

# The Future of Global Work: Challenges and Recommendations for Global Virtual Teamwork

Tobias Blay and Fabian Jintae Froese

#### 1 Introduction

In the past few decades, organizations have expanded their operations overseas, including establishing foreign subsidiaries. To manage their foreign subsidiaries, multinational enterprises (MNEs) have increasingly used expatriates (Bebenroth & Froese, 2020). In response to this trend, the importance of expatriation has increased accordingly within international business research (e.g., Bhaskar-Shrinivas et al., 2005; Froese et al., 2021; Stoermer et al., 2021). Prior research has often explored the reasons behind expatriate success (for a review, see: Bhaskar-Shrinivas et al., 2005), and established that it is important to consider the expatriation cycle's different stages; from pre-assignment preparation, the actual international assignment, and their repatriation (Bonache et al., 2020). For instance, careful selection and training is of particular importance in the preparation stage (Kim & Froese, 2012), while organizational support is especially relevant during and after the expatriation (e.g. Froese et al., 2021).

Globalization has demanded various types of global work during the past few decades outside of the aforementioned expatriation within MNEs. Shaffer et al. (2012) have developed a sophisticated taxonomy of global work. The matrix describes five different types of global work experience and their relationship according to the dimensions of physical mobility (e.g., physical cross-border mobility), cognitive flexibility (adaption to, e.g., foreign cultures), and non-work disruption (disruption or interference of work role requirements with employee's outside of work activities). First, self-initiated or corporate expatriates relocate to a foreign country to work and live there permanently or at least for an extended period of time (usually with their family members) (Froese & Peltokorpi, 2013; Stoermer et al., 2020). They have high cognitive flexibility, high physical mobility, and moderate

University of Goettingen, Goettingen, Germany

e-mail: tobiasludwiggerhard.blay@uni-goettingen.de; ffroese@uni-goettingen.de

T. Blay · F. J. Froese (⊠)

non-work disruption. Second, short-term assignees maintain a temporary residence abroad, as their assignment is often project-specific or limited in time (Brewster et al., 2020). Their adaption to the foreign culture is less pronounced and their families do not normally relocate with them (i.e., low cognitive flexibility, high physical mobility, and non-work disruption). Third, international business travelers and flexpatriates spend few weeks or months in the foreign country and are characterized by a high level of physical mobility (Brewster et al., 2020). Both require a relatively high level of cognitive flexibility and a high degree of non-work disruption (due to a high adaption to foreign cultures because of a second residence and a greater separation from their family) but it should be noted that there exists a nuanced difference between the two types. Fourth, global domestics rarely travel overseas and often use technologies to interact with various stakeholders (low physical mobility). Hence, their cognitive flexibility as well as their non-work disruption are developed at a lower level. The fifth form of global work is characterized as global virtual teams (GVT) (Shaffer et al., 2012; Taras et al., 2019). Its members communicate exclusively through electronic information and collaboration tools, are geographically distributed (often across countries or continents) and work on (inter)dependent organizational tasks to achieve a common goal (Maznevski et al., 2006). As stated by Shaffer et al. (2012), they do not travel to foreign countries (therefore no physical mobility) but have to be cognitively flexible due to a high level of interactions with foreign cultures. Due to time differences, GVT attend conference calls outside of working hours, which increases their non-work disruption. GVT are therefore challenged by multiple indicators (Shaffer et al., 2012) that can affect the performance.

Work processes' increasing globalization and decentralization, along with a dynamic environment and exponential growth of digital interaction and collaboration technologies have reduced the necessity of physical relocation as well as the first three types of global work. However, global work remains important, irrespective of the increasing deployment of collaboration technologies within organizations. Additionally, environmental changes, such as the COVID-19 pandemic, have even accelerated the trend toward "going digital" within fully virtual teams instead of meeting face to face (Culture Wizard, 2020). According to a Deloitte Study, 70% of the executives surveyed expect an increased usage of online collaboration platforms in the future, as physical meetings lose out to many forms of purely digital cooperation (Agarwal et al., 2018), and 89% of executives working for MNEs stated that they work in at least one (global) virtual team. Also, nearly 90% of the respondents confirmed, that GVT work is critical to their respective productivity (Culture Wizard, 2018).

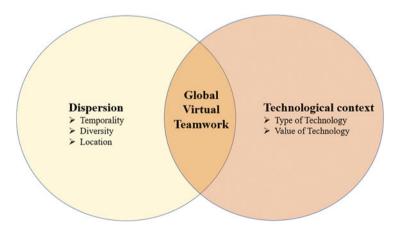
Examined together, the trend toward increased global work in the form of GVT is inevitable. Curiously, however, while abundant research has been devoted to expatriation (e.g. Bhaskar-Shrinivas et al., 2005; Bonache et al., 2020), i.e., the first three types of global work, GVT remains an underexplored research area. This chapter will seek to increase our collective understanding of GVT and provide thought-provoking ideas for future GVT research and practice. To that end, we will provide an overview of GVT and discuss typical challenges GVT workers face in the

following section, followed by key topics for future research and practice. We will end this chapter with a summary of key findings and implications.

#### 2 The Main Dimensions of Global Virtual Teamwork

In this section, we will provide a comparative review for understanding GVT's main dimensions within the broader context of international business. We (1) identify key aspects of global virtual teamwork, (2) review their importance for international business, (3) and discuss challenges.

GVT can be classified by several main dimensions. Many researchers emphasize the importance of virtuality in this special form of team collaboration (de Guinea et al., 2012). The two most frequently used dimensions in this context are (geographical) dispersion and the utilization of technology (Cohen & Gibson, 2003). While the latter emphasizes the technological context and technology dependence (e.g., value and type) of virtual team members, (geographical) dispersion focuses on the existence of subgroups in the virtual team environment. Subgroups can arise from different factors, such as temporality (time-zone differences), diversity of the team members' characteristics (e.g., cultural, demographics) or a team member's residential location (Jarman, 2005). In the remainder of this chapter, we would seek to give a brief introduction to these two main dimensions of global teamwork virtuality and to highlight their most relevant characteristics in the context of international business. Figure 1 summarizes and combines the dimensions of virtuality and their characteristics.



**Fig. 1** Dimensions of Global Virtual Teamwork. Source: Authors' own figure derived from de Guinea et al. (2012), Cohen and Gibson (2003), Jarman (2005), Raghuram et al. (2019)

# 2.1 Dispersion

Dispersion calls attention to different types of distances between the virtual work arrangement and the team members. One characteristic of dispersion is the temporal distribution of virtual team workers (e.g., O'Leary & Cummings, 2007). Therefore, we highlight Temporality as the first characteristic of dispersion in the context of global virtual teamwork followed by Diversity and Location.

#### 2.2 Temporality

Temporality or temporal dispersion in GVT occurs when there is no overlap of the regular working hours of team members. This normally occurs when virtual teams are distributed across different time zones. Since dealing with different time zones is common in an international business environment, it also occurs frequently in global teamwork scenarios. There is a consensus in virtual team literature that time dispersion increases conflicts, hinders intrateam collaborations, undermines the trust and commitment of virtual team members, and precludes team decision-making. One possible reason is that time zone differences cause communication delays and decelerate team coordination due to issues with information sharing (Raghuram et al., 2019) which may affect performance. It is a challenge for global virtual team members to develop and maintain social bonds within the team that connect tasks to individuals (Cramton & Webber, 2005). In summary, time zone differences are a major challenge when working globally in teams.

Since time zone differences represent a major boundary for the simultaneous processing of tasks, communication in GVT often occurs in a time-delayed manner. Team members, therefore, often rely on synchronous and asynchronous communication tools. While for synchronous communication media (e.g., telephone, videoconferencing) real-time communication is essential, asynchronous correspondence (e.g., messenger services, e-mail, social media) is characterized by a time lag. Therefore, communication is often dispersed over time and is based on an asynchronous exchange of information (Raghuram et al., 2019). In this regard, communication channel selection (asynchronous vs. synchronous) depends on the complexity of the task. Less complex tasks do not require a high level of communication and collaboration between team members. Since the need for interdependence and reciprocal communication cannot be reduced for tasks of low complexity, asynchronous communication is usually sufficient. In such situations, it is more effective to rely on non-simultaneous communication tools. On the other hand, the higher the level of collaborative decision-making or information exchange within the group (e.g., challenging, complex or dynamic tasks), the greater the need for synchronous communication (Bell & Kozlowski, 2002).

We can conclude that temporality is an essential characteristic of dispersion in the context of global virtual teamwork. When working in GVT, attention must be paid to time zone differences and the temporality of communication (asynchronous or

synchronous). However, there are several other factors that characterize global virtual teamwork. One of these aforementioned characteristics is Diversity.

### 2.3 Diversity

A second dimension of dispersion in global virtual work teams is Diversity. It refers to the amount of distribution among the characteristics of team members. Diversity can be differentiated between personal and contextual Diversity. Personal Diversity refers to the personal perceptions or characteristics of global virtual team members (e.g., gender, age, personal values and cultural intelligence, etc.). Contextual Diversity describes the environmental characteristics and context in which the team members are embedded (e.g., economic and human situation/development, income equality, importance of religion, etc.) (Taras et al., 2019). In the international business context, personal Diversity is particularly relevant. The workforce of MNEs is often composed of a variety of cultural subgroups classified by religion, ethnicity, or other characteristics. It is therefore common that their (virtual) teams often consist of multicultural team members (Johnson et al., 2006). In particular, team members' norms and cultural values can therefore affect the relationships and interactions of team members (Raghuram et al., 2019). The majority of relevant literature is conflicted regarding whether Diversity has a positive or negative impact on the effectiveness of virtual teamwork. It is a complex construct that can be seen not just as a single factor, but in the context with other team constructs. Diversity, therefore, varies in terms of magnitude and direction in its relationship to team effectiveness (Taras et al., 2019). Irrespective, Diversity is a central characteristic of Dispersion in the context of global virtual teamwork.

#### 2.4 Location

A third dimension of dispersion in the context of GVT is the team members' Location. It can be conceptualized as a configuration of team members (physical) locations or as their spatial separation. The locational dispersion and distribution of GVT members can be due to isolates and geographic subgroups. The latter describes teams in which their team members work in different locations. The location-based subgroups have no physical contact with one another. Isolates denotes individuals who work alone and are separated from their team members within a GVT (Raghuram et al., 2019). Although Location describes the physical presence in a particular environment, it also represents the context in which global virtual team members are embedded. The context of GVT can differ in terms of their administrative frameworks, their organizational affiliation, their social networks and norms or the cultural environment. Since team members of GVT often have little insights or a limited understanding of the locational context of their peers (Jimenez et al., 2017), it is challenging to execute complex tasks or to find a common denominator. This challenge becomes more pronounced when the social context of the Location

(e.g. relocation, change of political context, etc.) of the team members changes (Jimenez et al., 2017).

In summary, the (physical) Location is a main characteristic in global virtual teamwork that has to be considered when working both globally and virtually. Despite the importance of factors related to Dispersion in GVT, Technology is another central dimension to consider when working in global virtual teams.

#### 2.5 Technological Context

When working in global dispersed teams, team members must be connected via virtual tools to ensure communication and information exchange. GVT rely on communication technologies that meet the requirements and purpose of the task. Since virtual teamwork is technology-dependent, GVT need to figure out (1) what type of technology they should use when interacting and (2) identify the value of the communication tool chosen (Raghuram et al., 2019). In this regard, we break down technological context into two sections: Type of technology and its respective value. For this reason, we first identify the main types of technology that GVT use and then assess their value for effective global virtual teamwork.

#### 2.6 Type of Technology

GVT use a wide range of communication types to interact with their team members. Research separates computer-mediated communication (CMC) tools into two types: Asynchronous communication technologies and synchronous communication technologies. Team members do not respond directly with asynchronous technologies. Communication, therefore, does not take place in real-time, but with a delay. Such communication channels can be e-mails, discussion forums, groupware (e.g., intranet, newsgroups, document sharing services) or websites (Bell & Kozlowski, 2002; Duranti & de Almeida, 2012). Groupware in particular is often used by team members to share documents or exchange information. Examples of those tools are Dropbox, Trello, Google Docs, Slack, Basecamp (Jimenez et al., 2017) or services provided by the employer.

Conversations with synchronous communication technologies occur in real time. Team members can instantly reply to their team members during live meetings. There are several categories of synchronous communication technologies where real-time conversation can occur. Tools that fulfill this purpose are messaging services (e.g. chats), teleconferences (with video and/or audio), or internet-based virtual meeting rooms (Bell & Kozlowski, 2002; Duranti & de Almeida, 2012) such as Zoom, Skype, or Google Hangouts. When thinking about the best type of communication technology, a mix of different types of communication technologies (asynchronous and synchronous) generates the highest team output. It helps to keep track of things while staying connected with team members without losing too much information about the work's progress (Accenture, 2020). We, therefore, conclude

that the selection of the appropriate types of technology can be an asset when working in global virtual teams.

#### 2.7 Value of Technology

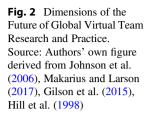
When working virtually in a global team, knowing the different types of technologies is critical to team success. Since GVT have a high technology dependency (Raghuram et al., 2019), it is also important to know the value of the technology used during task work.

Task complexity is the main selection criterion to assess the value of the type of technology. Different communication tools add differing levels of value based upon their respective scope and purpose with regard to decision-making and information sharing (Duranti & de Almeida, 2012). Therefore, a high task-technology fit is associated with the selection of suitable communication tools in order to carry out organizational tasks virtually (Raghuram et al., 2019). Individual preferences and experiences are second criteria associated with the value of the communication tool. Having good experiences with the technology, individuals tend to rate a certain type of tool higher, which again increases the chance of use. Thus, the perceived value of the technology can depend on individual taste (Hollingshead et al., 1993). Another criterion for assessing the value of technology in global virtual teamwork is the media richness of a communication tool. The media richness theory (Daft et al., 1987) helps to understand how individuals can evaluate the value of technology in the context of GVT. There are three indicators to evaluate the functionality of a tool: Richness, interactivity, and social presence. Richness refers to the ability to communicate a particular stimulus (e.g., verbal and non-verbal) to provide an area of communication that enables fast shared understanding. Interactivity means the pace at which feedback can be exchanged. Social presence describes the perceived degree of proximity between the participants. Therefore, the higher all three indicators are, the better a virtual conversation can depict personal (e.g., face-toface) communication (Daft et al., 1987).

In summary, identifying different types of technologies and their respective value for the team members is an important dimension and challenge for working globally in teams. In this section of the chapter, we wanted to provide an overview of the most important dimensions of global virtual teamwork (e.g., dispersion and technology context) and the challenges individuals face while working virtually. In order to understand future decisive implications for the aforementioned GVT dimensions, we will provide an outlook into the future of global virtual teamwork.

#### 3 The Future of GVT Research and Practice

Having provided an overview of key characteristics and challenges of GVT, we will now provide an outlook of key topics for the future of GVT research and practice. We understand this chapter as an agenda for the "future of global (virtual)





teamwork." Based on our review of the GVT and related literature, we identified three key topics for the future of GVT: (1) Developing Cultural and Virtual Intelligence, (2) New and Emerging Technologies, and (3) the Well-Being and Work–Life Balance of global virtual team members. We have summarized the key trends in Fig. 2 and describe them in the following sections.

# 3.1 Developing Global Virtual Teamwork Specific Forms of Intelligence

To succeed in the challenging work environment of GVT, workers need to possess and/or develop certain characteristics. Since this new form of work collaboration consists of two key elements, "globality" (e.g., cross-border and intercultural exchanges), and "virtuality" (e.g., no physical contact with team members) it is therefore important that the team members develop Cultural Intelligence (Johnson et al., 2006) as well as Virtual Intelligence (Makarius & Larson, 2017). We first introduce each concept and then describe how to develop Cultural Intelligence (CI) and Virtual Intelligence (VI) relevant in virtual international business contexts.

# 3.2 Developing Cultural Intelligence

Cultural Intelligence and Competence, defined as "an individual's effectiveness in drawing upon a set of knowledge, skills and personal attributes in order to work successfully with people from different national cultural backgrounds at home or abroad" (Johnson et al., 2006: 530), is particularly important when working globally (Froese et al., 2016; Stoermer et al., 2021). As the number of global teamwork interactions increases due to easier and faster access to cross-border meeting situations (e.g., virtual instead of face-to-face meetings) (Agarwal et al., 2018), a higher quantity of cross-cultural interactions is the result. GVT often meet with many people around the world. In order to work effectively with (team) members from different cultures, it is therefore critical to develop Cultural Intelligence and Competence (Johnson et al., 2006).

Thus, CI is a behavioral modification for effective (virtual) interactions with individuals from different cultures, regardless of whether the person interacts in their home or in a foreign culture (which is more the case in the context of international business). To demonstrate CI, the person must actively use the intercultural skills, attributes, and knowledge that they possess and apply them to the given circumstances (situation), which can sometimes be challenging (Johnson et al., 2006). However, when there is a high level of CI, individuals are more likely to perform better. Cultural Intelligence and Competence can be developed based on the three dimensions of knowledge, skills, personal attributes in international business (Johnson et al., 2006) in order to increase the quality of interactions in a global virtual teamwork environment.

The first dimension in developing CI is to gain cultural knowledge (Johnson et al., 2006). According to Hofstede (2001), cultural knowledge can be divided into culture-general knowledge and culture-specific knowledge. To develop CI in a virtual setting, both forms of knowledge should be considered. Cultural-general knowledge focuses on the knowledge and the awareness of cultural differences. It relates to the key components of culture, such as learning of cultural values and the complex environment of IB (e.g., political, legal, economic systems) or gaining an intercultural understanding (Johnson et al., 2006). To develop CI, individuals should be able to recognize environmental differences in their virtual team members are embedded during project work. Cultural-specific knowledge refers to the specific recognition/understanding of different cultures (e.g., information about laws, history, hygiene, politics, etc.). Cultural-specific training helps to learn cultural-specific knowledge (Johnson et al., 2006). A higher level of cultural-specific knowledge goes hand in hand with an increase in a culture-based memory system (Taylor, 1981). Therefore, it is important that individuals gain an adequate level of knowledge about the cultural characteristics of the virtual team members to reduce interpersonal tensions.

The second dimension to developing CI and cultural competences is the development of cultural skills. This behavioral component includes the acquisition of aptitudes and abilities (Johnson et al., 2006). Perceptual skills (e.g., learning from social experiences), relational skills (e.g. empathy, flexibility, sociability) and adaptive skills (e.g., ability to display a well- or quickly-developed behavior set) are types of skills (Thomas et al., 2008) that help to adapt to a different cultural environment. Since the cultural diversity can be much higher in virtual team meetings compared to

cross-border face-to-face meetings, it is crucial for global virtual team worker to possess cultural skills.

The third dimension in developing cultural competences (e.g., CI) is to focus on the personal attributes (Johnson et al., 2006) of GVT members. Personal attributes include internalized values, beliefs, and norms, as well as personality traits such as loyalty, tolerance, or perseverance. Depending on whether they are present in the right amount, they can either hinder or support the development of CI. Nevertheless, they are the most important factor for individuals who work in a cross-cultural context (Johnson et al., 2006) as personality traits are often responsible for a change in team functioning (Molleman, 2005). We find that in order to gain/develop high CI, it is major to foster the growth of "cross-cultural-friendly" personal attributes among the virtual team members. They help to improve team functioning and interindividual understanding.

## 3.3 Developing Virtual Intelligence

As work settings (in global enterprises) will become increasingly virtual in the future (Culture Wizard, 2020), skills to deal with "online" settings will be a critical success factor. In this regard, Virtual Intelligence helps individuals to better handle "virtual worlds".

Virtual Intelligence is a special form of contextualized intelligence. It helps to increase the adaption processes of the individual to a virtual work context. It also addresses the new situational conditions and complexity of contexts that virtual work environments require (Makarius & Larson, 2017). Similar to other forms of intelligence, it enables individuals to act effectively and purposefully and to think rationally (Wechsler, 1944) while working virtually. Through the key components of recognizing, directing, and maintaining cognitive resources, individuals are able to develop VI to work effectively in a fully virtual work setting (Makarius & Larson, 2017). In the following paragraphs, we introduce the three main components of VI and delve into how VI can be developed through the components.

The first component of Virtual Intelligence includes recognizing that the context of a virtual work situation differs from a conventional situation. Since virtual work settings have a high potential for distraction (e.g. from technological or other distractions), it is important to recognize where attention should be paid to and which information is irrelevant and should be therefore filtered out. As the context in GVT can change rapidly from virtual to non-virtual work setting, cognitive flexibility helps to adapt behavior and to recognize the (non)virtuality of the context that people are exposed to while working (Makarius & Larson, 2017). A high level of cognitive flexibility in recognizing a changing context has been shown to contribute to faster adaption to virtual work settings (Reyt & Wiesenfeld, 2015). Hence, we believe that the recognition of heterogeneities should be developed while working in GVT. It increases the ability to identify essential differences between virtual and non-virtual work situations and helps to adapt behavior to virtual work settings more quickly.

Directing cognitive resources through reasoning and planning to influence virtual work behavior is the second component of Virtual Intelligence (Makarius & Larson, 2017). Reasoning is the ability to solve problems and shape concepts using new procedures or information (Flanagan et al., 2007). Planning includes the ability to organize and identify steps prior to task processing (Jurado & Rosselli, 2007). Both cognitive resources are important to adapt to a virtual environment as they help to build trust, coordinate information, establish norms, and select the most well-suited collaboration tools. With a high level of directing, virtual team workers are better equipped to mobilize their cognitive resources and to act appropriately in accordance with their respective virtual settings (Makarius & Larson, 2017). For these reasons, reasoning and planning, by directing cognitive resources, helps to improve the match between behavior and the virtual work context. We recommend keeping this in mind when developing VI for individuals working in a global virtual team setting.

After individuals have recognized the virtual setting and directed their cognitive resources through planning and reasoning, the final component for developing Virtual Intelligence includes the need to maintain cognitive resources (for managing information in the virtual work context). Individuals monitor and update their knowledge gained while working in a virtual environment. The maintenance of knowledge helps to increase success and reduce malfunctioning adaption processes when changing the virtual context (Makarius & Larson, 2017). It is therefore of importance for individuals who work in GVT to establish processes for maintaining virtually acquired knowledge.

# 3.4 New and Emerging Technologies in the Virtual Team Context

As the number of individuals who work in a fully virtual team environment increases (Culture Wizard, 2020), GVT need interaction tools that resemble face-to-face collaborations (Jimenez et al., 2017). Hence, we propose how new and emerging technologies should be designed in the virtual team context to meet these needs and introduce a technological trend that may be "fashionable" in the near future.

As companies started to begin using GVT to perform tasks, Townsend et al. (1998) found that there are three basic categories of technology to consider, when working in GVT: Desktop Videoconferencing Systems (DVCS) are the central system during work in GVT. They are necessary to simulate face-to-face meetings and to ensure complex communication channels. Collaborative Software Systems (CSS) ensure that team members can collaborate interactively and independently. CSS offer a comprehensive environment for teamwork. Internet and Intranet connect team members and software systems and help to work together quickly in a targeted manner.

The combination of all three technology categories increases the success of GVT work. It is therefore crucial for high team performance to link video, voice, interactivity, independence, and the collaboration tool of team members to create more opportunities for participation in a virtual environment (Murray, 2020). In particular, improving the similarity between virtual meetings and face-to-face interactions is an

important technological element for the future success of GVT (Kaiser et al., 2020). In this regard, immersive environments (e.g. 3D virtual environments) are an emerging technology that is receiving a great deal of organizational attention. Although physically dispersed in different locations, GVT members can share a digital 3D room. They work through avatars to interact, manipulate, and navigate common tasks (Gilson et al., 2015). This type of technology simulates a "real-life" scenario using virtual or augmented reality technologies and gives the impression of physical contact with team members. It provides the greatest value to a virtual team when the GVT members use it for interactive meetings or collaborative creations. By seeing the whole person (including mouth and hand movements), immerse environments convey the feeling of a physical contact with team members. Since this emerging technology is accessible via mobile devices (e.g., laptop or smartphone), GVT can easily use it (Kaiser et al., 2020). Therefore, 3D technology is useful for global virtual teamwork situations, as it ensures a high level of Media Richness, thereby, increasing the social presence of the members.

Since immersive environments are a new form of virtual collaboration, there are a few issues to be aware of when working with such tools: A high level of hardware and thus technological expertise is required for the use of 3D technologies. For a comprehensive experience of immersive environments, GVT members need an Augmented-Reality/Virtual-Reality headset with a complicated operation system (Kaiser et al., 2020). This limits the number of individuals willing to use such a technology.

# 3.5 Well-Being at Work

A GVT is highly technology-dependent and characterized by dispersion (e.g., temporality or location). In GVT, individuals often work independently on common tasks, are physically dispersed, and do not have a strong relationship with their teammates. Thus, the well-being of team members is seen as an important factor in shaping the performance and affectation among the team participants (Gilson et al., 2015). The concern for the well-being of GVT is an asset and success factor for the acceptance of global virtual teamwork. To date, research on well-being in a virtual environment has been limited. For some individuals, global virtual teamwork leads to greater autonomy and independence, while others fell into isolation, loneliness, and depression (Gilson et al., 2015) without any physical contact. In order to still achieve a high level of acceptance among completely virtual and global teams, organizations can implement a variety of measures in the future to combine virtuality and well-being in the fields of team functionality and the design of the work environment:

Team functionality: Organizations should form teams based on the individual characteristics of the team members. Forming teams based on work preferences, styles, and personal needs (Volini & Fisher, 2021) supports interindividual sympathy. The implementation of comfort criteria (e.g. evaluations, recognition programs) can lead to individuals talking about their personal (well-being) situation. In

addition, the initialization of non-work meetings (Volini & Fisher, 2021) supports the exchange of non-work information between teammates and allows flock together on a more private level.

Design of work environments: While team functionality focuses on interindividual processes to increase the well-being of team members, the design of work environments emphasizes the virtual context. Therefore, the working environment of (global) virtual team members should be designed in such a manner that it supports mental, emotional, and physical needs. This includes modeling well-being behavior (e.g. taking micro-breaks, decrease number of video-based meetings). Finally, the integration of new technologies such as virtual reality (Volini & Fisher, 2021) supports interindividual interactions and can protect against loneliness.

Virtual technologies also offer the opportunity for employees to work during non-work hours (e.g., weekends or during vacations). In addition, time zone differences increase the likelihood of working in the evening or at night (Raghuram et al., 2019). Consequently, there is a high potential to blur boundaries between private and work life (Hill et al., 1998) which can affect performance and health (Gilson et al., 2015). As global virtual teamwork collaboration increases, MNEs should take steps to support the work–life balance in GVT. Creating strict non-work hour slots is one solution to improve the work–life balance. Additionally, organizations may emphasize a restriction on early/late work calls (Dahik et al., 2020). Both approaches can be implemented to ensure work–life balance.

#### 4 Conclusion

Globalization, environmental changes, e.g., COVID-19, changing demography, and technology have had a significant impact on the nature of global work. While the past was dominated by physical relocation of expatriates across borders, MNEs increasingly embrace global virtual work, often via GVT. This chapter reviewed the extant literature and provided an outlook of the future of global work. We provided an overview of the key dimensions and challenges of GVT. GVT can be distinguished by dispersion (temporality, diversity, location), and technology context (type and value of technology).

GVT creates new challenges and opportunities for MNEs. We have discussed key topics for the future of global work relevant both for research and practice. While GVT can reduce the cost of expatriation and increase efficiency, such work arrangements can be challenging for employees. Thus, careful selection and training of GVT workers is key. Given the complexity of the GVT work, GVT workers need to possess cultural and virtual intelligence. MNEs can use such criteria in their selection processes and develop such traits among their incumbent employees. To facilitate collaboration and the reduction of boundaries in GVT, MNEs could look to leverage latest technologies such as collaborative software systems and/or 3D technology. Given rapid external changes and preferences of younger generation, i.e., millennials and generation Z, organizations should support the well-being and

work-life balance of their employees (Volini & Fisher, 2021). In the context of global virtual teamwork, MNEs should emphasize team member well-being (e.g., team functionality and the design of the work environment) and work-life balance to ensure the success of this new form of global teamwork in the future.

#### References

- Accenture. (2020). Virtual ways of working. Accessed June 23, 2021, from https://www.accenture.com/\_acnmedia/PDF-127/Accenture-Virtual-Ways-Working.pdf#zoom=40
- Agarwal, D., Bersin, J., Lahiri, G., Schwartz, J., & Volini, E. (2018). Deloitte global human capital trends. The hyper-connected workplace. Accessed June 18, 2021, from https://www2.deloitte. com/content/dam/insights/us/articles/HCTrends2018/2018-HCtrends\_Rise-of-the-social-enterprise.pdf
- Bebenroth, R., & Froese, F. J. (2020). Consequences of expatriate top manager replacement on foreign subsidiary performance. *Journal of International Management*, 26(2), 100730.
- Bell, B. S., & Kozlowski, S. W. J. (2002). A typology of virtual teams: Implications for effective leadership. *Group & Organization Management*, 27(1), 14–49.
- Bhaskar-Shrinivas, P., Harrison, D., Shaffer, M. A., & Luk, D. M. (2005). Input-based and time-based models of international adjustment: Meta-analytic evidence and theoretical extension. *Academy of Management Journal*, 48(2), 257–280.
- Bonache, J., Brewster, C., & Froese, F. J. (2020). Global mobility Reasons, trends, and strategies. In J. Bonache, C. Brewster, & F. J. Froese (Eds.), Global mobility and the management of expatriates (pp. 1–28). Cambridge University Press.
- Brewster, C., Dickmann, M., & Suutari, V. (2020). Short-term assignees, international business travelers, and international commuters. In J. Bonache, C. Brewster, & F. J. Froese (Eds.), *Global mobility and the management of expatriates* (pp. 153–180). Cambridge University Press.
- Cohen, S. G., & Gibson, C. B. (2003). In the beginning: Introduction and framework. In S. G. Cohen & C. B. Gibson (Eds.), *Virtual teams that work: Creating conditions for virtual team effectiveness* (pp. 1–13). Jossey-Bass.
- Cramton, C. D., & Webber, S. S. (2005). Relationships among geographic dispersion, team processes, and effectiveness in software development work teams. *Journal of Business Research*, 58(6), 758–765.
- Culture Wizard. (2018). Trends in high-performing global virtual teams. Accessed June 18, 2021, from https://content.ebulletins.com/hubfs/C1/Culture%20Wizard/LL-2018%20Trends%20in% 20Global%20VTs%20Draft%2012%20and%20a%20half.pdf
- Culture Wizard. (2020). Trends in global virtual work. Metamorphosis of the global workforce. Accessed June 18, 2021, from https://cdn2.hubspot.net/hubfs/466336/VTS-ExecutiveBrief-2020-Flnal.pdf?\_ga=2.192853610.1556005674.1601920431-1783803064.1601920431
- Daft, R., Lengel, R., & Trevino, L. K. (1987). Message equivocality, media selection, and manager performance: Implications for information support systems. *Management Information Systems Quarterly*, 11, 355–366.
- Dahik, A., Lovich, D., Kreafle, C., Bailey, A., Kilmann, J., Kennedy, D., Roongta, P., Schuler, F., Tomlin, L., & Wenstrup, J. (2020). What 12,000 employees have to say about the future of remote work. Accessed June 28, 2021, from https://www.bcg.com/de-de/publications/2020/ valuable-productivity-gains-covid-19
- De Guinea, A., Webster, J., & Staples, D. (2012). A meta-analysis of the consequences of virtualness on team functioning. *Information & Management*, 49, 301–308.
- Duranti, C. M., & de Almeida, F. C. (2012). Is more technology better for communication in international virtual teams? *International Journal of E-Collaboration*, 8(1), 36–52.
- Flanagan, D. P., Ortiz, S. O., & Alfonso, V. C. (2007). *Essentials of cross-battery assessment* (2nd ed.). John Wiley & Sons.

- Froese, F. J., Kim, K., & Eng, A. (2016). Language, cultural intelligence, and inpatriate turnover intentions: Leveraging values in multinational corporations through inpatriates. *Management International Review*, 56, 283–301.
- Froese, F. J., & Peltokorpi, V. (2013). Organizational expatriates and self-initiated expatriates: Differences in cross-cultural adjustment and job satisfaction. *International Journal of Human Resource Management*, 24, 1953–1967.
- Froese, F. J., Stoermer, S., Reiche, S., & Klar, S. (2021). Best of both worlds: How embeddedness fit in the host unit and the headquarters improve repatriate knowledge transfer. *Journal of International Business Studies*, 52, 1331–1349.
- Gilson, L. L., Maynard, M. T., Jones Young, N. C., Vartiainen, M., & Hakonen, M. (2015). Virtual teams research: 10 years, 10 themes, and 10 opportunities. *Journal of Management*, 41(5), 1313–1337.
- Hill, E. J., Miller, B. C., Weiner, S. P., & Colihan, J. (1998). Influences of the virtual office on aspects of work and work/life balance. *Personnel Psychology*, 51(3), 667–683.
- Hofstede, G. (2001). Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations. Sage Publications.
- Hollingshead, A., McGrath, J., & O'Connor, K. (1993). Group task performance and communication technology: A longitudinal study of computer-mediated versus face-to-face work groups. Small Group Research, 24, 307–333.
- Jarman, R. (2005). When success isn't everything case studies of two virtual teams. Group Decision and Negotiation, 14(4), 333–354.
- Jimenez, A., Boehe, D., Taras, V., & Caprar, D. (2017). Working across boundaries: Current and future perspectives on global virtual teams. *Journal of International Management*, 23(4), 341–349.
- Johnson, J. P., Lenartowicz, T., & Apud, S. (2006). Cross-cultural competence in international business: Toward a definition and a model. *Journal of International Business Studies*, 37(4), 525–543.
- Jurado, M. B., & Rosselli, M. (2007). The elusive nature of executive functions: A review of our current understanding. *Neuropsychology Review*, 17(3), 213–233.
- Kaiser, R., Schatsky, D., & Jones, R. (2020). Collaboration at a distance. Technology for remote, high-touch scenarios. Accessed June 28, 2021, from https://www2.deloitte.com/za/en/insights/ focus/signals-for-strategists/virtual-team-collaboration.html
- Kim, J., & Froese, F. J. (2012). Expatriation willingness in Asia: The importance of host-country characteristics and employees' role commitments. *International Journal of Human Resource Management*, 23(16), 3414–3433.
- Makarius, E., & Larson, B. (2017). Changing the perspective of virtual work: Building virtual intelligence at the individual level. *The Academy of Management Perspectives*, *31*, 159–178.
- Maznevski, M., Davison, S. C., & Jonsen, K. (2006). Global virtual team dynamics and effectiveness. In G. K. Stahl & I. Björkman (Eds.), *Handbook of research in international human resource management* (pp. 364–384). Edward Elgar.
- Molleman, E. (2005). Diversity in demographic characteristics, abilities and personality traits: Do Faultlines affect team functioning? *Group Decision and Negotiation*, 14(3), 173–193.
- Murray, E. (2020). The next generation of office communication tech. Accessed June 28, 2021, from https://hbr.org/2020/10/the-next-generation-of-office-communication-tech
- O'Leary, M., & Cummings, J. (2007). The spatial, temporal, and configurational characteristics of geographic dispersion in teams. *MIS Quarterly*, 31, 433–452.
- Raghuram, S., Sharon Hill, N., Gibbs, J. L., & Maruping, L. M. (2019). Virtual work: Bridging research clusters. The Academy of Management Annals, 13(1), 308–341.
- Reyt, J.-N., & Wiesenfeld, B. M. (2015). Seeing the forest for the trees: Exploratory learning, mobile technology, and knowledge workers' role integration behaviors. *Academy of Manage*ment Journal, 58(3), 739–762.
- Shaffer, M. A., Kraimer, M. L., Chen, Y.-P., & Bolino, M. C. (2012). Choices, challenges, and career consequences of global work experiences. *Journal of Management*, 38(4), 1282–1327.

- Stoermer, S., Davies, S., & Froese, F. J. (2021). The influence of expatriates' cultural intelligence on embeddedness and knowledge sharing: The moderating effects of host country context. *Journal of International Business Studies*, 52(3), 432–453.
- Stoermer, S., Froese, F. J., & Peltokorpi, V. (2020). Self-initiated expatriates. In J. Bonache, C. Brewster, & F. J. Froese (Eds.), Global mobility and the management of expatriates (pp. 181–203). Cambridge University Press.
- Taras, V., Baak, D., Caprar, D., Dow, D., Froese, F. J., Jimenez, A., & Magnusson, P. (2019). Diverse effects of diversity: Disaggregating effects of diversity in global virtual team. *Journal of International Management*, 25(4), 100689.
- Taylor, S. (1981). A categorization approach to stereotyping. In D. L. Hamilton (Ed.), *Cognitive processes in stereotyping and intergroup behavior* (pp. 83–114). Taylor & Francis.
- Thomas, D. C., Elron, E., Stahl, G., Ekelund, B. Z., Ravlin, E. C., Cerdin, J.-L., Poelmans, S., Brislin, R., Pekerti, A., Aycan, Z., Maznevski, M., Au, K., & Lazarova, M. B. (2008). Cultural intelligence: Domain and assessment. *International Journal of Cross Cultural Management*, 8(2), 123–143.
- Townsend, A. M., DeMarie, S. M., & Hendrickson, A. R. (1998). Virtual teams: Technology and the workplace of the future. *Academy of Management Perspectives*, 12(3), 17–29.
- Volini, E., & Fisher, J. (2021). How to integrate well-being into work so employees perform and feel their best. Accessed June 28, 2021, from https://www.forbes.com/sites/deloitte/2021/03/08/how-to-integrate-well-being-into-work-so-employees-perform-and-feel-their-best/?sh=3 6cfdaccb87b
- Wechsler, D. (1944). The measurement of adult intelligence. Williams & Wilkins.



**Tobias Blay** is a research associate and doctoral student at the Chair of HR-Management and Asian Business at the University of Goettingen, Germany. His research focuses on global virtual work collaborations and virtual teams. He holds a Master's degree in Sociology, majoring in work organization and HR management.



Fabian Jintae Froese is Chair Professor of HR-Management and Asian Business at the University of Goettingen, Germany, and Joint Appointment Professor of International Business at Yonsei University, South Korea. In addition, he is Editor-in-Chief of Asian Business & Management and Associate Editor of the International Journal of Human Resource Management.