

Article

The Ontology of Work during Pandemic Lockdown: A Semantic Network Analytical Approach

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Abstract: Digital nomadism is emerging as a growing segment of the labor force. It is an insightful framework for understanding work during the pandemic and perhaps into the post-pandemic era because it construes work to be related to the notion of space, time and the instrumentality of work. The present study is about how people understand, relate, and make sense of their work during the early phase of the pandemic lockdown in 2020. The study will report difficulties that arise from work digitalization during the lockdown, and the study conceived the various dimensionality of work to cope with work challenges. Semantic network analysis (SNA) was used to aid the analysis of the contents from four European countries. One hundred and sixty respondents are interviewed using a semi-structured questionnaire. The words and word pairs from the SNA resulted in keywords identified for the four countries. There are common word hubs between the countries, such as hubs revolving around the meaning of ‘time’ and ‘meeting’. However, there are also unique hubs such as ‘task’, ‘office’ and “colleagues”. The results provide a cross-cultural comparison of how people adopted to work change. The organization of the word pairs in the network provided the narratives.

Keywords: remote work; lockdown; Europe; semantic network analysis



Citation: Cheng, K.H.C. The Ontology of Work during Pandemic Lockdown: A Semantic Network Analytical Approach. *Merits* **2022**, *2*, 427–444. <https://doi.org/10.3390/merits2040030>

Academic Editors: Carla Maria Marques Curado, Paulo Lopes Henriques and Lucía Muñoz-Pascual

Received: 4 November 2022

Accepted: 22 November 2022

Published: 1 December 2022

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1. Introduction

Toffler [1] predicted that people could work at home with their personal computers where “white-collar work will not require 100 percent of the workforce to be concentrated in the workshop” (p. 199). Toffler predicted the future of work, but he did not foresee the circumstance in which this occurred. In early 2020, the World Health Organisation declared the COVID-19 outbreak a pandemic [2]. Government and employers in the Western world ordered citizens and employees to remain at home, and their home became their offices. Pollution level in the United States recorded their lowest levels in decades [3]. In the UK, the proportion of working adults working from home in 2020 increased to 37% on average from 27% in 2019 [4]. In another study [5] close to 62% of workers between 22 to 65 years of age claimed to work remotely occasionally. In the same report, only 44% of companies do not allow remote work.

People stranded in their own homes whilst confined to their working lives at the same time improvised and, as a result, produced a myriad of arrangements that changed the nature of work and how work is accomplished. Some arrangements fell in accord with scholar and intuitive expectations, but some were creative and unexpected [6–10]. The various improvisations from employees to maintain effective communications between colleagues and manage distractions in the same instance are tied to and become a critical factor in personal and professional coping [11]. In later section, we will introduce the socio-context model and how the notion of digital nomad frame the current research.

The adaptation to transform everything or anything digital during the pandemic was not without consequence. Many felt alone/isolated, and that work–life has spill over literally to the bedroom [12]. Studies reported that telework is associated with decreased productivity by employees during the COVID-19 pandemic [13]. Further, the OECD [14]

also reports that limited access to child-care support, social isolation, and family-work boundary violations have caused teleworkers to suffer work productivity difficulties at both the individual and organizational levels during this global crisis. To many, their work, domestic time, and space have collided [15].

According to Fisher and Fisher [16], time, space and/or culture constitute the distance between managers and employees. This study explores how workers dealt with competing time and space during the pandemic. In particular, the study aims to probe how workers define, relate to, and cope with the nature of work physically, psychologically and socially.

Literature Review

The notion of working-from-home encapsulates occupational activities in places other than the traditional office environment [17]. Scholars and practitioners have explored this type of distance work under numerous adjacent concepts such as telework, telecommuting, virtual work, e-work, mobile work and, more recently work-from-anywhere [18–26]. The notion of taking work outside the office (or at the traditional workspace) has been gaining popularity. It has become a common feature in the market due to the rise of digital infrastructures and miniaturized mobile devices [27] and changing attitudes towards where and when work should be performed [28]. One implication is that some workers can now decide when and where they work.

Before the pandemic, the nature of work was slowly permutating, and the rate of permutating and adaptation differ depending on occupations and their flexibility to connect with globalization and digitalization trends. Work arrangements such as telecommuting, coworking and digital nomads are adaptations which allow workers to craft work in ways that suit their living circumstances [29]. The change had been gradual, but the pandemic accelerated the existing trend. Many businesses explored factors facilitating or hindering the transition. Some empirical research has yielded four factors that influence success in remote work: individual, job design, organizational, and family/home factors [30]. Subsequently, Belzunegui-Eraso and Erro-Garcés [31] identified three more from a study during the pandemic of 2020. It included environmental, safety, and legal factors. Similarly, Golden and Veiga [32], and Nakrošienė, Butkevičienė, and Goštautaitė [33] proposed work intensity, work schedule and work location as measures to consider when switching or adapting to remote work. The current study advocates the prospect of culture's influence on how work is defined, shaped, perceived & conceived, organized, and prioritized, and change agents are not people from management but the workers.

The nature of work in terms of time and space have traditionally been the domains of and decisions made by the employers at the management or organizational level [34]. There is little or no compromise in allowing the employee/worker to craft work at a time or space that customizes individual needs on a large scale. However, norms about work time during the pandemic have become individualistic, tailored to individual needs and lifestyles. Especially this becomes apparent for work that can be digitized, thus transforming the temporal and spatial boundary between professional and domestic domains.

Past research noted the benefits and costs of remote work. For example, while there are gains in productivity, control of work schedules, and work-life-balance, there are also experiences of intensification [35], isolation, role ambiguity, lack of autonomy [36], blurring of work-home boundaries, and lack of support from management. While these results remain to be confirmed in large multi-nations studies, the conclusion is that remote work has more benefits than costs [37,38]. Further, examining and taking priority in fitting personal circumstances with work context will maximize gains in adapting from traditional to a new form of remote work.

This approach to remote work differs from past studies that treat remote work as an antecedent to work outcomes. Instead, works by Belanger et al. [39] and Bailey and Kurland [18] view remote work as the social context. The contextual approach predicts adverse outcomes might result when remote work context fails to meet individual preferences or task requirements. For example, families with young children may experience difficulties

simultaneously meeting domestic and professional requirements. Women reported that their well-being was at its worst during the pandemic because spouses did not help or share childcare or domestic duties [40]. The advantage of this approach is that it focuses on the relationship between virtual work characteristics and working experiences. Nevertheless, the contextual approach has problems because it is descriptive. That is, while it may suggest workers shape the meaning of work, it remains vague as to what and how the context shapes the work characteristics and, thus, outcomes. Given that people are becoming more diverse and the workplace is multicultural, it would be useful to use culture or cultural context as the explaining factor in what and how the meaning of work is derived. For example, interdependent cultures value social ties and connections between people in social settings [8]. Plenty of work indicates that cultural dimensions shape and affect how we appraise workplace situations [16]. Some cultures manage work based on co-production and interconnections [41]. During the lockdown, however, these connections are absent due to physical isolation or segregation, and these work characteristics may be shaped negatively.

Besides temporal and spatial challenges, perhaps even how work is performed is subject to the worker's discretion. It was not just globalization and digitalization that changed work, IT consumerization [42] also gave back workers the power to choose their tools. Digital nomadism is emerging as a growing segment of the labor force [43]. Digital nomads are geographically mobile and free to work from almost anywhere and at any time. The consensus about what constitutes "digital work" is inconclusive in the literature. On the one hand, it can be construed as using "digital tools to produce digital goods" [44,45]. On the other hand, it can be summarized as knowledge work [46,47]. Orlikowski and Scott [48] provided a broad definition wherein digital work entails work but does not directly involve a computing device.

Digital nomadism is an insightful framework for understanding work during the pandemic and perhaps into the post-pandemic era because it construes work to be related to the notion of space, time and the instrumentality of work. In other words, work, or the production of work, will be less likely to be defined and dictated by the location of work. It is expected to be independent of temporal restrictions or when it needs to be performed. Finally, the instruments used to produce the output will be dictated or provided by the workers. The choice to adopt one's trade tool can be due to geography or utility. Such a position is reminiscent of the fact that work production depends on three factors. That is the labor (or work), the subject matter, and the instruments [49]. Or, as Wang et al. [43] wrote, "Digital work, then, can be understood to be work in which digital technology has transformed factors of production", where "Labour is increasingly organized through distributed digital systems . . . Subject matter is increasingly digital data forming materials such as documents, statistics, audio/video recordings Finally, instruments of work are now less defined by their mechanical configurations like the machines of the industrial revolution, and more defined by the bitstreams of digital data stored within the machine".

Given the timing and the need to push toward digitizing work, what has happened and how has it changed the factors of production as we know? Across the world, do the above factors by Wang et al. [43] consistent across cultures? Or would culture impact the prioritization of factors? What and how many difficulties during the transition from office to lockdown working did the digitalization of work encounter? In other words, what digitization difficulties did people encounter when transitioning from office work to homework? Before the lockdown, researchers had limited engagement with the mobilities of digital work. One reason is that digital work is often considered inter-organizational work [50].

Finally, this study aims to show how people understand, relate, and make sense of their work in terms of the construal of work, the arrangement of work, the priority of work and the coordination of work. Additionally, we will report difficulties that arise from work digitalization during the lockdown, and we will conceive the various dimensionality of work to cope with the difficulties.

2. Materials and Methods

2.1. Participants

The participants came from four European regions: Switzerland (CH), Germany (DE), United Kingdom (UK) and Italy (IT), all experiencing the first wave of the pandemic differently. The sampling considerations took into account that people from the regions differ in terms of work practices, ethics and beliefs [8,9]. For example, Germans are task-oriented, whereas those originating from Latin culture focus on social-emotional aspects of work. Traditionally, the Protestant work ethics were attributed to the diverse difference in these regions' cultural differences [51], although recent controversy [7] question the validity of Weber's [10] early assertions. Further criteria were based on how these regions cope with COVID, where CH and DE had lower mortality at the time compared to the UK and IT. By sampling with such diverse differences, we aim to challenge known conventions and understand how people work during the lockdown. The participants were recruited online using Clickwork for CH and Prolific for GE, UK and IT. Respondents from Clickworker were solicited because Prolific had no Switzerland panel at the time of data collection.

Respondents in both Prolific and Clickworker were subjected to the same selection or inclusion criteria. For example, German respondents must be working on German soil and carry German Nationality at the time of the interview. The service provider authenticated the latter criteria. There were no other selection criteria other than employment status—that is, the respondents must be employed at the time of the study, and they are working remotely from home during the lockdown more than 50% of the time compared to the pre-lockdown.

Eventually, between 7 May 2020 and 4 June 2020, data from four European regions ($N = 35_{CH}$, 41_{DE} , 41_{UK} and 43_{IT}) were secured using a purposive sample. Because the Switzerland sample required liaison with a new online data collector (i.e., Clickworker), only 35 respondents were secure. No further collection was attempted for the Switzerland cohort because the research intended to capture the same period for all regions during the initial first wave of the pandemic. Table 1 describes the demographic of the respondents by area.

Table 1. Demographics by Country, Sex and Age Group.

Country		CH	DE	UK	IT	Total
	Frequency	35	41	41	43	160
	Percentage (%)	22	26	26	27	100
Sex		Female	Male			
	Frequency	90	68			158
	percentage (%)	57	43			100
Age groups		18–24	25–54	55–64		
	Frequency	49	104	7		160
	percentage (%)	31	65	4		100

Note: Country code: CH—Switzerland; DE—Germany; UK—United Kingdom; IT—Italy.

2.2. Ethics

All participants gave their informed consent for inclusion before they participated in the study. The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by the Ethics Committee (REF-19.26).

2.3. Procedures

2.3.1. Data Collection Platform

A pilot study of 22 respondents globally was conducted one month (in April 2020) using the author's professional and personal social network. Any open-ended items deemed ambiguous and unconcise were revised or removed based on respondents' feedback or

comments. The online study from the four regions was conducted sequentially from 7 May 2020, to 4 June 2020, starting (in the following order) German, Italy, UK and Switzerland. To avoid temporal and environmental factors, the author collected and subsequently collected all the responses within one month. They were not conducted simultaneously because the author was unsure if the items required alternation or adaption throughout the data collection duration. Another reason is the author needed time to verify the response before approving and reimbursing the respondents. The items were all in English.

The study used two online participant recruitment platforms. Prolific is an online participant recruitment platform. On its website, Prolific (<https://app.prolific.co/>) (accessed on 1 January 2020)) reported over 100 reputable (some of which are peer-reviewed) publications. Clickworker provides similar services where users design and administer survey-type questionnaires at their discretion. The author considered MTurk and other similar data collectors (e.g., SoSci, peopleforresearch, Social Psychology Network, Reddit Psychological Research on the Net, PsychStudies) in the pilot study, but for MTurk, the author successfully solicited respondents who primarily resided and work in North America. There were a lot of respondents who responded without attending to the selection criteria. The other websites yield low responses. Given the critical duration the author aims to capture in the early pandemic, the above data platforms were finalized.

The survey questionnaire was designed and displayed on an online platform. It consists of open-ended but word-limited (minimum-20; maximum 250 words) semi-structured interview items. The twenty-two items in the questionnaire explored work efficiency, work difficulties, coping mechanisms, sustainability of remote work, and boundaries between domestic and professional affairs during the lockdown. A survey link was inserted in Prolific, which the participants then accessed the survey on Google Form. For Clickworker (<https://www.clickworker.com/>) (accessed on 1 January 2020)), the questionnaire items appear within Clickworker's intranet interface because it was the service provider service provision policy.

These two online recruitment services operate based on approval by the client (or the author in this case), and the author verified the responses against dubious and unconcise responses. Any responses that are dubious/ambiguous were probed before the responses were approved and the respondents paid. Further, all the responses need to show reasonable effort from the respondents. For example, some responses were all answered similarly and vaguely. In the end, 3, 1, 2, and 4 respondents from CH, DE, UK and IT (respectively) were discarded. All these cases refused to continue after further investigation/probe. Across the four regions, the author paid an equivalent of USD 3.37, 3.90, 1.61, and 3.91 per respondent from CH, DE, UK and IT, respectively. The author initially began the rate for all cohorts at 1.5USD but had to vary the rate due to a lack of interest.

In brief, semantic network analysis (SNA) is a form of content analysis that identifies associated concepts. SNA can identify a new cluster of concepts, which allows the analyst to explore the meaningful ideas from the texts. For a detailed semantic network analysis (SNA) outline, refer to Yoon and Chung [52].

The total number of words from the four regions' responses to the interview is 45,118 (CH: 15591, DE: 9382, UK: 8126, IT: 12019). The raw data are available on the Harvard Dataverse repository. Four semantic networks based on these four regions were constructed based on procedures discussed in Danowski, Yan, and Riopelle [53]. In preparing for the corpora, the following steps were taken. First, the word is 'dropped' using a stop-word list from Github (<https://github.com/igorbrigadir/stopwords>) (accessed on 1 January 2020)). Second, stemming was not used after considering the discussion from Danowski et al. [53]. The decision was based on the focus on preserving the finer-grained semantic relationships. Next, the author dropped word and word pairs less than 3 to normalisation the distribution [54]. The author followed the convention of using the sliding window three-words-wide on both sides of the word. The corpora were analyzed by countries using WORDij [55] to generate words and word-pairs frequency. Gephi (0.9.2) generated the visualisation and the relevant network measures (Tables 2 and 3, and Figures 1–4). The

graphical visualisation of the word pairs aided the author in the interpretation. WORDij can be downloaded and installed on Linux, Windows (aka PC) and McIntosh (aka Mac) by referring to (<https://wordij.net> (accessed on 1 January 2020)). Gephi [56] is also free-ware available for online download (<https://gephi.org/users/download/> (accessed on 1 January 2020)). Preference towards these applications were based on accessibility and replicability from interested parties.

2.3.2. Transparency and Openness

Analysis procedures, research data, and research materials are stored in Harvard Dataverse [57]. Data are available upon requests [57]. Data were analyzed using Wordij (v3.0) and Gephi (0.9.2). The study design was not preregistered because the study was exploratory and not confirmatory. The study deployed qualitative and mixed-methods.

Table 2. Summary of Network Measures.

	Germany	Italy	UK	CH
Average degree	0.73	0.81	1.24	1.03
Average weighted degree	2.85	3.31	5.74	4.06
Network diameter	11	10	8	8
Graph density	0.004	0.005	0.004	0.003
Modularity	0.73	0.71	0.56	0.73
Average Clustering Coefficient	0.57	0.50	0.57	0.46
Average Path Length	4.15	3.86	3.23	3.50

Table 3. Summary Output of the Semantic Network Analysis.

Germany (DE)				Italy (IT)			
Id	Label	Degree	Eigencentrality	Id	Label	Degree	Eigencentrality
3	writing	21	1	12	colleagues	21	1
2	meetings	27	0.88	20	time	26	0.78
21	time	26	0.85	6	office	19	0.78
4	reading	10	0.53	17	connection	11	0.73
7	data	15	0.44	39	clients	15	0.6
138	internet	7	0.43	134	meetings	15	0.58
137	searching	6	0.42	33	phone	16	0.54
102	online	13	0.4	97	direct	9	0.52
136	method	5	0.38	8	job	7	0.45
131	learning	6	0.36	51	talk	7	0.43
82	planning	4	0.36	296	Phone/video	6	0.42
202	reports	4	0.35	14	pc	8	0.39
183	thinking	4	0.35	228	communication	4	0.32
139	report	4	0.32	222	calls	6	0.31
74	people	4	0.31	275	lack	4	0.3
44	office	8	0.3	145	managers	3	0.29
1	zoom	5	0.29	16	internet	5	0.28
201	customer	4	0.26	126	video	4	0.27
244	issue	4	0.26	72	tasks	6	0.27
180	solutions	6	0.26	2	data	7	0.27
11	tasks	5	0.26	291	motivation	4	0.25
193	teaching	6	0.24	292	hurry	4	0.25
227	coding	3	0.24	118	life	5	0.25
140	writting	4	0.24	223	effective	4	0.25
37	emails	4	0.23	57	customers	6	0.24
273	care	3	0.23	115	spend	3	0.24
154	calls	6	0.22	194	materials	3	0.23
153	phone	7	0.21	114	space	3	0.22
17	contact	4	0.21	286	limit	3	0.21
288	managing	2	0.2	96	calling	4	0.21
167	researching	2	0.2	130	people	5	0.2
135	impact	3	0.19	4	emails	6	0.2
113	papers	5	0.19	65	day	6	0.2
30	hours	2	0.19	3	management	5	0.19
194	preparing	2	0.18	293	comparison	3	0.19

Table 3. Cont.

Germany (DE)				Italy (IT)			
Id	Label	Degree	Eigencentrality	Id	Label	Degree	Eigencentrality
48	difficult	6	0.18	71	writing	7	0.19
55	spend	4	0.17	62	difficult	5	0.19
172	applicable	2	0.17	24	feel	5	0.18
281	application	4	0.17	19	family	4	0.18
128	reaserching	1	0.15	314	shipping	3	0.18
141	communicate	3	0.14	101	documents	5	0.18
282	impactful	3	0.14	32	client	7	0.18
35	analysis	5	0.14	53	relationship	3	0.17
89	documents	5	0.14	31	coworkers	5	0.17
65	person	1	0.14	13	hardware	4	0.15
84	projects	2	0.14	120	inserting	3	0.15
92	performance	1	0.14	128	hours	3	0.15
124	physical	1	0.14	313	sell	3	0.14
133	presentations	1	0.14	52	human	2	0.14
228	maintanance	2	0.14	136	presentations	5	0.13
United Kingdom (UK) Switzerland (CH)							
Id	Label	Degree	Eigencentrality	Id	Label	Degree	Eigencentrality
4	meetings	38	1.00	32	office	21	1.00
46	emails	14	0.60	51	tasks	11	0.70
6	writing	12	0.44	6	time	16	0.66
57	calls	13	0.42	101	documents	11	0.60
114	answering	7	0.41	105	colleagues	7	0.57
24	planning	9	0.39	13	phone	7	0.47
38	time	18	0.39	212	ich	14	0.45
251	reports	6	0.36	118	contact	6	0.42
5	reading	7	0.29	34	meetings	10	0.39
81	phone	6	0.24	282	customer	6	0.32
84	colleagues	6	0.23	48	excel	5	0.32
25	team	4	0.23	192	personal	5	0.31
73	client	6	0.22	234	sehr	8	0.30
274	liaising	3	0.21	46	calls	8	0.29
275	collegues	3	0.21	251	gebe	6	0.28
22	researching	3	0.21	60	impact	3	0.27
56	training	7	0.20	252	hier	6	0.27
29	online	3	0.20	244	somit	6	0.27
131	zoom	3	0.20	174	lot	5	0.26
215	interaction	4	0.18	88	physical	3	0.26
291	staff	4	0.18	47	effective	3	0.25
21	family	3	0.18	245	gut	8	0.24
52	tasks	3	0.17	253	keine	5	0.23
75	presentations	2	0.17	232	das	6	0.23
99	video	2	0.17	190	writing	6	0.23
130	contacting	3	0.17	104	discussions	5	0.23
134	student	3	0.16	225	zu	5	0.23
296	adminfiling	3	0.16	17	people	5	0.22
276	collating	4	0.16	22	difficult	3	0.21
112	office	8	0.15	39	emails	5	0.20
149	issues	2	0.15	254	antwort	4	0.19
235	chatting	2	0.15	304	boss	4	0.18
255	scale	2	0.15	198	paper	4	0.18
294	department	2	0.14	366	lists	3	0.17
48	dealing	9	0.13	367	word	3	0.17
44	updating	5	0.12	326	skype	5	0.17
2	attending	1	0.12	95	answering	4	0.17
70	documents	1	0.12	116	life	2	0.16
78	sharing	1	0.12	92	clients	4	0.16
108	distractions	1	0.12	345	speaking	4	0.16
218	spreadsheets	1	0.12	346	planning	4	0.16
253	hosting	1	0.12	1	space	1	0.16
260	activity	1	0.12	57	task	1	0.16
262	brainstorming	1	0.12	84	days	1	0.16
284	records	5	0.12	127	noise	1	0.16
72	database	6	0.10	131	concentrate	1	0.16
45	stock	6	0.10	148	lunch	1	0.16

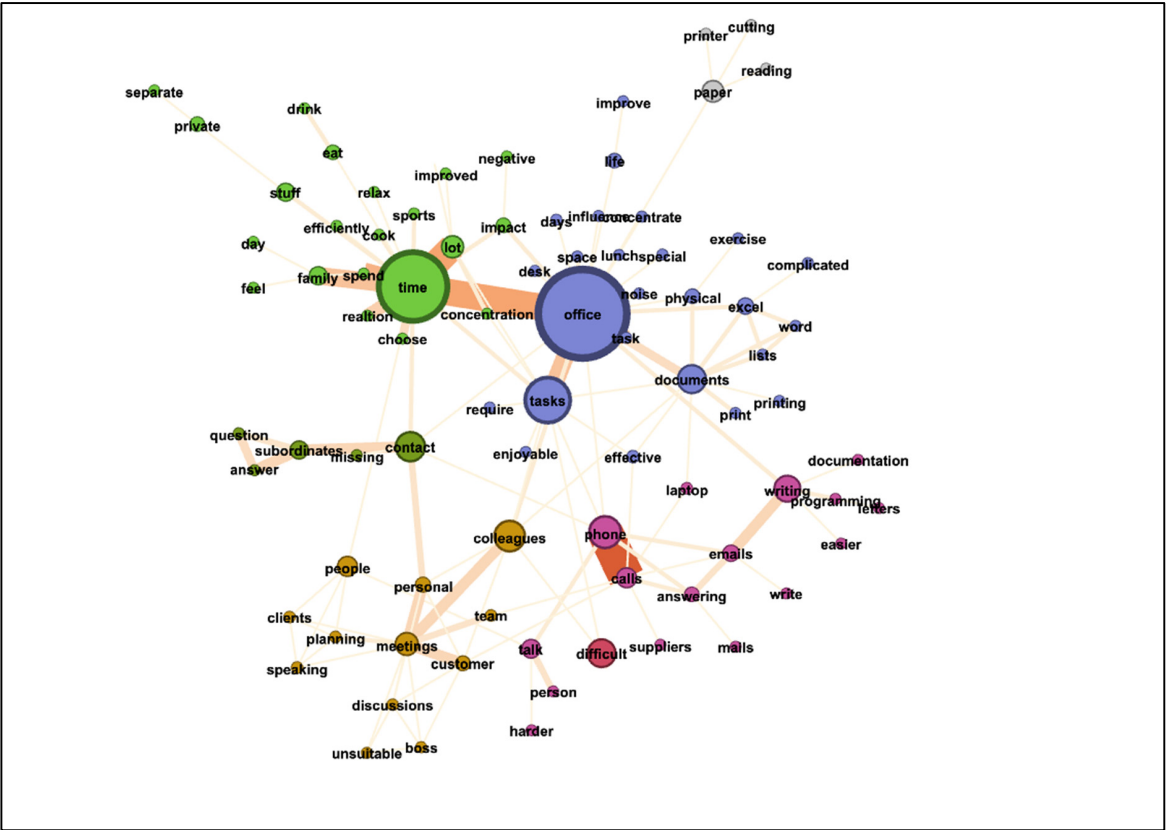


Figure 1. Switzerland Semantic Network.

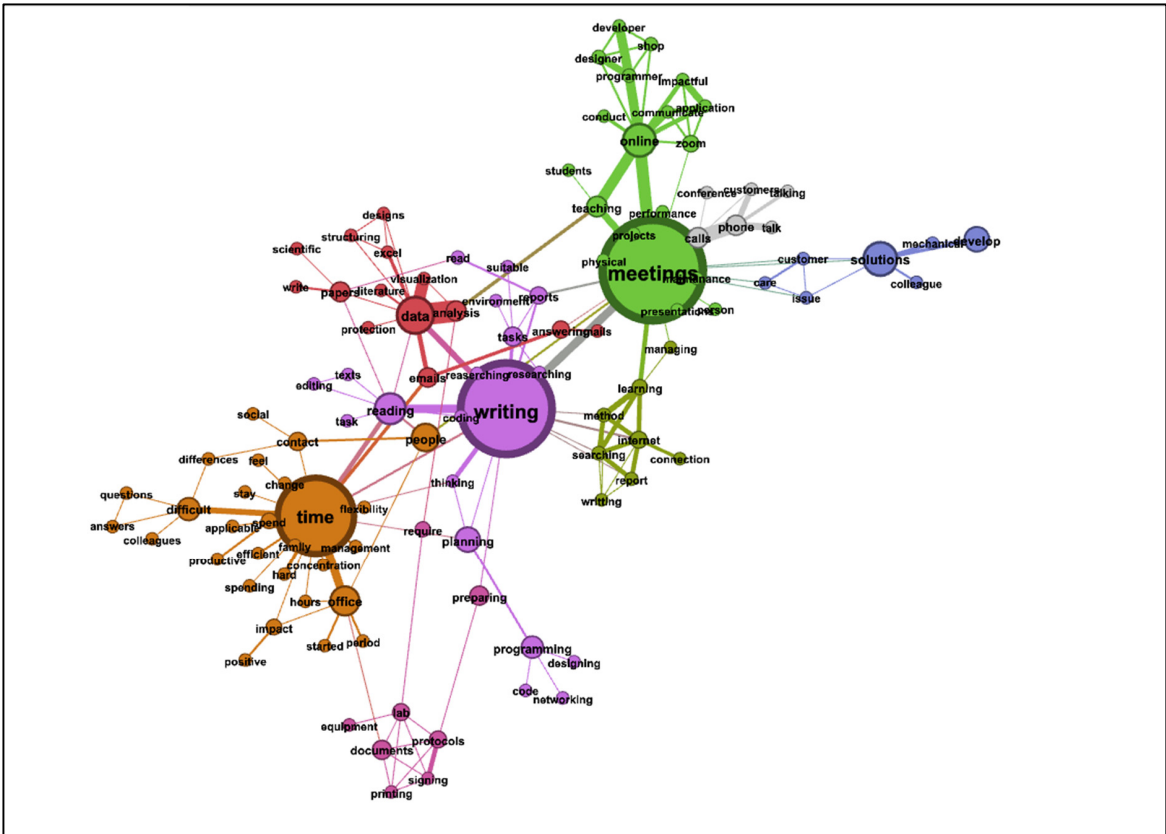


Figure 2. Germany Semantic Network.

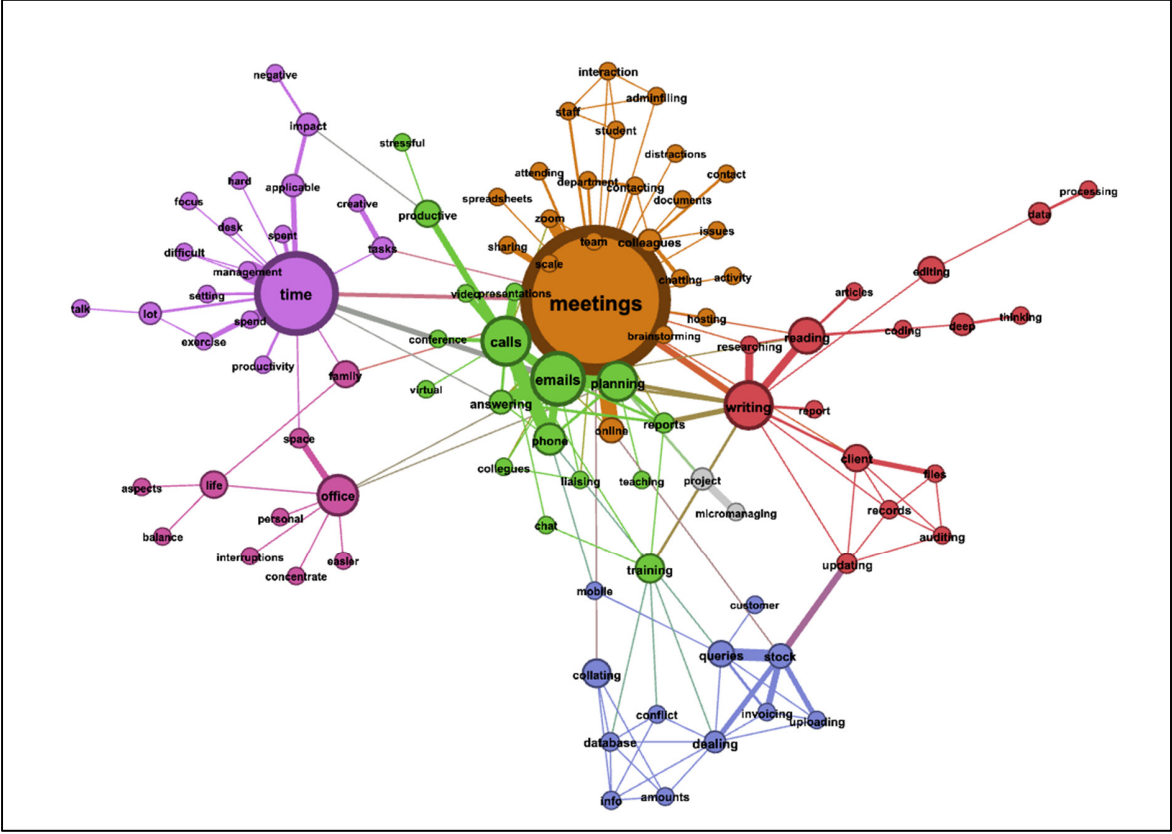


Figure 3. United Kingdom Semantic Network.

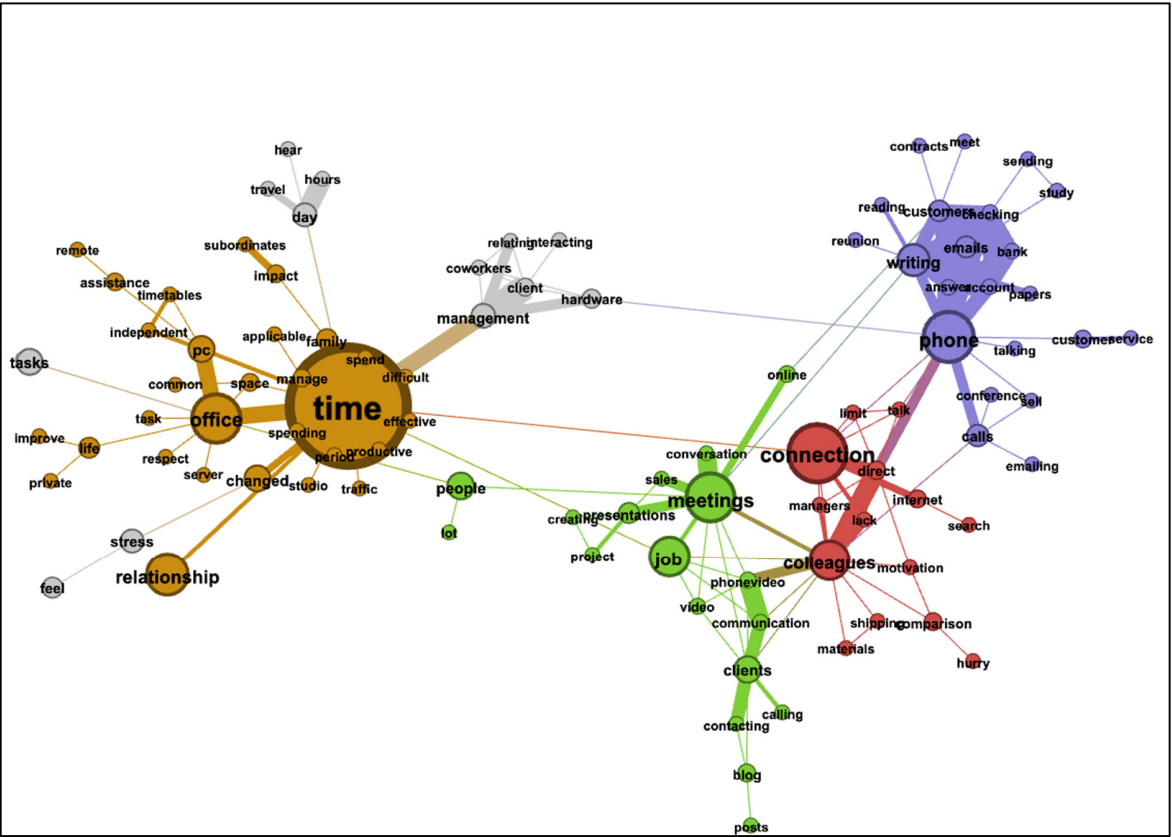


Figure 4. Italy Semantic Network.

3. Results

3.1. Semantic Network

A summary of network measures for the German (DE), Italian (IT), United Kingdom (UK), and Switzerland (CH) samples are listed in Table 2. The average degree for DE, IT, UK and CH are 0.73, 0.81, 1.24, and 1.03, respectively. The average indicates there are few connections among the words. Further, the graph density for DE and IT networks is more sparse than UK and IT. In other words, there are fewer connections among the words between DE and IT compared to UK and CH.

Table 3 list the first fifty central terms based on eigenvector centrality and degree. The most frequent terms relate to work-from-home for DE are writing, meetings, time, and reading. For IT, it is colleagues, time, office and connection. The UK is meetings, emails, writing and calls. CH is office, task, time, and documents.

The more common label is 'time' which sits at third for DE (eigenvector = 0.85), second (0.78) for IT, and third (0.66) for CH. In the content analysis, our elaboration will be based on writing, meetings and time for DE and colleagues, time, office and meetings for IT. For the UK, it will be meeting, time and writing. Followed by CH, which included office, task and time. The selection of these nodes (or words) was finally guided by both the measures in Tables 2 and 3, and how the nodes are related visually, as shown in Figures 1–4.

The networks were modelled using the Force Atlas 2 algorithm on Gephi [56]. Figures 1–4 illustrate the semantic networks between words by the four regions. The size of the nodes is represented by eigenvalue centrality. The color of the node is governed by modularity. The thickness between edges reflects the relations between nodes.

However, what do these connections between nodes/hubs mean? What are the respondents saying about their experience at work during the pandemic? To do that, the author used the illustration as a visual guide for organizing the word pairs (within and between major node-hubs). The author read the respondents' responses and derived meaning between node-hub and associated nodes. For example, as decided and mentioned above, the German cohort is dominated by three node-hubs: time, meeting and writing (Figure 2). The theme of the largest cluster for the German sample was related to the label 'writing' which is linked to words such as reports, tasks, researching, coding, reading, thinking and planning. The second-largest cluster revolves around the notion of time, connected to words such as family, hard, change, etc. By reading these responses at this level and deriving incremental and abstract ideas and meanings about the relations between word pairs, the conceptions about work experience across cohorts are described below.

3.2. Time

The German cohort perceived work during the pandemic in various time-relevant dichotomies. For example, some responses outlined the continuous and synchronous aspect of time during work. This is balanced by other responses that work time is segmented, asynchronous, and disruptive. Working at home also allows one to use the time to reflect and engage in in-depth focus. It is said that free time will enable one to engage in creative thoughts and ideas. Time is left to one's control and managed so that one's work becomes more autonomous, but some levels of discipline are required. Time is perceived as relaxing at home compared to the office space. The stress from the latter may arise from conflicts with superiors or colleagues. When working at home, time is spent alone, isolated from others. When there are indistinguishable boundaries between work and home affairs, the blur of boundaries leads to poorer well-being. Overall, whether the time is perceived as continuous or segmented; or alone and independent, the response highlights the blurring of boundaries between home and office and how it relates to well-being.

The Italian cohort perceives time working at home as either efficient or inefficient. Some of the responses pointed out it is due to inadequate equipment, which delays or inhibits the required task. Time is also perceived as subject to autonomy, where one chooses to manage how time is spent, and tasks are done during the day. The autonomy led to work time, which generally appears to be stressful, is now more comfortable. The consequence

of autonomy is better-perceived well-being. However, this is conditioned upon the balance between home and office times, which can compete with each other if the coordination of work between colleagues is not achieved. The key to managing time is the synchronization of work with colleagues. In addition, synchronization may need to occur with family members. For example, coordinating work is imperative, so one does not compete online connection time with family members. It seems time at work is like a double-edged sword in that while time at the office can be a source to stay in touch with colleagues, it can also be a source of stress when conflict arises. Overall, the central theme from the semantic network refers to the coordination of time with colleagues and how this is integrated with home affairs during the lockdown. When the balance or the synchronization is achieved, there is ample time for private life and reflections about work. However, when the balance is not achieved, it leads to stress and a decline in well-being. It would appear time is a coordinated, inter-connected, and interdependent affair.

The UK cohort also perceived time at work during the lockdown became a blur with home affairs when each competed. Work time, in the beginning, can be tough because tasks between home and office compete. However, eventually, adaptation kicked in, and one finally had time for well-being and contemplation. With time to reflect and create, one perceives the fluidity of time as an opportunity to reschedule and manage time customized for oneself. The insight is iterative and requires an emergent process. Time is also perceived as between uni-dimensional and multi-dimensional or multi-facet. The key to making sense of the change is understanding, achieving time flow, and remaining focused. The focus on time can be used to react and reflect. When reacting, the notion of time becomes multi-faceted, spontaneous and reciprocal, whereas time on the opposite end is reflective and contemplating. Overall, work time is an adaptive and negotiated affair. The negotiation involves, in the beginning, from fluidity, chaos and uncertainty to realization and work structure that suits individual needs, preferences, and timing. The time before lockdown can be reactive or reciprocating. Yet, post-lockdown can become self-indulging and reflective.

During the lockdown, the Swiss notion of time expanded many concepts where time can be uni-dimensional vs. multi-dimensional. Tasks can be done one at a time or many at the same time across professional and domestic domains. Uni-dimensional time allows one to concentrate on the task, whereas multi-tasking is associated with stress. On this note, time spent on multi-tasking is perceived as unproductive. Additionally, related to the above is the notion of time, which is either linear/lateral vs. collateral-time. The former requires one to take turns during the conversations or dialogue with the correspondents. Time here is uni-channelled or -directional and staggered. The latter is more disordered, iterative, spontaneous, and even chaotic. It is also multi-channelled and multi-multi-directional. The uni-channel is usually based on a single source or a single medium, whereas the multi-source is rich in information and complex in sensory modality. Time can be space-bound where work is tied within the physicality of the office, but it can be space irrelevant. Time can be allocated to engage in mundane and regular work activities, but it can also be more flexible, creative and reflective. Time in the former is associated with schedule time, whereas time in the latter is subjected to self-control and discipline. On this note, time can be linked with extrinsic (scheduled time) and intrinsic (autonomous) motivation. Overall, the Swiss times are complex, multi-conceptual/faceted, and multi-modal.

3.3. Meeting

Beginning with the German cohort, the notion of the meeting was another meaningful aspect during the lockdown for work from home. Because meetings were restricted to the virtual realm, some respondents found it easy and difficult to cope. For those who found it easy, work meetings carry the typical advantage of connecting people from vast distances and time zones. Some respondents also found virtual meetings are easier in terms of pre-meeting preparation. Some also said there is less disturbance during virtual meetings. However, those who experienced difficulties found the uni-modal aspect of virtual meetings restrictive. Virtual meetings are perceived as less personal and lonely.

Respondents believe it is hard to meet online when the meeting requires a lot of back-and-forth interaction and coordination between the participants. One attributed cause is still a technological limitation; difficulties arise from technical difficulties and familiarities when conversing in the virtual setting. Overall, this cohort points out the challenges one faces when meeting in a virtual arena under specific constraints and requirements.

The Italian cohort produced a set of prescriptions for virtual meetings. In the respondents' opinion, meeting in the virtual is appropriate when the meeting is simple, mundane, non-controversial, and when the medium of exchange is limited and uni-modal. High-stake meetings should be done in person. Virtual meetings are largely ineffective and inefficient, and especially, it is used to solve conflicts. Virtual meetings are difficult to manage when one needs to persuade or explain complex issues. When the contention involves multiple stakeholders, getting one's point across is difficult. The difficulties are due to the dialectic nature of the correspondence, which requires back-and-forth correspondence spontaneously and instantaneously. Overall, this cohort further specifies the fundamental parameters where virtual meetings are appropriate. Respondents argued that where one needs to explain different ideas or persuade another person, the uni-modal channel in the virtual meeting is limited and can be detrimental to the function of meetings in high-stakes affairs.

The British cohort, like the Italian, also relies on the multi-channel and multi-modal information that a physical meeting brings during a work meeting. Important meetings are perceived to be conducted in person. The meeting can be categorized as simple vs. complex. The former is generally based on the summary and reporting of current work affairs. Discussions aim to clarify and explain. The latter is interactive, dynamic, and reciprocal. Where there is a large group of participants, the nature of the meeting becomes complex and interactive. Meetings with large groups involve more engagement, reciprocation, and dialogue. The richness of the exchange can often challenge the information technology and capacities available. There is a prescriptive aspect of the respondents' opinion about virtual meetings. They serve to solve problems, discover/develop new ideas, coordinate executions, socialize, and consolidate what is known and decided. Where these functions operate between colleagues and superiors/leaders, the former is associated with coordination, while the latter relates to instructions and debriefing of current and past work activities. Based on the distribution between the node-hub (i.e., meeting) and other associated nodes, the UK cohort indicates meetings form an essential aspect of work. Overall, the cohort identified why and how virtual meetings might pose challenges and areas where technologies need to change and develop.

3.4. Writing

The UK cohort conceives the notion of writing at work as one that allows one to concentrate and focus. Similarly, this is taken up by the German cohort, which sees the advantage of working at home as it will enable one to devolve oneself to a single task.

3.5. Colleagues

The conception of work for the Italian cohort differs from other countries in terms of the notion of colleagues. The degree and eigencentrality for "colleagues" sit on top of Table 3, above time and office. Most responses revolve around three keywords: connection, coordination and competition. First, one important aspect is staying connected with colleagues and superiors in remote work. Second, staying coordinated with others is another essence of remote work. If the first is the pre-requisite, then the second ensures work between colleagues is in sync. Finally, some suggested the presence of other facilitate performance through competition. While the presence of others in the office facilitates performance, the absence of physical colleagues in remote work, according to some respondents, inhibits performance. Referring to Figure 4, the words "meeting", "connection", and "colleagues" cluster closely and is dependent on "timing". Overall, the notion of colleagues for this cohort is associated with connection, interaction and reciprocation.

3.6. Task

The notion of a task for the Swiss cohort is multi-faceted. In one way, tasks can be ordered and organized, and they can be random and sporadic. The former is bounded by priority, and it is time-sensitive. The latter is unbounded by time. Tasks can revolve around work per se as well as people and societies. Where tasks require a social exchange, one needs to focus on the participants and the discourse of the correspondence. However, when it involves other people, where one is not involved, it can be disruptive. Tasks can be independent on the one hand but interdependent on the other. When it is independent, it can be unbounded by time. However, when it is dependent, it is bounded by physical limitations and social factors. In a sense, tasks can be those that can be achieved without interruptions. It can also be those that are regularly disrupted. Similarly, some tasks can perceive as dull (or homogenous) while others are demanding, needing one's undivided attention, and it is very arousing. The office can very much bound tasks due to its physicality and material aspect. It can also be digitalized. What is interesting from several respondents is that tasks at home become casualized because they are not performed in the office. Overall, work tasks are multi-faceted. A task can be tied to space or geography, but it can be linked to synchronization with others at a particular moment. A task may require or be done continuously, without disruptions in a series of flows, but it can also be broken down into sub-tasks and shared across time and space. Similar to the notion of the Swiss times above, Swiss tasks are complex, multi-conceptual/faceted, and multi-modal.

3.7. Office

The conception of work for the Swiss cohort differs from other countries in terms of the notion of the office. The degree and eigencentality for "colleagues" sit on top of Table 3, above task and time. There are positive and negative views on remote work regarding the office. On the positive, the office provided a place with the necessary equipment and ergonomics for the task on hand. The office allows one to engage on the problem on hand and resolve it instantaneously. The office provides and gratifies the social aspects of work. Workers can give updates to each other, and it is a place to gratify social needs. On the negative, one gets less sleep in the office setting—due to commute and travel; there is less time and occasion for healthy cooking at home; distractions undermine the focus by peers' independent activities; the setting does not allow one to reflect and create and analyze in-depth; it has impact family qualities; multiple tasks compete for attention. Overall, the office is work-centric and meets the group's needs and organizational objectives. However, office work can be detrimental to individual well-being and the family's needs. The office may not tap into individual perspectives and insights.

4. Discussion

The study began with some promises: how workers dealt with competing time and space during the pandemic. In particular, the study aims to probe how workers define, relate to, and cope with the nature of work physically, psychologically and socially. Our findings are diverse and perhaps culturally relevant. Here, is the summary:

CH: workers depend on office space, but during the pandemic, how time is spent and work is achieved became very diverse and innovative.

DE: workers have used to the separation between work and home but have adopted virtual work and recognize its limitations but found the spilled-over between domestic and professional life challenging.

UK: workers have used to the status quo prior but have reconceived how work can be done and how time needs to be arranged; the arrangement is individualistic and democratic.

IT: workers rely on knowing each other in the synchronization and coordination of work; during remote work, it has become a negotiation between colleagues, so work time and tasks are synchronized and integrated.

We now summarize the findings by regions.

The physicality of the office bounds the Swiss way of work. Yet, the response also acknowledged the possibility that work that shifts towards the individual rather than the organization positively impacts individual mental well-being. The notion of time and task are multi-faceted and can be perceived and conceived in a multitude of complexity. We learn from the Swiss cohort that work, *per se*, can manifest many possibilities and flexibility in time, at the office and in the tasks. Work is malleable regarding when work is performed, where it is completed, and how it is performed. Individual workers adopt space, time, and task changes tailored to their circumstances. The adaptation creates a myriad of work arrangements. For example, a task may require completion in one continuous flow, without disruptions in a series of flows, but it can also be broken down into sub-tasks and shared across time and space.

The German identified key limitations in work meetings: it is confined by technology and human factors. Because writing forms an essential part of work, the German reported writing in one's private home to be easier than in the office. Finally, time is less defined in remote work, where the boundaries between domestic and professional affairs are a blur. The blur creates a degree of uncertainty and opportunities.

The German cohort differs from the Swiss in that it identified key limitations in work meetings in that it is confined by technology and human factors. This cohort was also concerned about the negative that a work unbounded by space and time brings. Whereas the Swiss bring optimism to remote work, the Germans accept it with caution. The British cohort further identified the challenges in terms of technology and culture. In cultures where work is completed by reciprocal, rhetorical and incremental fashion, in groups, the uni-modal and discursive fashion limits and impedes work production. Similar to the Germans, the British also found writing at work as one that allows one to concentrate and focus. The British response indicated an entrenched and embedded reliance on the meeting in daily work. Unlike the German cohort, the British identified why and how virtual meetings might pose challenges and areas where technologies need to change and develop. The reliance on the previous week's etiquette through time was adapted and changed. Time is treated as impermanence and fluid. The complexity and the multiplexity of the work meeting overlap with the notion of time which is fluid, negotiable and adaptable.

Italian work time relies on coordination and synchronization with colleagues. Meetings are presumed to be effective only when coupled with multi-modal and synchronizations of partners' cues. Overall, the notion of colleagues is dependent on a connection, interaction, and reciprocation.

5. Conclusions

It is tempting to generalize based on learned regional stereotypic expectations. For example, the Swiss are bounded by precision, space, and time; the Germans are task-focused; the Brits are chatty, and the Italian place more emphasis on relations than the task itself. However, the lessons learned is that the idea and the work priority for these places/cultures differ. For Swiss, it is essential to arrange work so that supplies, equipment, and print documents are in place for the digitalization of work to work. It is also necessary to define how tasks are performed, given the nature of the task can be fragmented to suit individual availability, competence, and preference. For Germans, the separation of domestic from professional affairs is of the essence. Technological or social arrangements are also required to solve the dynamic, reciprocal, and interactive aspects of work. For the British, all array of work is intertwined with the interaction between stakeholders. Like the Germans, the British believe some types of meetings are not suitable online, particularly those with high-stakes circumstances. However, unlike the Germans, the British believe work arrangements are fluid and can be adjusted and adapted in actual practice. It is through active engagement that conflicts and resolutions are achieved. This is consistent with how stakeholders engage in sense-making during changes in organizational structure. Finally, the Italian place importance on the inter-dependent nature of work and workers' relations/connections. The central aspect of work is the fulfilment of people's needs to

connect and rely upon. This is unlike the British, where the emphasis is on the process; the Swiss on the organization itself; the Germans on clarity.

To what extent is the result consistent with the current knowledge structure? German, like the Swiss, engage in work at the content and task level [9]. The Germans may focus less on a social-emotional level on the one hand but are concerned, on the other hand, about spill-over of work between domestic and professional affairs, leading to mental health. While Swiss focus on precision and placing work at the office (plus reliance on traditional office etiquette). Their work tasks and time notion are multifaceted, diverse, and flexible. In the literature, there are works relating British work ethics to Protestant values [10]. These ethics include hard work, punctuality, honesty, frugality, and a negative view of leisure. However, there is also the layman's belief that outlines the relaxed and social aspects of work in the UK [6]. The present study also suggests work between worker rely on dialectics and rhetoric. Work is negotiated and permutates as stakeholders make sense of how work will be and can be achieved, and the meaning of work emerges. Finally, the Italians focus on working inter-dependent where social ties between colleagues are paramount [51]. This is consistent with work preference towards inter-dependence and synchronization of work tasks. Yet, based on the original cross-cultural work of Hofstede [8], his Italian cohort sat high on the dimension of individualism, along with nations such as the UK, Finland, and Germany. In Andersen et al. [7], our understanding of cultures, in terms of Protestant and Catholicism beliefs and ethics, may be misguided.

Baruch & Nicholson [30] and Belzunegui-Eraso and Erro-Garcés [31] spoke of various aspects of remote work. For example, there are legal, job design and technology aspects, to say a few. The present study increments the knowledge base by discussing some possibilities that culture defines how work is conceived, prioritized and structured across different countries with historical and cultural differences. Cultural dimensions such as Individual-Collectivism continue to allow us to frame and make sense of how people manage and coordinate work activities. In the Italian sample, for example, the contextual model of Belanger et al. [39] assumes remote work as the context and culture as the source of meaning and conceptualizing medium of occupational activities. Hence, we see results in the sample where work is coordinated and managed by resorting to social resources, connections, or collective mindset. This may suggest that for some cultures, social resources are prominent or salient in many aspects of life, professional and social. Finally, this study began with an introduction to digital nomads. To reiterate, digital nomads are not different from work in the past because it assumes work refers to the work (or worker), the subject matter (work outcome), and the instruments [43,49]. Irrespectively of the culture or nature of industries, the results represented in semantic networks describe who does what (e.g., teacher, sales, marketers, manager), what is being processed (e.g., documents, statistics, sales figures, business plans) and how it is done (e.g., writing using a word processor, meeting using video conference, presenting using conference APPS, selling to clients over the phone). What can be concluded is how the networks show cultural characteristics in terms of how work is conceived, coordinated and prioritized.

As noted in the previous paragraph, however, while there is consistency with how aspects may fit into past cultural dimensions, there are also unfit aspects or irrelevant ones. Not all classic cultural dimensions or values are relevant in remote or digital work aspects. For example, the results did not show power-distance or uncertainty avoidance. This may be because the respondents mainly source from Europe, where power distance is relatively low compared to some South American and East Asian countries. The purposive sampling criteria made the findings unrepresentative of different cultures. However, data collectors (e.g., Prolific and Clickworker) claim they recruited samples from a diverse array of respondents, and the respondents have no personal affiliation with the author. Given this, the results deserve some credibility and merit.

Future Outlook

The pandemic triggered the acceleration of work digitalization and nomadic work. Understanding the core ontology of work, in terms of how time is spent and conceived (or the range of possible conceptualization), allows one to self-manage work where one works away from the office. Because work also involves coordination with others, one needs to anticipate the different work modes taking place through meeting with others. Future studies can focus on generalizing the above ideas, such as working models when working in the UK in general or meeting in particular. Future efforts can also explore and clarify contradictions or incoherence between findings. For example, how can we resolve the flexibility of work in the Swiss cohort on the one hand and the reliance on the office space? Similarly, how can the Italian achieve inter-dependence and synchronization with colleagues and the notion of the individualistic self? These ideas can no doubt be developed further with positivistic or interpretivistic philosophical approach in mind.

Funding: This research received no external funding but the employer had allocate time for the author to pursuit knowledge exchange activities.

Institutional Review Board Statement: All participants gave their informed consent for inclusion before they participated in the study. The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by the Ethics Committee (REF-19.26).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Analysis procedures, research data, and research materials are stored in WFH_Pandemic. Harvard Dataverse [57]. Data are available upon requests.

Conflicts of Interest: The authors declare no conflict of interest. The author personally funded the research.

References

1. Toffler, A.; Alvin, T. *The Third Wave*; Bantam Books: New York, NY, USA, 1980; Volume 484.
2. World Health Organization. *WHO Director-General's Opening Remarks at the Media Briefing on COVID-19*; World Health Organization: Geneva, Switzerland, 2020.
3. Berman, J.D.; Ebisu, K. Changes in U.S. air pollution during the COVID-19 pandemic. *Sci. Total Environ.* **2020**, *739*, 139864. [CrossRef] [PubMed]
4. Office for National Statistics. Business and Individual Attitudes Towards the Future of Homeworking, UK: April to May 2021. Available online: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/businessandindividualattitudestowardsthefutureofhomeworkinguk/apriltomay2021/pdf> (accessed on 1 December 2021).
5. Statistics on Remote Workers That Will Surprise You. Apollo Technical LLC. 2022. Available online: <https://www.apollotechnical.com/statistics-on-remote-workers/> (accessed on 1 January 2020).
6. Abell, S. *How Britain Really Works: Understanding the Ideas and Institutions of a Nation*; John Murray: London, UK, 2018.
7. Andersen, T.B.; Bentzen, J.S.; Dalggaard, C.-J.L.; Sharp, P.R. Pre-Reformation Roots of the Protestant Ethic. *Econ. J.* **2017**, *127*, 1756–1793. [CrossRef]
8. Hofstede, G. *Culture's Consequences: International Differences in Work-Related Values*; Sage: London, UK, 1984; Volume 5.
9. Schroll-Machl, S. *Doing Business with Germans: Their Perception, Our Perception*; Vandenhoeck Ruprecht: Göttingen, Germany, 2016.
10. Weber, M. *The Protestant Ethic and the Spirit of Capitalism*; Allen Unwin: London, UK, 1976.
11. Chang, Y.; Chien, C.; Shen, L.-F. Telecommuting during the coronavirus pandemic: Future time orientation as a mediator between proactive coping and perceived work productivity in two cultural samples. *Pers. Individ. Differ.* **2021**, *171*, 110508. [CrossRef] [PubMed]
12. Galanti, T.; Guidetti, G.; Mazzei, E.; Zappalà, S.; Toscano, F. Work From Home During the COVID-19 Outbreak. *J. Occup. Environ. Med.* **2021**, *63*, e426–e432. [CrossRef] [PubMed]
13. Morikawa, M. *The COVID-19 Pandemic and Productivity of Working from Home: Panel Data Analysis (Japanese)*; Research Institute of Economy, Trade and Industry (RIETI): Tokyo, Japan, 2021.
14. Organization for Economic Cooperation and Development (OECD, 2020). Productivity Gains from Teleworking in the Post COVID-19 Era: How Can Public Policies Make It Happen? Available online: <https://www.oecd.org/coronavirus/policy-responses/productivity-gains-from-teleworking-in-the-post-covid-19-era-a5d52e99/> (accessed on 1 January 2021).
15. Rothbard, N.P.; Beetz, A.M.; Harari, D. Balancing the scales: A configurational approach to work-life balance. *Ann. Rev. Organ. Psychol. Organ. Behav.* **2021**, *8*, 73–103. [CrossRef]

16. Fisher, K.; Fisher, M. *The Distance Manager: A Hands on Guide to Managing Off-Site Employees and Virtual Teams*; McGraw-Hill Professional: London, UK, 2000.
17. Niles, J.M.; Carlson, F.R.; Gray, P.; Hanneman, G.G. *The Telecommunications-Transportation Tradeoff*; John Wiley: Hoboken, NJ, USA, 1976; Volume 88, pp. 10–5555.
18. Bailey, D.E.; Kurland, N.B. A review of telework research: Findings, new directions, and lessons for the study of modern work. *J. Organ. Behav.* **2002**, *23*, 383–400. [\[CrossRef\]](#)
19. Choudhury, P.; Foroughi, C.; Larson, B. Work-from-anywhere: The productivity effects of geographic flexibility. *Strateg. Manag. J.* **2021**, *42*, 655–683. [\[CrossRef\]](#)
20. Grant, C.A.; Wallace, L.M.; Spurgeon, P.C. An exploration of the psychological factors affecting remote e-worker's job effectiveness, well-being and work-life balance. *Empl. Relat.* **2013**, *35*, 527–546. [\[CrossRef\]](#)
21. Ipsen, C.; van Veldhoven, M.; Kirchner, K.; Hansen, J.P. Six Key Advantages and Disadvantages of Working from Home in Europe during COVID-19. *Int. J. Environ. Res. Public Health* **2021**, *18*, 1826. [\[CrossRef\]](#)
22. Kirk, J.; Belovics, R. Counseling would-be entrepreneurs. *J. Employ. Couns.* **2006**, *43*, 50–61. [\[CrossRef\]](#)
23. Madsen, S.R. The Benefits, Challenges, and Implications of Teleworking: A Literature Review. *Cult. Relig. Rev. J.* **2011**, *2011*, 148–158.
24. Moon, C.; Stanworth, S. Flexible working in Europe. The case of teleworking in the UK. *Quad. Psicol. Lav.* **1997**, *5*, 337–344.
25. Nilles, J. Telecommunications and Organizational Decentralization. *IEEE Trans. Commun.* **1975**, *23*, 1142–1147. [\[CrossRef\]](#)
26. Nilles, J.M. Telework: Enabling distributed organizations: Implications for IT managers. *Inform. Syst. Manag.* **1997**, *14*, 7–14. [\[CrossRef\]](#)
27. Sørensen, C. *Enterprise Mobility: Tiny Technology with Global Impact on Work*; Springer: Berlin/Heidelberg, Germany, 2011.
28. De Macêdo, T.A.M.; Cabral, E.L.d.S.; Silva Castro, W.R.; de Souza Junior, C.C.; da Costa Junior, J.F.; Pedrosa, F.M.; da Silva, A.B.; de Medeiros, V.R.F.; de Souza, R.P.; Cabral, M.A.L.; et al. Ergonomics and telework: A systematic review. *Work* **2020**, *66*, 777–788. [\[CrossRef\]](#) [\[PubMed\]](#)
29. Imperatori, B. Engagement and disengagement at work: What's new. In *Engagement and Disengagement at Work*; Springer: Cham, Switzerland, 2017; pp. 5–18.
30. Baruch, Y.; Nicholson, N. Home, Sweet Work: Requirements for Effective Home Working. *J. Gen. Manag.* **1997**, *23*, 15–30. [\[CrossRef\]](#)
31. Belzunegui-Eraso, A.; Erro-Garcés, A. Teleworking in the Context of the COVID-19 Crisis. *Sustainability* **2020**, *12*, 3662. [\[CrossRef\]](#)
32. Golden, T.D.; Veiga, J.F. The impact of superior-subordinate relationships on the commitment, job satisfaction, and performance of virtual workers. *Leadersh. Q.* **2008**, *19*, 77–88. [\[CrossRef\]](#)
33. Nakrošienė, A.; Bučiūnienė, I.; Goštautaitė, B. Working from home: Characteristics and outcomes of telework. *Int. J. Manpow.* **2019**, *40*, 87–101. [\[CrossRef\]](#)
34. Schriber, J.B.; Gutek, B.A. Some time dimensions of work: Measurement of an underlying aspect of organization culture. *J. Appl. Psychol.* **1987**, *72*, 642–650. [\[CrossRef\]](#)
35. Kelliher, C.; Anderson, D. Doing more with less? Flexible working practices and the intensification of work. *Hum. Relations* **2009**, *63*, 83–106. [\[CrossRef\]](#)
36. Gajendran, R.S.; Harrison, D.A.; Delaney-Klinger, K. Are telecommuters remotely good citizens? Unpacking telecommuting's effects on performance via i-deals and job resources. *Pers. Psychol.* **2015**, *68*, 353–393. [\[CrossRef\]](#)
37. Anderson, A.J.; Kaplan, S.A.; Vega, R.P. The impact of telework on emotional experience: When, and for whom, does telework improve daily affective well-being? *Eur. J. Work Organ. Psychol.* **2015**, *24*, 882–897. [\[CrossRef\]](#)
38. Biron, M.; Van Veldhoven, M. When control becomes a liability rather than an asset: Comparing home and office days among part-time teleworkers. *J. Organ. Behav.* **2016**, *37*, 1317–1337. [\[CrossRef\]](#)
39. Bélanger, F.; Watson-Manheim, M.B.; Swan, B.R. A multi-level socio-technical systems telecommuting framework. *Behav. Inf. Technol.* **2013**, *32*, 1257–1279. [\[CrossRef\]](#)
40. Alon, T.; Doepke, M.; Olmstead-Rumsey, J.; Tertilt, M. *This Time it's Different: The Role of Women's Employment in a Pandemic Recession* (No. w27660); National Bureau of Economic Research: Cambridge, MA, USA, 2020.
41. Repper, J.; Eve, J. Embedding coproduction in organisational culture and practice: A case study. *Leadersh. Health Serv.* **2022**, ahead-of-print. [\[CrossRef\]](#)
42. Leclercq-Vandelannoitte, A. Leaving employees to their own devices: New practices in the workplace. *J. Bus. Strat.* **2015**, *36*, 18–24. [\[CrossRef\]](#)
43. Wang, B.; Schlagwein, D.; Cecez-Kecmanovic, D.; Cahalane, M.C. Digital work and high-tech wanderers: Three theoretical framings and a research agenda for digital nomadism. In *Proceedings of the Australasian Conference on Information Systems*, Sydney, Australia, 3–5 December 2018; pp. 1–12. Available online: <https://aisel.aisnet.org/acis2018/55> (accessed on 1 January 2020).
44. Durward, D.; Blohm, I.; Leimeister, J.M. Crowd work. *Bus. Inform. Syst. Eng.* **2016**, *58*, 281–286. [\[CrossRef\]](#)
45. Holts, K. Towards a taxonomy of virtual work. *Work Organ. Labour Glob.* **2013**, *7*, 31–50.
46. Müller, A. The digital nomad: Buzzword or research category? *Transnatl. Soc. Rev.* **2016**, *6*, 344–348. [\[CrossRef\]](#)
47. Nash, C.; Jarrahi, M.H.; Sutherland, W.; Phillips, G. Digital nomads beyond the buzzword: Defining digital nomadic work and use of digital technologies. In *Transforming Digital Worlds, Proceedings of the International Conference on Information*, Sheffield, UK, 25–28 March 2018; Springer: Cham, Switzerland, 2018; pp. 207–217. [\[CrossRef\]](#)

48. Orlikowski, W.J.; Scott, S.V. Digital work: A research agenda. In *A Research Agenda for Management and Organization Studies*; Czarniawska, B., Ed.; Edward Elgar Publishing: Northampton, MA, USA, 2016; pp. 88–96. Available online: <http://hdl.handle.net/1721.1/108411> (accessed on 1 January 2020).
49. Smith, A. *The Wealth of Nations*; Bibliomania.com Ltd.: Oxford, UK, 2002. Available online: <https://lcn.loc.gov/2002564559> (accessed on 1 January 2020).
50. Winter, S.; Berente, N.; Howison, J.; Butler, B. Beyond the organizational ‘container’: Conceptualizing 21st century sociotechnical work. *Inf. Organ.* **2014**, *24*, 250–269. [[CrossRef](#)]
51. Arruñada, B. Protestants and Catholics: Similar Work Ethic, Different Social Ethic. *Econ. J.* **2010**, *120*, 890–918. [[CrossRef](#)]
52. Yoon, S.-W.; Chung, S.W. Semantic Network Analysis of Legacy News Media Perception in South Korea: The Case of PyeongChang 2018. *Sustainability* **2018**, *10*, 4027. [[CrossRef](#)]
53. Danowski, J.A.; Yan, B.; Riopelle, K. A semantic network approach to measuring sentiment. *Qual. Quant.* **2021**, *55*, 221–255. [[CrossRef](#)]
54. Church, K.; Hanks, P. Word association norms, mutual information, and lexicography. *Comput. Linguist.* **1990**, *16*, 22–29.
55. Danowski, J.A. WORDij: A word-pair approach to information retrieval. *NIST Spec. Publ.* **1993**, 131–136.
56. Bastian, M.; Heymann, S.; Jacomy, M. Gephi: An open source software for exploring and manipulating networks. In Proceedings of the International AAAI Conference on Web and Social Media, San Jose, CA, USA, 17–20 May 2009; Volume 3, pp. 361–362.
57. Cheng, K.H.C. WFH_Pandemic. Harvard Dataverse. V1. 2022. Available online: <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/BDI7C8> (accessed on 3 November 2022).