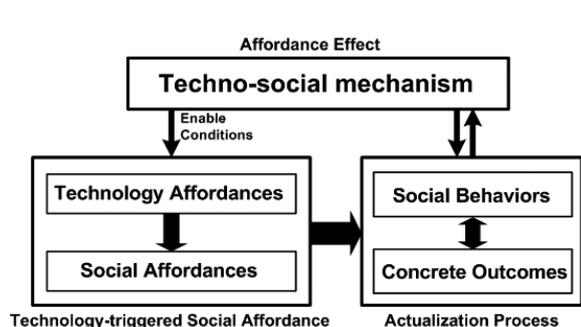


Figure 2 Technology-triggered social affordances structure

The actualization process of Technology-triggered social affordance consists of Social behavior, and Concrete outcome. Nine social behaviors and corresponding concrete outcomes were identified. Technology-triggered social affordance helps shaping social behavior and concrete outcome along with time. For instance, Information and knowledge sharing platform is considered as the concrete outcome of Exchanging knowledge and information. The pioneers of digital nomads might start exchanging information

online by using the Bulletin Board System. However, with the development of technology and the digital nomads' community, various information and knowledge platforms are available right now. Hence, the actualization of Technology-triggered social affordance consists of the interplay between social behaviors and concrete outcomes under the continuous impact of Technology-triggered social affordance.

A techno-social mechanism is the affordance effect which can result in enabling conditions for additional individual technology affordances and Technology-triggered social affordances. It can also influence the affordance actualization progress. Comparing to the concrete outcomes, the Techno-social mechanism might involve longer periods, sophisticated technology and social systems, and more extensive collections of actors. The long-term affordance effects are influenced by the perception of affordances and the efforts involved in the actualization¹⁷⁾. Social affordance can enable the condition of emerging social behaviors. From the perspective of large collections of

actors, multiple technology-afforded actions of individual digital nomads generate similar patterns of interactions as Social Behavior. Techno-social mechanism follows from the definitions of Bygstad *et al.*⁵⁾. It refers to the relationships among technical objects, social actors, and social objects, which generated from the concepts of Techno-organizational context and Social-technical mechanism. From the perspective of large periods, the Techno-social mechanism as the social affordance effect might enable the conditions which can further provide more affordances effectively. Four conceivable techno-social mechanisms are the following:

I. Enabling conditions of Entrepreneurship. By analyzing the whole period of their digital nomads' lives, the author finds that the beginning of their decision to nomad is the beginning of their entrepreneurship. Some of them start a new business based on accumulated work skills and experiences; some of them enhance their hobbies, and some of them choose to learn new skills. The social behaviors, such as Maintaining online presence, Keeping self-discipline and self-examination, and Exchanging knowledge and information, are the preconditions for her entrepreneurship. On the other hand, the convergence of accelerating technological change and globalization provides the services and platforms for sharing experience, information, and knowledge, the customers with the habit of accessing information, and other enablers. Under this techno-social mechanism, it is more convenient for individuals to start their own business. Although the quality and lifespan of various startups might be varying, it will be a friendlier environment for entrepreneurship.

II. Enabling conditions of Office innovation. In conclusion, the possibility of work anywhere and anytime presses organizations to rethink their working environment. For more and more employees, evolving technology enables them to be able to become remote workers. Contrary to releasing the employees with more flexible rules, some innovations focus on bring more benefits by including people other than employees. The concept of co-working was encountered many times during the research. Co-working spaces support informal interaction environments, productive work spheres, social support, collaboration, etc.⁸⁾. For organizations, many experiments of "sharing office" of their own are undergoing, and some of them are declared to be successful²⁷⁾. The concept of "corpworking" is introduced, which enables a mix of employees, entrepreneurs, researchers, freelancers, and others. It is said that the real revolution is with employees working beyond the boundaries of their organizations²⁷⁾.

III. Enabling conditions of Workforce changing. Our workplaces are continuously evolving. For new ideas, expectations, innovations, and establishments, there always will be enough room. On the other hand, workplace changing also will force the changing of the workforce. Technology innovation is one of the significant factors for workplace changing. More types of the workforce, such as digital workers, gig workers, nomadic workers, etc., are emerging³⁾. Technology also distributes the possibility of a new type of workforce (e.g., digital nomads) to more people. People might encounter with digital nomads in person, read their life story online, work with them, etc. The globalization and commodity of the technology break the wall of language, culture, gender, and nationality.

IV. Enabling conditions of the Gig economy. More and more people operate professionally as digital nomads to use digital technology to free themselves from the fixed salaryman life. The social affordance of Earning one's own living enables the above phenomenon and many digital platforms for these people. Because of the increase in such gig workers, organizations tend only to keep a small number of permanent employees and to hire short-term workers for specific projects. The above system of flexible, on-demand and transient work arrangements is usually referred to as gig economy²⁾.

5.2 Theoretical and practical Implications

The first theoretical implication is that the findings of this study reveal the process of affordances that not only occur on the individual and organizational level but also the social level. The conceptual framework proposed by this study uncovers the relationships among various affordances on different levels. It fills up the research gap in IS filed that more studies focus on the technology side. Contrary to most prior studies only study one kind of technology or a similar sequence of technology features, this study explores a full range of technologies used by

the digital nomads community and theorized the interplay among those technologies, actors, and the society. Instead of only focusing on one particular affordance and its actualization process, this research explored how advanced or additional affordances are generated and impacted by other affordances.

Secondly, this research enriched the literature on how affordance actualization generates affordance effects and the implications of the affordance effects. The concept of immediate concrete outcome⁴⁾ was extended from a short-term effect due to one individual action to a relatively short-term effect due to one social behavior. The author also extends the concept of collective outcomes/organizational goals^{4) 14)} from a long-term effect due to the realization of the goals of one organization to a longer-term effect due to the realization of the goals of a subset of human society. The major difference between an organization and a society subset is that the latter is not controlled by anyone and focuses on privacy concerns. Hence, the long-term effect revealed in this study is more complicated and dynamic. The findings also confirm that higher-level affordances depend on succeeding basic affordance actualizations⁴⁾, and higher-level mechanisms can act as conditions enablers for lower-level affordances⁵⁾.

6. Conclusion and limitation

This research adopted the Netnography method to analyze four types of digital nomads' lives for exploring the interplay among humans, technology, and society. Findings uncover four Technology-triggered social affordances and show the features of technology adopted by digital nomads, the characteristics of digital nomads, technology affordances on the individual level, and distinctive social behaviors. The proposed structure of Technology-triggered social affordance reveals the process that how are the social behaviors of digital nomads triggered by technology. Through the theoretical lens of technology affordance, the research represents an early attempt to illuminate the mechanism and impact of the ever-expanding digital nomads community. This research also contributed to the literature on the affordance theory by illustrating the mechanism on the social level and by showing the long-term affordance effects generated from the affordance actualization.

The proposed structure needs more data to be tested and perfected. For instance, the long-term affordance effects generated from the affordance actualization as one of the findings might only cover what we can see, due to the limitations of the author's knowledge, perspective, and era. Further research, especially when the COVID-19 pandemic may have accelerated the digital nomad phenomenon's normalization, might need to pay attention to the Techno-social mechanism proposed by this research. For instance, how a potential business ecosystem (e.g., hotspots acknowledged by most digital nomads, such as Chiang Mai, Bali, Medellin, etc.) is formed and what the further effects are, how new social interactions might be reshaped by technology, et al. The social aspects of affordances also need more attention in the IS field.

Reference

- 1) Tingting, Huang. Technology Affordances Identification: A Netnography Study of Digital Nomads (Part 1) . Bull. Mukogawa Women's Univ. 2021, vol 68, p. 55-63.
- 2) Sutherland, Will; Jarrahi, Mohammad Hossein. "The Gig Economy and Information Infrastructure: The Case of the Digital Nomad Community". 2017, p. 1-24.
- 3) Nash, Caleece et al. "Digital nomads beyond the buzzword: Defining digital nomadic work and use of digital technologies". 2018. Springer, p. 207-217.
- 4) Strong, Diane M et al. A theory of organization-EHR affordance actualization. Journal of the Association for Information Systems. 2014, vol. 15, no. 2, p. 53.
- 5) Bygstad, Bendik et al. Identifying generative mechanisms through affordances: a framework for critical realist data analysis. Journal of Information Technology. 2016, vol. 31, no. 1, p. 83-96.
- 6) Reichenberger, Ina. Digital nomads—a quest for holistic freedom in work and leisure. Annals of Leisure Research. 2017, vol. Routledge, p. 1-17.

- 7) Müller, Annika. The digital nomad: Buzzword or research category? *Transnational Social Review*. 2016, vol. 6, no. 3, p. 344-348.
- 8) O'Brien, Michelle. Finding a home for the "digital nomad". Disponible en ligne. 2011.
- 9) Pozzi, Giulia et al. "Affordance theory in the IS discipline: a review and synthesis of the literature". Savannah, USA, 2014. AIS, p. 1-12.
- 10) Majchrzak, Ann; Markus, M Lynne "Technology affordances and constraints in management information systems (MIS) ". in *Encyclopedia of management theory*, Sage Publications, 2012.
- 11) Leonardi, Paul M. When does technology use enable network change in organizations? A comparative study of feature use and shared affordances. *MIS Quarterly*. 2013, vol. 37, no. 3, p. 749-775.
- 12) Majchrzak, Ann et al. Designing for digital transformation: lessons for information systems research from the study of ICT and societal challenges. *MIS Quarterly*. 2016, vol. 40, no. 2, p. 267-277.
- 13) Fayard, Anne-Laure; Weeks, John. Affordances for practice. *Information and Organization*. 2014, vol. 24, no. 4, p. 236-249.
- 14) Tim, Yenni, Pan, Bahri and Fauzi. Digitally enabled affordances for community – driven environmental movement in rural Malaysia. *Information Systems Journal*. 2017, vol. 2017, no. 0, p. 1-28.
- 15) Du, Wenyu et al. Affordances, experimentation and actualization of FinTech: A blockchain implementation study. *The Journal of Strategic Information Systems*. 2018.
- 16) Wang, H. et al. A Review of Application of Affordance Theory in Information Systems. *Journal of Service Science and Management*. 2018, vol. 11, no. 1, p. 56-70.
- 17) Bernhard, E. et al. "Understanding the actualization of affordances: A study in the process modeling context". Università Bocconi, Milan, 2013 15-18 December.
- 18) Zheng, Yingqin; Yu, Ai. Affordances of social media in collective action: the case of Free Lunch for Children in China. *Information Systems Journal*. 2016, vol. 26, no. 3, p. 289-313.
- 19) Thapa, Devinder; Sein, Maung K. Trajectory of Affordances: Insights from a case of telemedicine in Nepal. *Information Systems Journal*. 2017.
- 20) Valenti, S Stavros; Gold, James MM. Social affordances and interaction I: Introduction. *Ecological Psychology*. 1991, vol. 3, no. 2, p. 77-98.
- 21) Ackerman, Mark S; Palen, Leysia. "The Zephyr Help Instance: promoting ongoing activity in a CSCW system". 1996. ACM, p. 268-275.
- 22) Bradner, Erin et al. "The adoption and use of 'Babble': A field study of chat in the workplace". 1999. Springer, p. 139-158.
- 23) Faraj, Samer; Azad, Bijan "The materiality of technology: An affordance perspective". *Materiality and organizing: Social interaction in a technological world*, 2012, p. 237-258.
- 24) Suthers, Daniel D. Technology affordances for intersubjective meaning making: A research agenda for CSCL. *International Journal of Computer-Supported Collaborative Learning*. 2006, vol. 1, no. 3, p. 315-337.
- 25) Kozinets, Robert V. *Netnography: Redefined*. Sage, 2015.
- 26) Penney, J; Dramowicz, K. "Geographical aspects of geo-arbitrage: work in Canada and live in countries with low cost of living". 2016. IOP Publishing, p. 12-25.
- 27) Nagy, Gabor ; Lindsay, Greg. "Why Companies Are Creating Their Own Coworking Spaces". <https://hbr.org/2018/09/why-companies-are-creating-their-own-coworking-spaces>, (accessed 2018-October 1) .
- 28) Ferriss, Timothy. *The 4-hour workweek: Escape 9-5, live anywhere, and join the new rich*. Harmony, 2009.

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