

Iliescu, Andra Nicoleta

## Article

# The emergence of knowmads from the knowledge workers

Management dynamics in the knowledge economy

## Provided in Cooperation with:

National University of Political Studies and Public Administration, Bucharest

*Reference:* Iliescu, Andra Nicoleta (2021). The emergence of knowmads from the knowledge workers. In: Management dynamics in the knowledge economy 9 (1/31), S. 94 - 106.  
<http://www.managementdynamics.ro/index.php/journal/article/download/405/353>.  
doi:10.2478/mdke-2021-0007.

This Version is available at:

<http://hdl.handle.net/11159/6046>

## Kontakt/Contact

ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics  
Düsternbrooker Weg 120  
24105 Kiel (Germany)  
E-Mail: [rights\[at\]zbw.eu](mailto:rights[at]zbw.eu)  
<https://www.zbw.eu/>

## Standard-Nutzungsbedingungen:

Dieses Dokument darf zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden. Sie dürfen dieses Dokument nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen. Sofern für das Dokument eine Open-Content-Lizenz verwendet wurde, so gelten abweichend von diesen Nutzungsbedingungen die in der Lizenz gewährten Nutzungsrechte. Alle auf diesem Vorblatt angegebenen Informationen einschließlich der Rechteinformationen (z.B. Nennung einer Creative Commons Lizenz) wurden automatisch generiert und müssen durch Nutzer:innen vor einer Nachnutzung sorgfältig überprüft werden. Die Lizenzangaben stammen aus Publikationsmetadaten und können Fehler oder Ungenauigkeiten enthalten.

## Terms of use:

*This document may be saved and copied for your personal and scholarly purposes. You are not to copy it for public or commercial purposes, to exhibit the document in public, to perform, distribute or otherwise use the document in public. If the document is made available under a Creative Commons Licence you may exercise further usage rights as specified in the licence. All information provided on this publication cover sheet, including copyright details (e.g. indication of a Creative Commons license), was automatically generated and must be carefully reviewed by users prior to reuse. The license information is derived from publication metadata and may contain errors or inaccuracies.*



<https://savearchive.zbw.eu/terms-of-use>

## The Emergence of Knowmads from the Knowledge Workers

**Andra Nicoleta ILIESCU**

National University of Political Studies and Public Administration, 30A Expozitiei Blvd., 012104  
Bucharest, RO; [andra.iliescu@facultateademangement.ro](mailto:andra.iliescu@facultateademangement.ro)

**Abstract:** The purpose of this paper is to contribute to the academic advances in the knowledge management field, by increasing the understanding of the knowmad workforce. Knowledge economy represents the context in which organizations and individuals strive to learn continuously, to remain competitive, and to reach success. In this context, knowledge management joins other management specializations in the dedicated quest of optimizing organizational knowledge dynamics. Over the past decades, in close connection with unpredictable developments in all facets of our lives, which impact the business environment as well, a new typology of workers is being recognized in the knowledge management literature. The knowmads are emerging from the knowledge workers in a context of an intensified knowledge economy and they are developing skills and competencies that are suitable for the global markets, becoming autonomous, innovative, highly adaptable, and entrepreneurial members of the organizations, as this study proves. The research objective of this paper is to find and analyze the core conditions that favor the emergence of the knowmads from the knowledge workers. Through extensive literature review and by using data analysis software, key concepts are identified in close relation with knowmads. In the first part the intensification of the knowledge economy in Society 3.0 is analyzed from a critical perspective while, in the second part, the significant skills and competencies shift is being discussed. The working hypothesis of this research is that knowmads represent a new type of knowledge worker. Therefore, a comparison between the two worker groups from a skill, competencies, and attributes perspective was also implemented for increased methodological coherence. As this paper shows, in the intensified and global knowledge economy environment and under the forces of digitalization, technologization, new key competencies become essential within organizations. The holders of these competencies prove to be the knowmads, the new workers' group emerging from the knowledge workers in the late 21<sup>st</sup> century.

**Keywords:** knowmads; Society 3.0; knowledge economy; competencies; knowledge workers.

### Introduction

The purpose of this paper is to identify and review the conditions contributing to the emergence of entrepreneurial and knowmad workers from knowledge workers employees, within organizations. The close relation between the two categories is explained by the originator of the knowmad concept as the expansion of Drucker's knowledge workers (Moravec, 2008, 2013a, 2013b). On these premises, further theoretical complexities describing both discrepancies and similarities between the two constructs are essential contributions of this research paper, as they prove instrumental in revealing important trends, such as the growth of the knowledge economy influence under the specific forces of modern society or the paradigm shift in education towards a competency-based approach (Bratianu, Hadad, & Bejinaru, 2020; Bratianu, & Vatamanescu, 2017).

The importance of this research is sustained by previous academic studies that demonstrate how, at the organizational level, the greatest quest of contemporary companies is to achieve results that are valuable in the context of rising globalization (Igielski, 2017). The main criteria defined by Igielski in this regard are the inclusion of entrepreneurial workers within the companies and the achievement of a strong business reputation outside of them. To achieve valuable results in the global business market organizations "have to work very strongly on the partnership, with external and internal

### How to cite

Iliescu, A. N. (2021). The emergence of knowmads from the knowledge workers. *Management Dynamics in the Knowledge Economy*. 9(1), 94-106, DOI 10.2478/mdke-2021-0007  
ISSN: 2392-8042 (online)  
[www.managementdynamics.ro](http://www.managementdynamics.ro)  
<https://content.sciendo.com/view/journals/mdke/mdke-overview.xml>

clients" (Igielski, 2017, p. 133). By focusing on internal relationships with relevant team members, the author suggests that organizations must attract and retain professionals who own the best assets to excel in the intensified and globally reaching knowledge economy: "business owners need to understand that qualified staff is not a cost or even a resource, but a capital without which no organization can handle it anymore" (Igielski, 2017, p. 134).

In the knowledge-based, disruptive, and innovation-driven market climate, the race for human talent is critical to organizational success (Florida, 2002). As this paper will prove, the knowmad workers might be what exactly what the companies are looking for, as they are emerging from knowledge workers in the context of a global knowledge economy, with the advent of new competencies requirements of the "volatile, uncertain, complex, and ambiguous (VUCA) business environment" (Bratianu, Hadad, & Bejinaru, 2020, p. 1).

The structure of this paper is as follows: In the first part, I will present the methodology of the qualitative literature review, followed by a conceptual discussion in the second part on the growth of knowledge economy market share in the contemporary society. In the third part, the key competencies of the new workers will show how knowledge workers are giving way to innovative, networking, and adaptable knowmads in organizations. The underlying logic of this paper builds on a comparison process between knowledge workers as employees and knowmads as entrepreneurial individuals within organizations, by focusing on specific work behavior and traits – best defined specific skills, roles, and attributes in the workplace.

### Research objectives and methodology

Based on the literature review we formulate the following research question for the present investigation:

*R.Q.: What are the main conditions that favor the emergence of knowmads from knowledge workers?*

To answer this question a conceptual review methodology has been developed and implemented by the author. This is based on a systematic review of relevant literature in the field followed by software coding and classification of selected digital sources (Massaro et al., 2015). Also, the author's library and public digital libraries have been used to identify meaningful references in the knowledge management literature. The research was limited to resources written in English and Spanish, published before the date of the research (January 2021). While the wealth of academic materials in English is well acknowledged in most research fields, having access to Spanish studies has proven instrumental for this study, as several important studies on the knowmad topic are published exclusively in Spanish.

In the first research phase, publications that are relevant for this paper have been retrieved from Internet Books Archive, ProQuest Central, Science Direct, Wiley Online Library, Google Scholar, Research Gate, and Web of Science. For each of the databases, the same search words have been used by the author to identify relevant studies.

The keywords and descriptors have been established after ensuring a direct correlation with the research topic. As such, these are intricately connected to the knowmad, knowledge worker, and knowledge economy concepts, as well as to Society 3.0 concept. Firstly, descriptors from the knowmad taxonomy have been established for literature search, such as knowmads, knowmad society, or knowmadic workforce. Secondly, additional descriptors have been set, based on the revealed necessity to place the knowmads into the right context. Out of the second set of descriptors we name: knowledge workers, knowledge economy, Society 3.0, and knowledge management.

In the second research phase, the snowball method has been used to identify additional studies for this research amongst the studies selected in the first research phase.

The final study selection for this paper is motivated by a variety of factors, generally considered in academic literature reviews. Among them are the coherence with the research objective and research question, the conformity with the need for the used sources to be primary research sources, the historical value of certain studies as well as the critical value of other studies. Finally, even if the knowmad segment can be considered emergent in the knowledge management literature, the author selected the most cited references.

The comprehensive character of the conceptual review has been obtained by implementing the NVivo data analysis engine functionalities in the research process. Firstly, the selected digital resources have been imported into the engine. While analyzing them, important research directions have been identified and coded under different labels that eventually highlighted the most important trends to be studied. Therefore, two research sub-domains have been revealed in the research process in correlation with the knowmad workforce: the growth in the level of importance of the knowledge economy and the new type of skills and competencies considered relevant on the global job market.

## **Literature review**

### ***Knowledge economy in Society 3.0***

It is widely agreed that we are currently actors in a still emergent economy (Davenport, 2005; Kubik, 2013; Tomé, 2020) where the main asset is knowledge. According to Tomé, the essence of society has changed substantially over the last two decades, based on the advent of the knowledge economy. In the new economy “the most important task is to use knowledge assets as the driver of both innovative ways of creating and delivering new products and services as well as understanding a much more quality and value-orientated market” (Tomé, 2020, p. 453).

Before diving into further analysis, it is important to note that knowledge has been associated with progress and growth since historical times (David, & Foray, 2002). Knowledge, knowledge management, and organizational knowledge have been part of the organizations since their formation, but they did not have the significance that we see today (Bratianu, & Bejinaru, 2020; Nonaka, & Takeuchi, 2019). Moreover, in the academic field, the interest in the knowledge economy and its actors has recently begun to grow significantly (Hadad, 2017; Rhem, 2017; Tomé, 2020).

In the post-industrial society, the value of knowledge as an organizational asset started to gain recognition in the theoretical and practical fields, bringing knowledge workers to the center of organizational attention. Knowledge assets are, until today, strategic assets for organizations in the knowledge ecosystems, since knowledge-based economies are solely based on creation, distribution, and the use of information and knowledge (OECD, 1996). In the knowledge economy, organizations strive to become learning organizations (Bratianu, Prelipcean, & Bejinaru, 2020; Garcia-Perez et al., 2020).

Traditionally, in the knowledge economy, the means of production are in the hands of the knowledge worker (Davenport, 2005), who brings analytical commitment at stake to help the organization accomplish its goals. Therefore, according to Reinhardt et al. (2011), “knowledge workers are often perceived as human objects whose cognitive dimension is targeted with knowledge management systems” (p. 151).

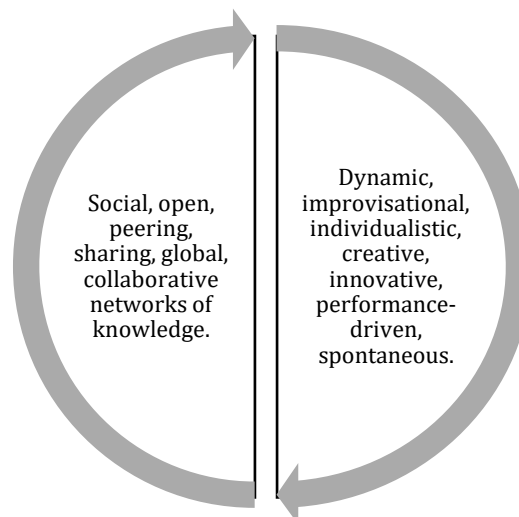
Nevertheless, in the context of an intensified and globalized knowledge economy a new type of worker emerges: the knowmad worker (Cobo, & Moravec, 2011; Kubik, 2013; Moravec, 2008, 2013a, 2013b; Garcia, 2012a, 2012b; Orel, 2019, 2020). Contemporary

times are profoundly shaped by continuous growth, increasing transition, and building confusion, while the effects of globalization are rapidly visible in every part of our lives (Beck et al., 2013; Igielski, 2017; Nadkarni, & Prügl, 2020). Leading influences can be seen in the social and educational fields (Moravec, 2013a; Moravec, & van den Hoff, 2015) while indirect effects closely follow the above-mentioned trends in the labor market, where they are most visible in competencies shift.

Many authors are working on understanding our society: while some are labeling it as a relational society (Cobo, & Moravec, 2011; Engeström, 2004), others refer to it as a borderless society (Kubik, 2013; Hokanson, & Karlson, 2013), or even a digital society (Lindgren, 2017; Martin, 2008). In the knowmad literature, Moravec's (2008, 2013a, 2013b) concept of Society 3.0 is preferred since it is also known as Knowmad Society. This represents a developing paradigm that is already a norm for some individuals but is not equally available to everyone at the same time.

Society 3.0 is a society characterized by unprecedented acceleration of disruptive technological and social changes that have exponential effects on education and the enterprise climate. In this context, it is also more difficult than ever to forecast the future because multiple changes occur simultaneously, at a higher pace than ever before. Nevertheless, as Davenport and Prusak (2000,) note, "knowledge is the most sought-after remedy to uncertainty" (p. 25).

Observing the structure of work, Kubik (2013) finds by a comprehensive literature review that knowledge work is developing in contemporary hyper-competitive societies by becoming less skilled in specific fields of practice and more relational, creative, and improvisational, as presented in Figure 1.



**Figure 1. Work in the emerging hyper-competitive society.**  
(Kubik, 2013)

We thus notice that extensive specialization and technical expertise are no longer necessary criteria for knowmads that wish to excel in organizations, even though these remain valuable assets. It becomes at least equally important, though, to be dynamic and flexible in front of novel challenges, to spontaneously improvise and to adapt individual knowledge to a different context, and to openly share personal insight with peers.

Kubik (2013) finds that, in our times, the knowledge economy is articulated by information, creativity, and ideas. Furthermore, it is continuously changing, operates differently from previous economic structures, and offers expanded market participation for customers and stakeholders, as firms shift to open access to engaging market innovation. In addition, innovations, and e-commerce, as well as the virtual social

configuration is powered in the knowledge economy, as more numbers of the global public are getting involved.

Beck et al., (2013) are developing a critique towards Society 3.0 and the knowmad workers, considering that they are “mostly seen as ideals to strive for in globalizing conditions” (2013, p.93). The authors are mainly looking at the problem from a position that acknowledges the limits of the international work market and international study opportunities, which is one of the main contexts ensuring the acquisition of the new set of desired skills. In the authors’ opinion, the intensively globalized knowledge economy brings a new set of specific inequities and challenges.

### ***Knowledge workers***

In the field of knowledge management science, it is generally accepted (Davenport, 2005; Horwitz et al., 2003; Leon, 2015; Schneckenberg, 2009) that what is now intricate literature constructed around the idea of knowledge worker has evolved from Drucker’s pioneering work (Drucker, 2008).

Surawski (2019) is one of the authors that analyze this concept. In his philosophical review paper, he finds that the most prominent definition in the literature field in Davenport’s definition of the knowledge worker. According to Davenport, knowledge workers are highly trained or experienced individuals engaging in knowledge practices, such as development, distribution, and application of knowledge (Davenport, 2005). Consequently, multiple authors are placing knowledge workers in professional fields of activity that borrow the same attributes, as presented in Table 1.

***Table 1. Knowledge worker professions***

Professional fields of knowledge workers	Author/-s (year)
Pharmaceutical or biotechnological sciences	Davenport et al. (1996) Salem, & Yousof (2013)
High hierarchical positions in organizations, based on their high degree of formal education and their professional experience	Davenport (2005) Brinkley (2006)
Strategic or market growth positions in organizations	Igielski (2017)
ICT professionals capable to make their own decisions	Zelles (2015) Rosenthal-Sabroux, & Grundstein (2008) Schneckenberg (2009)

Source: author’s own research.

To achieve a comprehensive understanding of the knowledge workers concept, Surawski works on the hypothesis that a particular concept (i.e., knowledge worker) can be best interpreted by a conceptual analogy methodology research. After defining a set of fifteen synonyms used by peer authors in their academic work or used in functional organizational practices, the author finds that from all terms examined, “specialists (or professionals in wider meaning) are the term closest to knowledge workers and with features making it a useful proxy in the research of knowledge work” (Surawski, 2019, p. 126). It is worth noting that in his findings, both specialists and knowledge workers are characterized by expert knowledge, high education, professional experience, problem-solving abilities, capacity to build or implement knowledge, continuous learning, autonomy, they are proactive employees, not driven by power, although the key limitation of the specialist concept versus knowledge worker concept is the fact that the first does not include management positions (Surawski, 2019).

It is also Davenport (2005) that constructs a comprehensive portrait of the knowledge worker by establishing a series of typical attributes within this group. The author finds

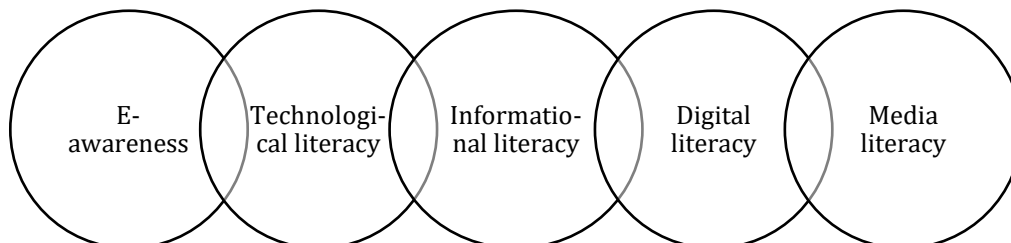
that generally they favor autonomy in their workflows, and they require confidence from their managers in performing their tasks. Therefore, their workflows become customizable and are often personally designed. This can make knowledge workers' processes hard to break down into steps and communicated to others. This idea is supported by the essence of knowledge work itself, where the best practice of knowledge exchange could instead be shadowing or observation. In the knowledge economy, intellectual engagement is critical, and it can be achieved by the knowledge workers through managerial confidence and organizational willingness to depend on the knowledge workers' skills to make the correct decisions. Finally, knowledge workers are often reluctant to share their knowledge because they have experienced the downsides of a globalizing labor market, where they often found themselves unemployed after providing specialized training to shared services center offices. These are well known in the 20<sup>th</sup> century after being intensively established in emergent countries, in a cost reduction effort of multinational companies.

From a skills and abilities perspective of the knowledge worker, Leon (2015) identifies through an extensive literature review that teamwork, problem-solving, risk-taking, and learning skills are some of the most frequent attributes of knowledge workers, closely followed by resilience, ingenuity, the use of information and communication technology (ICT), as well as innovation skills. Strategic skills, political and economic literacy, sensitivity, respect, autonomy, appreciation of other's points of view, and higher-order thinking are also noted as findings of the author's research.

### ***The emergence of knowmads***

Knowmad is a concept created in 2008 by Moravec and further refined within the next several years (Cobo, 2013; Cobo, & Moravec, 2011; Moravec, 2013a, 2013b; Moravec, & van den Hoff, 2015). In the understanding of the originator, the emergence of the knowmad workforce represents the direct effect of the uncertain, technological, and globalized Society 3.0. According to Moravec (2008, 2013a, 2013b), a knowmad is "a nomadic knowledge worker – that is, a creative, imaginative, and innovative person who can work with almost anybody, anytime, and anywhere." Currently, the focus in the knowmad literature is on the developments of traditional education and the virtual environments dedicated to skills development (e-learning platforms).

Nevertheless, it is important to understand how the competencies shift is impacting the knowledge worker profile and how is this leading way to knowmads in the context of an intensified and globalized knowledge economy. This can be best acquired by analyzing the skills, roles, and attributes of the knowmads, making continuous parallels with previously established professional coordinates of the knowledge worker group. In the new society, increasingly more attention is being paid to information and communication technology (ICT) skills, as key resources for lifelong learning. Although ICT-based skills and continuous learning skills represent competencies that have been first introduced by knowledge workers, these were traditionally enabled within organizational activities, offering operational advantages to the beholders when performing work-related tasks.



***Figure 2. ICT skills for knowmads***  
(Cobo, 2013)

For knowmads, ICT skills are key competencies that enable immediate access via the Internet to a wide range of knowledge opportunities and potential new professions, representing essential learning tools. As such, a primary talent of a Society 3.0 dynamic and flexible working is its technological and digital maturity embodied in his or her capacity to exploit ICT creatively (Cobo, & Moravec, 2011; Moravec, 2008, 2013b). According to Cobo (2013), five ICT skills enable knowledge to be generated and re-reacted, as presented in Figure 2.

From a skills standpoint, the biggest strength of the knowmads is their capacity to navigate the modern society's ocean of ambiguity, unsettled by disruptive changes. Referring to the competent workers, Cobo and Moravec (2011) set up the first set of skills, divided into three major groups, as seen in Figure 3.

Collaboration skills	Critical thinking skills	Complexity management skills
<ul style="list-style-type: none"> <li>□teamwork,</li> <li>□innovation,</li> <li>□effective communication,</li> <li>□problem solving,</li> <li>□adaptability,</li> <li>•management of information and knowledge</li> </ul>	<ul style="list-style-type: none"> <li>□leadership,</li> <li>□perseverance,</li> <li>□creativity,</li> <li>□flexibility,</li> <li>□initiative,</li> <li>•cooperation</li> </ul>	<ul style="list-style-type: none"> <li>□self-confidence,</li> <li>□time management,</li> <li>□responsibility,</li> <li>□persuasion,</li> <li>□empathy,</li> <li>•dealing with uncertainty.</li> </ul>

**Figure 3. Knowmad worker skills per categories**  
*(Cobo, & Moravec, 2011)*

While most knowmad skills are not exclusively associated with this category of workers, it is important to consider the value of contextual skills that ensure the success of the knowmads in a dynamic market where innovative, creative, and inventive individuals are needed in future-looking organizations. According to Hokanson and Karlson (2013), the environment we are now entering is a borderless one, “in which workers and work can compete and flow across national boundaries and around the world, much like manufactured goods” (2013, p.112). We notice how, in the global knowledge economy fixed frameworks such as national borders, local strategies, or study degree requirements are fading in front of an individual’s creative power, resilience in front of obstacles, and courage to act.

For instance, while problem-solving is a shared skill between the two classes of workers analyzed in this paper, Cobo and Moravec (2011) add a component of sophistication when they suggest that knowmads have the potential to solve unfamiliar problems in new circumstances. Moreover, we note leadership, perseverance, self-confidence, or persuasion as new competencies gained by the knowmads, under actual business market requirements, in comparison to the knowledge workers.

Developing on the work of Duckworth et al. (2007), Hokanson and Karlson (2013) strive to go beyond the norm that professional experience and technical knowledge in a certain domain are the most important assets of a worker. The authors sustain the idea that creativity, persistence, and grit are becoming instrumental skills for achieving success. Their findings are sustained by the novel requirements from the business environment, where excellent communication or problem-solving skills are pre-requisites for obtaining desired working positions (Bratianu, Hadad, & Bejinaru, 2020). According to the authors, knowmads that have built grit or persistence are those who will accomplish their goals and complete assignments. Consequently, this will create for them a context of growth within companies, as they will be most likely to receive new motivating responsibilities, challenges, and rewarding projects (Hokanson, & Karlson, 2013).

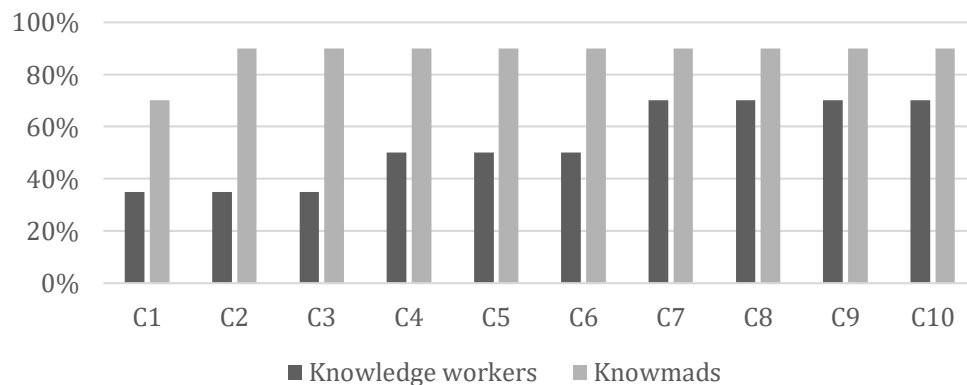


Although risk-taking and creativity are two of the most common knowledge workers' talents, based on previously mentioned literature findings, it is important to note how Hokanson and Karlson (2013) rely solely on these two main non-cognitive abilities as future norm of education and work.

Developing on the work of Cobo and Moravec (2011), and Garcia (2012b) establishes an e-Learning competencies decalogue analyzing the adherence of three different categories - knowledge workers, knowledge agents, and facilitators and knowmads – to a set of ten key competencies for Society 3.0 workers:

- C1. Highly inventive, collaborative, and intuitive, able to generate new ideas.*
- C2. Highly adaptable to new contexts and challenges. Unafraid of failure.*
- C3. Uses information and generates knowledge to solve unknown challenges in a variety of contexts.*
- C4. Able to create socially constructed meaning.*
- C5. Network generator, always connected to people, ideas, institutions, and organizations.*
- C6. Able to generate horizontal knowledge networks.*
- C7. Digital literate, knowledgeable on technology uses and purposes.*
- C8. Attentive to contexts and information adaptability and usage.*
- C9. Values and promotes knowledge-sharing and free access to information.*
- C10. Practices life-long learning: able to learn & unlearn quickly, adding new useful knowledge.*

According to the author, there are significant differences concerning achieved competencies levels between knowmads and knowledge workers valid for all ten competencies. This is mainly correlated with the knowmads' affiliation with e-learning environments, seen as interaction boosting environments established within the internet, extranet, and intranets. In Figure 4 the study findings are presented in an adapted form, focusing only on the estimated differences between knowledge workers and knowmads (Garcia, 2012b).



**Figure 4. Estimation of competencies developed in e-learning environments**  
(Adapted from Garcia, 2012b)

A similar tendency to focus on key positions of knowledge development has been noticed when examining the progression of roles of knowledge staff into roles of knowmads within organizations. Reinhardt et al. (2011) have built a typology of knowledge workers based on two observational studies. Their findings were further refined by Garcia (2012a), by excluding those roles that were not so powerfully linked to knowledge creation and development activities in organizations, such as the controller role, the helper role, or the organizer role.

Although core knowledge creation functions have been transferred from one generation of workers to the other, knowledge workers' roles not so closely correlated with

innovation and creativity, have been excluded from the updated typology. Therefore, the knowmad roles classification developed by Garcia includes six key roles (Garcia, 2012a).

The *collector* or *retriever* (1) is the first knowmad role adapted by Garcia based on previous findings in the literature. Amongst his or her key responsibilities we note classification, organization, indexation of knowledge as well as linking, shaping, defining clusters of knowledge, charting relationships amongst different instances of a process or mapping, modeling, and establishing frameworks for knowledge allocation. Following, the *connector's* or *networker's* (2) responsibilities are presented: the connectors are collectors of relationships mainly because they are bringing people together. As such, they are connecting and engaging in valuable conversations. The third knowmad role is the *communicator* or *sharer* (3), which describes the activities of storytellers. Their responsibilities are information analysis and presentation, meeting the audience's needs, creating reports, presentations and meeting records, briefing papers, and discussion documents that could facilitate knowledge sharing towards the different groups of interest. The *creator* or the *solver* (4) oversees the production of theories, models, and knowledge systems that other people follow. In this respect, he or she is often writing memos, manuals, articles, books, and reports as well as running experiments. The fifth role is the *critic* or the *tracker* (5), in charge of knowledge analysis, identification of internal inconsistencies, procedure gaps, errors, risks, or development opportunities. Finally, the *consumer* or the *linker* (6) is responsible for developing relationships based on trust, reputation, and ability to add value to the network (Garcia, 2012a).

The idea that knowmads are using their acquired knowledge to produce new ideas can be understood better with the help of Eduardo Tomé's proposed typology of knowledge economy actors (2020). In his conceptual paper, Tomé points out the need to leave behind the traditional roles of employees, employers, and buyers and to emerge into a process of understanding who the knowledge economy actors are. This is acquired by the author by considering both private and public sectors and by analyzing the main instances and their relationship with knowledge.

As such, in opposite positions on the knowledge creation scale are introduced the *composers* and the *customers*. While the first ones are the ones producing knowledge, the latter are the ones consuming it. Between them, the *performers* and *owners/administrators* are completing the stage of the knowledge economy. Tomé's perspective is particularly important because it brings to our attention four different alter-egos of the same individual, sketching the functions of the knowledge economy individually by values, objectives, methods, and results. As Tomé explains "every one of us is a bit of every type of actor but each actor has a dominant perspective" (2020, p.455).

Considering knowmads as entrepreneurial individuals within organizations, highly creative and innovative, we correlate their professional activities with Tomé's definition of composers: they value creative work itself, their objectives are to innovatively explore knowledge and bring significant contributions to the world, while the means of achieving their goals are through academic education as well as persistence in trying and failing. Finally, the most important results for the composers are peer recognition, the opportunity to share gained knowledge as well as a rewarding career itself (Tomé, 2020).

Similar knowmad attributes are identified and listed by Moravec (2013b) when he mentions that their ideas and knowledge can be implemented contextually in different settings, they are particularly focused on networking and value peer acknowledgment, are willing to share their knowledge, experience, and skills with others and, most importantly, are not scared of failure.

In a global and mature knowledge economy, knowmad workers are living their professional and personal lives in a combination of virtual and physical environments, where information is shared, networks are created and, as a result, dynamic knowledge-sharing mechanisms function outside the traditional organizational, community, or

national limits (Moravec, 2008, 2013a, 2013b). As Garcia points out, knowmads are the agents of the new networked society (2013b). This is a major contrast between knowledge workers and knowmads concerning work behavior. While knowledge workers do not share their expertise easily, we find that knowmads are knowledge networkers by nature.

And since knowmads are working and living a virtual-physical hybrid existence, nomadism remains the flagship trait of this group. Multiple scholars (Orel, 2020; Müller, 2016, Nash et al., 2018, Wang et al., 2018) center their research on recent findings in labor migration. There are modern ways for knowmads to meet their professional duties, and these fall outside conventional labor practices, choosing a flexible schedule and the work outside of the company office instead.

In the first phase of the literature, knowmad refers to physical or geographical transience and develops on Makimoto and Manners' definition of digital nomads, coined in 1996 (Cook, 2020; Kakihara, & Sørensen, 2001; Orel, 2019, 2020). As Cook explains, "the digital nomad idea of freedom is often a generalized and subjective notion of freedom that imagines a lifestyle and future where the tensions between work and leisure melt away" (Cook, 2020, p. 355).

The tendency to escape traditional working norms is explained by Moravec (2013) when he states that, by effectively integrating their expertise through the use of emerging technology, knowmads frequently succeed in transcending conventional spatial limits. This idea meets a consensus also when it comes to a second phase of the knowmad literature - the one focusing on mobile employees (Nelson et al., 2017; Ojala, & Pyöriä, 2018). However, as Ojala and Pyöriä (2018) point out, amid the hope that modern technologies would enable knowmads to enjoy work free of constraints, they "predominantly work at their employer's premises" (p.402).

An easier path to follow by the dynamic and flexible knowmads in the spirit of their nomadism is the same one that is generating the biggest challenges for managers: in search for their fulfillment, knowmads migrate easily from job to job, forcing organizations to invest in better headhunt and retention strategies and to direct their searches towards the global talent market (Horwizt et al., 2003; Lee-Kelley et al., 2007; Nelson, & McCann, 2010). As Nelson and McCann (2010) explain, there is a significant risk of knowledge loss associated with this practice that requires an important share of knowledge management attention.

## Conclusion

In Society 3.0 knowledge economy gains important market share under the forces of globalization and digitalization. In this new context, specific individual competencies become essential for individual and organizational success: innovation, creativity, risk-taking, leadership, networking, critical thinking, or autonomy are only part of them.

As this paper has shown, the knowmads are a new group of workers emerging from the knowledge workers, ready to succeed in a mature and globally reaching knowledge economy. Knowmads represent both a consequence of the continuously changing technological and social environment and a solution to the volatile business context, that these forces create because they are holding the key skills and competencies required by the job market.

## References

- Beck, K., Ilieva, R., Pullman, A., & Zhang, Z. (2013). New work, old power: inequities within the labor of internationalization. *On the Horizon*, 21(2), 84-95. <https://doi.org/10.1108/10748121311322987>

- Bratianu, C., & Bejinaru, R. (2020). Knowledge dynamics: a thermodynamics approach. *Kybernetes*, 49(1), 6-21. <https://doi.org/10.1108/K-02-2019-0122>.
- Bratianu, C., & Vatamanescu, E.M. (2017). Students' perception in developing generic skills for business: a knowledge approach. *VINE Journal of Information and Knowledge Management Systems*, 47(4), 490-505. <https://doi.org/10.1108/VJKMS-11-2016-0065>.
- Bratianu, C., Hadad, S., & Bejinaru, R. (2020). Paradigm shift in business education: a competence-based approach. *Sustainability*, 12(4), 1348. <https://doi.org/10.3390/su12041348>.
- Bratianu, C., Prelipcean, G., & Bejinaru, R. (2020). Exploring the latent variables which support SMEs to become learning organizations. *Management & Marketing. Challenges for the Knowledge Society*, 15(2), 154-171. <https://doi.org/10.2478/mmcks-2020-0010>.
- Brinkley, I. (2006). *Defining the knowledge economy*. The Work Foundation.
- Cobo, C. (2013). Skills and competencies for knowmadic workers. In Moravec, J.W. (Ed.). *Knowmad Society* (pp. 57-88). Education Futures.
- Cobo, C., & Moravec, J.W. (2011). *Aprendizaje invisible. Hacia una ecología de la educación [Invisible learning. Towards an ecology of education]*. Laboratori de Mitjans Interactius / Publicacions i Edicions de la Universitat de Barcelona.
- Cook, D. (2020). The freedom trap: digital nomads and the use of disciplining practices to manage work/leisure boundaries. *Information Technology & Tourism*, 22, 355-390. <https://doi.org/10.1007/s40558-020-00172-4>
- Davenport, T. H., & Prusak, L. (2000). *Working knowledge. How organizations manage what they know*. Harvard Business School Press.
- Davenport, T. H. (2005). *Thinking for a living: how to get better performance and results from knowledge workers*. Harvard University Press.
- Davenport T. H., Jarvenpaa, S., & Beers M. (1996). Improving knowledge work processes. *Sloan Management Review*, 37, 53-66.
- David, P. A., & Foray, D. (2002). An introduction to the economy of the knowledge society. *International Social Science Journal*, 54, 9-23.
- Drucker, F.P. (2008). *The age of discontinuity. Guidelines to our changing society*. Transaction Publishers.
- Duckworth, A. L., Peterson, C., Matthews, M. D., Kelly, D. R. (2007). Grit: perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 92(6), 1087-1101. <https://doi.org/10.1037/0022-3514.92.6.1087>
- Engeström, Y. (2004). New forms of learning in co-configuration work. *Journal of Workplace Learning*, 16, 11-21. <https://doi.org/10.1108/13665620410521477>.
- Florida, R. (2002). *The rise of the creative class: and how it is transforming work, leisure, community and everyday life*. Basic Books.
- Garcia, B.C. (2012a). MAKCi: a knowledge-based development metrics experience. *International Journal of Knowledge-Based Development*, 3(4), 367-387.
- Garcia, B.C. (2012b). New e-learning environments: e-merging networks in the relational society. [https://www.researchgate.net/profile/Blanca\\_Garcia5/publication/224830017\\_New\\_e-Learning\\_Environments\\_e-Merging\\_Networks\\_in\\_the\\_Relational\\_Society/links/00b49531629495ce78000000.pdf](https://www.researchgate.net/profile/Blanca_Garcia5/publication/224830017_New_e-Learning_Environments_e-Merging_Networks_in_the_Relational_Society/links/00b49531629495ce78000000.pdf)
- Garcia-Perez, A., Cegarra-Navarro, J.G., Bedford, D., Thomas, M., & Wakabayashi, S. (2020). *Critical capabilities and competencies for knowledge organizations*. Emerald Publishing.
- Hadad, S. (2017). Knowledge economy: characteristics and dimensions. *Management dynamics in the Knowledge Economy*, 5(2), 203-225. <https://doi.org/10.25019/MDKE/5.2.03>.
- Hokanson, B., & Karlson, W. R. (2013). Borderlands: developing character strengths for a knowmadic world. *On the Horizon*, 21(2), 107-113. <https://doi.org/10.1108/10748121311323003>
- Horwitz, F.M., Heng, C.T., Quazi, H.A. (2003). Finders, keepers? Attracting, motivating and retaining knowledge workers. *Human Resource Management Journal*, 13(4), 23-44.

- Igielski, M. (2017). Assumptions to the model of managing knowledge workers in modern organizations. *Management*, 21, 133–147. <https://doi.org/10.1515/manment-2015-0085>.
- Kakihara, M., & Sørensen, C. (2001). Expanding the 'mobility' concept. *ACM SIGGROUP Bulletin*, 22(3), 33–37.
- Kubik G. H. (2013). Limitless: becoming remarkable in the borderless economy. *On the Horizon*, 21(2), 114–126. <https://doi.org/10.1108/10748121311323012>.
- Lee-Kelley, L., Blackman, D. A., & Hurst, J. P. (2007). An exploration of the relationship between learning organizations and the retention of knowledge workers. *The Learning Organization*, 14(3), 204–221.
- Leon, R.D. (2015). The future knowledge worker: an intercultural perspective. *Management Dynamics in the Knowledge Economy*, 3(4), 675–691.
- Lindgren, S. (2017). *Digital media and society*. Sage.
- Martin, A. (2008.) Digital literacy and the 'digital society'. In C. Lankshear and M. Knobel (eds) *Digital Literacies: Concepts, Policies and Practices* (pp. 151–76). Peter Lang.
- Massaro, M., Dumay, J., & Garlatti, A. (2015). Public sector knowledge management: a structured literature review. *Journal of Knowledge Management*, 19(3), 530–558.
- Moravec, J.W. (2008). A new paradigm of knowledge production in higher education. *On the Horizon*, 16(3), 123–136. <https://doi.org/10.1108/10748120810901422>.
- Moravec, J.W. (2013a). Knowmad society: the 'new' work and education. *On the Horizon*, 21(2), 79–83. <https://doi.org/10.1108/10748121311322978>.
- Moravec, J.W. (Ed.) (2013b). *Knowmad society*. Education Futures.
- Moravec, J.W., & van den Hoff, R. (2015). Higher education 3.0: knowmads create their own value!. In A. Daily-Hebert, & K.S. Dennis (Eds.). *Transformative perspectives and processes in higher education, advances in business education and training* (pp. 233–240). Springer.
- Müller, A. (2016). The digital nomad: buzzword or research category? *Transnational Social Review*, 6(3), 344–348.
- Nadkarni, S., & Prügl, R. (2020). Digital transformation: a review, synthesis, and opportunities for future research. *Management Review Quarterly*, 70, 1–109. <https://doi.org/10.1007/s11301-020-00185-7>
- Nash, C., Jarrahi, M.H., Shutherland, W., & Phillips, G. (2018). Digital nomads beyond the buzzword: Defining digital nomadic work and use of digital technologies. In *Transforming Digital Worlds* (pp. 207–217). Springer International Publishing.
- Nelson, S.B., Jarrahi, M.H., Thomson, L. (2017). Mobility of knowledge work and affordances of digital technologies. *International Journal of Information Management*, 37(2), 56–62. <https://doi.org/10.1016/j.ijinfomgt.2016.11.00>.
- Nelson, K., & McCann, J.E. (2010). Designing for knowledge worker retention & organization performance. *Journal of Management and Marketing Research*, 1, 1–18.
- Nonaka, I., & Takeuchi, H. (2019). *The wise company: how companies create continuous innovation*. Oxford University Press.
- OECD (1996). The knowledge-based economy. <https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=OCDE/GD%2896%29102&docLanguage=En>.
- Ojala, S., & Pyöriä, P. (2018). Mobile knowledge workers and traditional mobile workers: assessing the prevalence of multi-locational work in Europe. *Acta Sociologica*, 61(4), 402–418. <https://doi.org/10.1177/0001699317722593>
- Orel, M. (2019). Coworking environments and digital nomadism: Balancing work and leisure whilst on the move. *World Leisure Journal*, 61(3), 215–227. <https://doi.org/10.1080/16078055.2019.1639275>
- Orel, M. (2020). Life is better in flip flops. Digital nomads and their transformational travels to Thailand. *International Journal of Culture, Tourism and Hospitality Research*, 15(1), 3–9. <https://doi.org/10.1108/IJCTHR-12-2019-0229>
- Reinhardt, W., Schmidt, B., Sloep, P., & Drachsler, H. (2011). Knowledge worker roles and actions—results of two empirical studies. *Process Management*, 18, 150–174. <https://doi.org/10.1002/kpm.378>.
- Rhem, A.J. (2017). *Knowledge management in practice*. CRC Press.

- Rosenthal-Sabroux, G., & Grundstein, M. (2008). A knowledge management approach of ICT. *VNU Journal of Science*, 24, 162-169.
- Salem, N.B.B.S., & Yusof, N.A.M. (2013). Diagnosing organization systems model for knowledge workers development in Malaysian biotechnology industry. *Procedia – Social and Behavioral Science*, 81(1), 618-623. <https://doi.org/10.1016/j.sbspro.2013.06.486>.
- Schneckenberg, D. (2009). Web 2.0 and the empowerment of the knowledge worker. *Journal of Knowledge Management*, 13(6), 509-520. <https://doi.org/10.1108/13673270910997150>.
- Surawski, B. (2019). Who is a “knowledge worker” – clarifying the meaning of the term through comparison with synonymous and associated terms. *Management*, 23(1), 105-133. <https://doi.org/10.2478/manment-2019-0007>.
- Tomé, E. (2020). Actors in the knowledge economy: a typology. *Management Dynamics in the Knowledge Economy*, 8(4), 451-461. <https://doi.org/10.2478/mdke-2020-0029>.
- Wang, B., Schlagwein, D., Cecez-Kecmanovic, D., & Cahalane, M.C. (2018). Digital work and high-tech wanderers: three theoretical framings and a research agenda for digital nomadism. In *Australasian Conference on Information Systems*. [http://www.acis2018.org/wp-content/uploads/2018/11/ACIS2018\\_paper\\_127.pdf](http://www.acis2018.org/wp-content/uploads/2018/11/ACIS2018_paper_127.pdf)
- Zelles, R. (2015). Better profitability through higher employee engagement in the knowledge worker age. *Journal of HRM*, 5(11), 62-72.

*Received: November 12, 2020*

*Accepted: February 22, 2021*