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Remote working during the COVID-19 pandemic: A study on the emotional and relational experience and on the well-being of Italian university scholars and clerks

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Abstract

The COVID-19 pandemic has had significant effects on people's well-being and also on their ordinary work activities. This study aims to investigate the emotions, relational experience and well-being of academic personnel who continued their activities in remote working, during the Italian lockdown period in the months of March and April 2020.

For this purpose, 87 workers (55 % scholars and 45 % university clerks) filled out an online quali-quantitative questionnaire about their experiences of being in lockdown and doing their work remotely.

Qualitative data were analyzed through Grounded Theory Methodology using the ATLAS.ti 8.4 software. From the coding process, the following macro-categories emerged: remote working, affects and interpersonal relationships in lockdown. Then cross-tabs intertwined the code groups emerged with work role and gender of participants. In the end, the frequencies in the cross-tabs were analyzed by Chi square test. Quantitative data were analyzed through Univariate Analysis of Variance (ANOVA) using SPSS 22 software.

The results showed that scholars consider remote working mainly as a critical issue, while clerks see it more as a resource. Moreover, clerks more frequently report negative feelings of anxiety, fear and anger, while scholars more frequently report loneliness. Regarding interpersonal relationships, no significant differences between scholars and clerks were observed. Neither affects nor interpersonal relationships were associated with gender differences. Moreover, clerks reported lower economic and overall well-being compared to scholars. Finally, results highlighted the importance of the mattering role of human relations in work activities; this core category gives some practical implications that will be discussed extensively.

Keywords: remote working; COVID-19 pandemic; well-being; affects; Grounded Theory Methodology.

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Introduction

The COVID-19 pandemic affected the whole world, bringing changes that have modified people's daily lives with respect to work, school, free time, and interpersonal relationships, negatively impacting their emotional, interpersonal, and psychological well-being (Dawson & Golijani-Moghaddam, 2020; Macdonald & Hülür, 2020; Zacher & Rudolph, 2020). The state of emergency increased the precariousness and instability of work activities and also changed times and methods related to these activities, affecting the workers' well-being (Evanoff et al., 2020; Pacheco et al., 2020).

Remote working was the flexible form of work which allowed workers to carry out their activities without having fixed hours to respect and without having to go to the workplace (Biasi, 2020; Canello et al., 2020; Langè & Gastaldi, 2020). In this mode, the workload was usually not quantified on the basis of hours of presence in the workplace, but on the basis of tasks completed within a set deadline (Angelici & Profeta, 2020).

De Masi (2020) underlined that remote working implies a saving of time, effort and stress involving a greater level of autonomy in the performance of activities and in the distribution of times; more remote working means also less commuting for workers and, therefore, less traffic and less environmental pollution.

But remote working also implies various criticalities. For example, a problem of remote working concerns the maintenance of social relationships leading to a decrease in human and social contact, a kind of social isolation. The lack of daily attendance at the workplace actually leads to a loosening of interpersonal relationships with colleagues and to the limiting of social interactions only to family and friends (Grant et al., 2013).

Therefore, literature has considered remote working as a positive evolution of the way of working, but also as an involution that increasingly isolates workers.

Italian universities switched to this new way of working and have experienced an exponential increase in remote working compared to the previous year. The data on the staff of the University of Naples Federico II (2020), who carried out remote working in the early months of 2020, clearly show this high increase: while in January and February 0% of the entire staff worked remotely, in March there was an increase of 83% in the first half of the month and of 90% in the second half, and finally in April the percentage reached 92%.

However, despite this increase, still little research has investigated the psychological and affective aspects of remote working, particularly in the academic context.

On this basis, this study aims to investigate the effects that remote working has on emotional life, interpersonal relationships and well-being of academic workers (namely scholars and clerks).

Method

Procedure and Participants

The research was carried out from March to May 2020, i.e., during the first lockdown established in Italy as a containment

measure against the COVID-19 pandemic. It was started on behalf of the Comitato Unico di Garanzia (CUG) of the University of Naples Federico II, which is the committee responsible for enforcing equality among public workers and protecting their rights. Through the CUG, an email containing a link to the online questionnaire was sent to all academic workers to find participants in the research.

Following this procedure, the research involved 87 (65 females and 22 males) workers of the University Federico II of Naples. The mean age of the participants was 51.67 (SD = 10.70), and they belonged to two distinct categories: 48 were scholars, while 39 were clerks.

All the characteristics of the participants can be viewed in Table 1.

Tab. 1. Characteristics of the participants

Age	M = 51.67	SD = 10.70
Sex	%	N
Male	25.3	22
Female	74.7	65
Role in the university institution	%	N
Scholar	55.2	48
Clerk	44.8	39
Marital Status	%	N
Single	14.9	13
With a partner	13.8	12
Married	56.3	49
Separated or divorced	12.6	11
Widowed	2.3	2
Total	100	87

Measures

The qualitative-quantitative questionnaire administered, consisting of a preliminary demographic section and of two further sections:

- 1) six open-ended questions related to the workers' emotional and relational experiences during the lockdown period. Specifically, the participants were asked to write about: the emotions they felt; their most recurring thoughts; events perceived as significant in this lockdown period; individual or collective actions, carried out by them and/or by others, to be mentioned; what the pandemic and the lockdown have taught them about the future.; and finally comments on how they perceive the new mode of working remotely.
- 2) the *I COPPE scale* (Prilleltensky et al., 2015; Di Martino et al., 2018) in its 14 items short form (Esposito et al., 2021), for assessing perceived well-being in seven domains, such as interpersonal, community, occupational, physical, psychological, economic and overall well-being. For each

item, respondents had to indicate their level of well-being using a 11-points Cantril scale ranging from 0 (the minimum) to 10 (the maximum).

Finally, all participants were asked to communicate their consent to the use of responses and sensitive data exclusively for research purposes, in accordance with the Law Decree n. 101 - 2018, established by the Italian Government.

Data analysis

The textual material from the six open-ended questions was analyzed by the Grounded Theory Methodology (GTM; Charmaz & Belgrave, 2018), supported by the software ATLAS.ti.

Indeed, the data analysis, carried out through a bottom-up approach, involved three coding phases: open coding, axial coding and selective coding. This coding phase was implemented using the software ATLAS.ti, starting with the open coding, that is the attribution of codes to significant words and sentences; later these codes were collected into larger code groups; finally, macro-categories were identified.

During several meetings, organized according to the CASP Qualitative Research Guideline (2018), the team interacted to construct the best categories to understand and explain the gathered textual materials; the researchers discussed also data in continuous comparison with the theoretical construction of the literature arriving at its substantive interpretation that is the core category.

Furthermore, the team verified the relation between the remote working experience of the workers and the affects and interpersonal relationships during lockdown. To test these further hypotheses, cross-tables were created, intertwining frequencies of the code groups that emerged with the role and sex of respondents, namely scholars or clerks and female or male. Finally, chi-squared tests were performed.

To evaluate the well-being of workers during lockdown, a univariate analysis of variance (ANOVA) was conducted, using the software SPSS. Specifically, to assess the differences between scholars and clerks, the variable *Role* as predictor, and all seven I COPPE domains of well-being as outcomes were used.

Results

Remote workers' affects and relational experience during lockdown

The analysis of the textual material resulted in 193 codes. These codes were collected into 32 code groups categorized in three macro-categories: a) *remote working*, which includes code groups referring to the perception of remote working, its usefulness or difficulties in daily work; b) *affects*, which includes code groups referring to the emotions and moods aroused in workers during the lockdown period; and c) *interpersonal relationships*, which includes code groups referring to the critical aspects and resources of relationships with family, friends, colleagues and the wider community and how they changed during the lockdown.

a) Remote working

The Remote working macro-category includes two code groups: Remote working criticality and Remote working resources.

Remote working criticality contains codes that refer to the negative aspects, problems and deficiencies experienced during remote working: scholars and clerks reported not going to university places as a "loss of contact with an environment of great cultural and human stimuli" (M, 38, scholar).

It is clear that with remote working there are no more time limits, as they claim to work all day and very often even during the weekend: "The first month of remote working and distance learning I had to work almost 10 hours a day including Saturdays and Sundays" (F, 33, scholar).

So, all this affects family life because, the time to dedicate to the family becomes less and less: "too many online appointments in the same day wear out the body and mind." (F, 42, scholar).

Among the critical issues the interviewees highlighted the technical problems, related to the world of technology and the web: "We talk about agile work, but we were and are not ready with the equipment to be made available to the staff" (F, 39, clerk).

Therefore, some participants do not consider remote working as real work, stating that: "working from home, we do not have any illusions, it is not working. Let's return as soon as possible, safely to our workplaces" (F, 61, scholar).

Remote working resources includes codes related to the opportunities and positive aspects of this experience.

In fact, remote working was considered effective, as it avoids commuting from home to work, and therefore the very often long journeys to reach the workplace.

Consequently, this aspect has considerably reduced anxiety and related stress, in many cases also making the most of the time available: "I do not detect any problems; on the contrary, I have discovered that agile work increases my productivity, because I am more serene in the management between work and household chores" (F, 55, clerk).

Not all participants complain of an overload of work. Many claimed to have managed, through this new way of working, to better reconcile working times with family and domestic ones. Furthermore, remote working was perceived as a chance to get involved, an opportunity to experiment with new ways of working: "I carry with me the satisfaction of having learned how to use new programs in a short time" (F, 43, clerk).

Finally, the participants highlighted how, in an emergency situation like the one experienced, remote working represented a valid alternative and above all a privilege when compared to those who had to interrupt their work activities.

b) Affects during lockdown

The macro-category *Affects* includes five different code groups: area of anxiety, area of loneliness, area of fear, area of anger and general negative moods.

Anxious area embodies codes referred to anxiety, distress but above all to concern. This emotion is the most widely present and it is declined in different ways: concern for the future, concern especially for their loved ones and their offspring.

In fact, most interviewees were worried about their offspring and at the same time, they felt the burden and concern for elderly parents: “I am 51, I am still a daughter, and I am a mother; I feel like Aeneas dragging his old father on his shoulders, but I am crushing my children under me” (F, 51, clerk).

Moreover, participants report that they experienced anxiety due primarily to the forced imprisonment: “initially I felt a strong sense of anxiety at the idea of having to stay at home forcibly” (F, 47, scholar).

These concerns provoked interviewees’ anxiety and at the same time a real fear.

The code group *area of fear* encloses the fear for the future and the non-return to normality: “imprisonment, anxiety about tomorrow’s uncertainty, violation of democratic rights, awareness that nothing will return as before” (F, 41, scholar).

Indeed, “social distancing seems to have more the form of social fear (fear of the other) than of protection” (F, 40, clerk), thus assuming the connotation of distrust of one’s neighbor, not only of the other stranger but “the perception of danger even by those who were formerly familiar” (F, 57, clerk).

Furthermore, the unpredictability and the difficulty of managing the pandemic led the interviewees to perceive themselves as exposed to real danger, and therefore more vulnerable: “at the beginning of the isolation I was afraid, a fear I had never felt before, I felt vulnerable” (F, 50, scholar).

Area of loneliness collects codes such as despair, helplessness, loneliness, and sadness. Particularly, participants report that they have experienced “a feeling of powerlessness with respect to such a new event” (F, 61, scholar).

Moreover, a consequence of social isolation was the exacerbation of negative emotions such as loneliness and sadness. In fact, the interviews report: “loneliness because this disease must be faced alone” (M, 59, clerk).

Anger is the least widely felt emotion by the interviewees. They report that they felt anger towards those who did not respect the rules, thus rendering useless the sacrifices of all and anger “for the asphyxiating slowness of the bureaucracy, for the carelessness of the health organization (testing)” (M, 59, clerk).

Lastly, *Moods* collects disorientation, human fragility, uncertainty, and bewilderment. These are the codes that refer to the affective states experienced by the interviewees.

Furthermore, the pandemic has confronted the interviewees with the awareness of their own limits: “human fragility” (F, 41, scholar).

A situation that in some ways was perceived as a loss of meaning: “it seemed impossible how such an experience could lead to a progressive loss of meaning” (F, 70, scholar).

Once again, the attention of the participants is placed on the future, perceived as unpredictable uncertainty: “the sense of precariousness about the future, we risk losing the sense of everything that has been lived up to now” (M, 49, scholar).

c) *Interpersonal relationships during lockdown*

The Interpersonal relationships macro-category embodies two code groups: positive and negative aspects of the same.

Codes such as absence of contact, lack of social interactions and divided families are included in the *negative aspects of*

interpersonal relationships; they described all those situations in which respondents experienced a worsening of their interpersonal relationships or negative feelings deriving from them, or rather from their absence.

In particular, this was due to the ban on leaving the house and therefore on meeting others: “the difficulties of maintaining a good level of relationship with relatives and friends given the obligation to stay at home” (M, 61, clerk).

Undoubtedly, however, the aspect that most negatively affected the participants, in the relational sphere, was the forced separation from their significant others, the lack of contact, especially with distant children.

However, not all participants report detachment from family. On the contrary, in many cases, the lockdown period served to increase the quantity and quality of family time. The code group “*positive aspects of interpersonal relationships*” collects codes such as having time to dedicate to the family, collaboration in the family and rediscovering the sense of family: “certainly the positive aspect of this particular situation was in being able to spend more time with loved ones, talk, tell each other and do things together at home” (F, 51, clerk).

Clerks and scholars: differences in the emotional and relational work experience

From the qualitative analysis, what emerged was that scholars have difficulties and critical issues in remote working, while clerks consider the remote working mostly as a resource.

These results which emerged from the coding process led us to verify specific hypotheses:

- 1) remote working is mainly perceived as a resource in the texts of clerks and as a critical issue in those of scholars;
- 2) participants considering remote working mainly as a critical issue more frequently report having felt negative affects;
- 3) given the positive effect that remote working should have on the work-family balance (Angelici & Profeta, 2020), we expected that in the texts of those who consider remote working more as a resource, also interpersonal relationships would be experienced in a more positive way;
- 4) finally, we supposed that in the females’ texts we should perceive that remote working would be more frequently described as a resource than in males’ texts, since it is suggested that it is an advantage especially for women (Sullivan & Lewis, 2001; Angelici & Profeta, 2020).

To confirm these hypotheses suggested by the coding process, all the documents and all the code groups of emerged macro-categories (*Remote working*, *Affects* and *Interpersonal relationships*) were used to create cross-tabs. We used these tabs to understand if there were differences in the way of describing remote working, in the texts of scholars and clerks and in those of female and male workers (see Table 2).

Tab. 2. Cross-table: code groups for scholars and clerks

Code Groups	Scholars	Clerks	Total
	nO/nE	nO/nE	n
Remote working			
Remote working Criticalities	49/40.8	24/32.2	73
Remote working Resources	31/39.2	39/30.8	70
Total (n)	80	63	143
Affects			
Anxiety feelings	17/18.7	26/24.3	43
Fear	10/15.7	26/20.3	36
Loneliness and depressive feelings	13/8.7	7/11.3	20
Anger	0/1.7	4/2.3	4
General negative moods	17/12.2	11/15.8	28
Total (n)	57	74	131
Interpersonal Relationship			
Positive relational aspects	5/5.6	5/4.4	10
Negative relational aspects	14 / 14.4	11/11.6	26
Total (n)	20	16	36

Note. nO = code frequency observed in each cell; nE = code frequency expected in each cell.

Furthermore, to test the significance of these differences, chi-square tests were conducted and the hypothesis were partially confirmed. For each chi-square test, we verified that all assumptions of applicability were respected: the expected value of the cell are greater than 5 in at least 80% of the cells and no observed value is equal to 0. (McHugh, 2013).

Regarding the first hypothesis the scholars' texts, compared to the clerks' ones, refer more frequently to the critical aspects of remote working, rather than resources, and this difference is significant for a 0.01 alpha level ($\chi^2_1 = 7.56$).

For the second hypothesis (regarding the relationship between considering remote working as a criticality and the prevalence of proven denied affects), to meet the applicability assumptions of the chi-square, before performing the test the code group *Area of anger*, that occurred 4 times in the clerks but 0 in the scholars, was merged into the code group *Area of fear*, and so these two areas were considered jointly.

Once the test was applied, the results showed a complex situation. Scholars' texts, who refer more frequently to the negative aspects of remote working, report with greater prevalence the negative affects related to the area of loneliness and to general negative moods. Conversely, the clerks, who refer more to positive aspects of remote working instead, report with more frequency codes related to the areas of anxiety, fear, and anger. This difference, too, was statistically significant at an alpha level of 0.01 ($\chi^2_4 = 13.68$).

Considering the third hypothesis, namely the frequency of referred positive or negative interpersonal relationships, it was not possible to respect the applicability assumptions of the chi-square test (since more than 80% of the expected values are

less than 5) and therefore we used the Fisher exact test, but the hypothesis was not confirmed.

Finally, the fourth hypothesis was also not confirmed: there was no significant difference between female and male workers in the way of considering remote working.

Remote workers' well-being during lockdown

The well-being scores reported by the participants using the I COPPE scale - short form were also used to compare clerks' and scholars' experience during the lockdown. Univariate ANOVA showed that there are significant differences in overall well-being and in three specific domains: physical, psychological, and economic. Observing the means of the two compared groups, it appears that all these differences are in favor of the scholars. Table 3 shows that these reported on average higher levels of well-being than the clerks, in all the domains.

Tab. 3. Means, standard deviations and results of the univariate ANOVA

Well-being domain	Scholars		Clerks		ANOVA	
	M	SD	M	SD	F	p
Interpersonal	7.68	1.51	7.60	2.12	.037	.85
Community	6.39	1.33	5.78	1.61	3.66	.06
Occupational	6.92	1.70	6.69	1.51	.415	.52
Physical	7.15	1.36	6.45	1.85	4.09	.04
Psychological	6.88	1.64	6.06	2.15	3.97	.04
Economic	6.92	1.46	5.97	1.78	7.39	.00
Overall	7.31	1.39	6.40	1.89	6.78	.01

Note. The variable set as predictor was Role.

Discussion

Results showed that, during the lockdown due to COVID-19 pandemic, remote working allowed the continuity of work duties even in forced domestic confinement; it also met some needs, such as commuting problems, home-work balancing, transportation costs, and increased effectiveness in daily time organization, confirming what literature describes about its resources (Wheatley, 2012).

However, our results highlighted critical issues related to carrying out one's work remotely, in terms of affects and interpersonal relationships of workers.

As far as affects expressed by the workers interviewed is concerned, what emerges is that during the lockdown there were common feelings of anxiety and fear related to the emergency situation that involved Italy, like the rest of the world. There were also frequent references to a feeling of loneliness and isolation and to the consequent limitation in interpersonal and social interactions. It is also noteworthy that workers never referred to positive affects in interviews.

Regarding interpersonal relationships, the remote working did not fill the gap of wider social interactions in personal life. For many interviewees the possibility of being always available at home reduces their relational time with the family.

Our results also show that the emotional effects of remote working during the lockdown were not the same for all workers. The comparison made between descriptions of university clerks and scholars highlights differences in the affects felt by the two professional categories. Clerks, more than scholars, experienced anxiety, fear, and anger. Scholars, conversely, experienced deep introspection and feelings of loneliness and sadness. This difference could be related to the different duties and tasks of the two professions, which determine different styles of time and workload management involved in remote working (Kossek et al., 2012).

The loneliness of the scholars can be traced, according to their words, to the difficulty of maintaining interaction with their students. If transmission and construction of knowledge is the mattering goal for the university, remote teaching does not help the human and scientific interaction among students and professors, gnawing at the base the role of the universities and of the researchers.

As for the clerks, however, the feelings of anger, anxiety and fear seem linked to the potential negative consequences of the pandemic on their life in general and not closely connected to their work activity. In fact, it is noteworthy that in the words of the clerks, there is no reference to the dimension of relationships in the work context, such as references to interactions with office colleagues.

While for scholars remote working, despite its criticalities, was configured as a tool to maintain working relationships with students, for clerks this mode was only a means of allowing them to continue conducting their work in an even more positive way, given the organizational advantages. But for them, it was not a tool for maintaining relationships with colleagues.

From the textual analysis and from the comparison between the code groups it emerges that clerks experienced remote working more positively than scholars, but the comparison between the levels of well-being of the two groups seems to say something different. The results showed that clerks reported lower physical, psychological, economic, and overall well-being compared to scholars. Therefore, although scholars more often referred to remote working as a criticality, it did not affect their well-being. The clerks, on the other hand, who mostly highlighted the remote working resources, seem to have reported more negative consequences on their well-being.

This difference in well-being descriptions in the two groups of workers could be explained by referring to two factors: independent time management and social support.

According to Charalampous et al.'s (2019) literature review, many researchers highlighted that knowledge workers, i.e., those who do not produce something material and who have low levels of standardization of working times and products (Pyöriä, 2005), such as scholars, can benefit from remote work because this allows them to autonomously manage time and workspaces, with greater control over private life (Suh & Lee, 2017). Furthermore, the autonomy that it allows, increases job satisfaction (Hornung & Glaser, 2009) and reduces emotional exhaustion (Sardeshmukh et al., 2012).

On the other hand, routine workers, such as clerks, who have more fixed working hours and less decision-making autonomy, rely heavily on the social support of colleagues and of organization for their well-being (Sardeshmukh et al., 2012; Bentley et al., 2016). So according to this literature, we assumed that the absence of references to the workplace relationships observed in the words of the clerks, is the perception of receiving little social support from their colleagues, and consequently this could explain their lower levels of well-being.

In conclusion, a higher level of autonomy could protect the well-being of scholars, even if the smart working mode is not positively evaluated by them. Unlike, the lack of references to social support received by the colleagues does not imply a negative evaluation of the remote working by the clerks, but could negatively affect their well-being.

This data prompts us to question the importance of caring for interpersonal interactions in the work context, not only in the moment of emergency: our study highlights the need to protect and maintain the relational dimension with colleagues and students and all those who belong to the working context. The support of the social networks during the lockdown was in fact a fundamental resource that helped to counteract loneliness (Wang et al., 2020).

These considerations brought our team to consider that the core category explaining the narratives under examination is the *mattering role of human relations in work activities*; it focalized the need of relational connections among the university personnel.

Therefore, our data suggests to us that working remotely allows the accomplishment of work duties, but it is not able to also maintain wider relational bonds and bridging.

In this sense, setting up remote working could include also relational connection among the workers (Vayre & Pignault, 2014), aimed at protecting the emotional needs and experiences of workers, thus contributing to the protection of well-being and health of workers in the particular state of emergency.

Limitation and future research

The results of this study must be considered in the light of some limitations. First of all, it should be noted that our results cannot be generalized, given that our research involved a relatively small number of participants and that it is limited to the staff of a single institution. Further studies are therefore needed to confirm our results, on a national and international level also.

Moreover, the absence of a gender difference in the affects and relationships of remote workers could have been conditioned by the fact that females represent about 75% of the participants. So further research is needed to verify, in a more representative sample, whether there are differences related to specific variables such as gender, but also such as the professional roles, the child/children's age, their numbers.

Finally, it must also be considered that the data were collected in a specific emergency period, therefore we could hypothesize that the need for social connection is felt even more because it is not compensated by other interpersonal

relationships with family and friends, also forbidden by the emergency condition.

Conclusions

Most recent studies (Di Napoli et al., 2021; Marzana et al., 2021; Migliorini et al., 2021; Novara et al., 2021; Procentese et al., 2021), conducted in academic context, have highlighted the psychological impact of the new teaching modality adopted during the COVID-19 emergency. However, almost all studies have focused on evaluating the consequences of these new modalities on students only. Conversely, the present study has the innovative aspect of considering the emotional experience of both, scholars and university clerks during the pandemic.

This article also makes it clear that these new tools cannot be conceived only as aseptic modalities to replace or improve the classic modality of face-to-face work. Our results show that without adequate consideration of social relationships (with students and colleagues), remote working, despite its practical resources, can have negative effects on the well-being of workers.

Undoubtedly, further future research needs to evaluate the psychological effects that this way of working can have on individuals' well-being. But, in an applied approach, our data highlight the need to always protect, even during remote activities, the interpersonal relationship among the workers, finding ways that guarantee spaces and tools that pursue this purpose.

Author Contributions

The authors contributed equally to this manuscript.

Compliance with Ethical Standards

Conflict of interest

The authors declare that they have no competing interests.

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Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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